Cisco UCS Rack-Mount Servers Cisco IMC XML API Programmer's Guide, Release 4.3

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Audience

This guide is intended for software engineers with a background in programming and the use of APIs. Engineers should have knowledge of XML, data systems, networking protocols, and storage protocols.

Document Organization

This XML API Reference Guide is organized into the following chapters:

- Cisco IMC XML API, on page 1
- Using the Cisco IMC XML API Methods, on page 9
- Cisco IMC XML API Method Descriptions, on page 15
- Cisco IMC XML Object-Access Privileges, on page 39

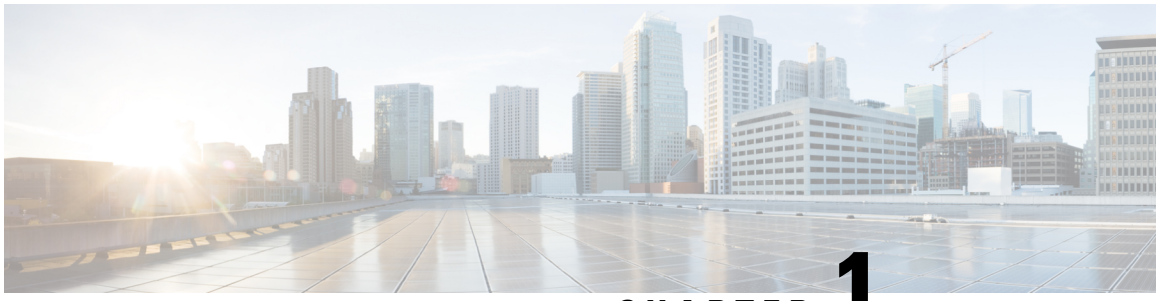
Related Documentation

For a complete list of all C-Series documentation, see the *Cisco UCS C-Series Servers Documentation Roadmap* available at the following URL: http://www.cisco.com/go/unifiedcomputing/c-series-doc.

Note The *Cisco UCS C-Series Servers Integrated Management Controller GUI Configuration Guide* and the *Cisco UCS C-Series Servers Integrated Management Controller CLI Command Reference* provide an overview of Cisco IMC. This is important background information for XML API software developers.

Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, please send your comments to ucs-docfeedback@external.cisco.com. We appreciate your feedback.



CHAPTER 1

Cisco IMC XML API

This chapter includes the following sections:

- About the Cisco IMC XML API, on page 1
- Cisco UCS Management Information Model, on page 2
- Cisco IMC XML API Sample Flow, on page 2
- Object Naming, on page 3
- API Method Categories, on page 4
- Success or Failure Response, on page 6

About the Cisco IMC XML API

The Cisco IMC XML API is a programmatic interface to the Cisco Integrated Management Controller (Cisco IMC) software for a C-Series Rack-Mount Server. The API accepts XML documents through HTTP or HTTPS. Developers can use any programming language to generate XML documents that contain the API methods. Configuration and state information for Cisco IMC is stored in a hierarchical tree structure known as the MIT (Management Information Tree), which is completely accessible through the XML API.

The Cisco IMC XML API implements a subset of the methods and management information model available in the Cisco UCS Manager XML API. The behavior of both APIs is similar in syntax and semantics, and you can use the same client development tools and techniques for both. The scope of the Cisco IMC XML API is limited to a single C-Series Rack-Mount Server, in contrast to the Cisco UCS Manager XML API, which controls an entire Cisco UCS domain consisting of switches, FEX modules, servers, and other devices.

Using the Cisco IMC XML API, the user has programmatic access to Cisco IMC to configure, administer, and monitor the server. The API provides most of the functions that are accessible through the Cisco IMC CLI and GUI interfaces.

Operation of the API is transactional and terminates on a single data model maintained in Cisco IMC.

The API model includes the following programmatic entities:

- Classes—Define the properties and states of objects in the MIT.
- Methods—Actions that the API performs on one or more objects.
- Types—Object properties that map values to the object state (for example, `equipmentPresence`).

A typical request comes into Cisco IMC and is placed in the transactor queue in FIFO order. The transactor gets the request from the queue, interprets the request, and performs an authorization check. After the request is confirmed, the transactor updates the MIT. This complete operation is done in a single transaction.

Event subscription is supported. Up to four Cisco IMC XML API clients can subscribe to receive event notifications from Cisco IMC. The event subscription operation establishes a connection session allowing a client to receive XML-formatted event notification messages that are sent asynchronously by Cisco IMC.

Note In Release 1.5(1.x), the Cisco IMC XML API sends event notifications only for fault-related events.

Cisco UCS Management Information Model

All the physical and logical components that comprise Cisco UCS are represented in a hierarchical management information model (MIM), also referred to as the MIT. Each node in the tree represents a managed object (MO) or group of objects that contains its administrative state and its operational state.

The hierarchical structure starts at the top (`sys`) and contains parent and child nodes. Each node in this tree is a managed object and each object in Cisco UCS has a unique distinguished name (DN) that describes the object and its place in the tree. Managed objects are abstractions of the Cisco UCS resources, such as CPUs, DIMMs, adapter cards, fans, and power supply units..

Configuration policies are the majority of the policies in the system and describe the configurations of different Cisco UCS components. Policies determine how the system behaves under specific circumstances. Certain managed objects are not created by users, but are automatically created by the Cisco UCS, for example, power supply objects and fan objects. By invoking the API, you are reading and writing objects to the MIM.

Cisco IMC Management Information Model

The Cisco IMC management information model is a subset of the Cisco UCS management information model. A C-Series Rack-Mount Server is modeled starting with `sys/rack-unit-1` in the MIT as in the following example:

Figure 1: Illustration of the CIMC MIM Structure

```
Tree (topRoot):————————————-Distinguished Name:

|——sys————————————— (sys)
     |——rack-unit-1————————(sys/rack-unit-1)
          |——adaptor-1————————(sys/rack-unit-1/adaptor-1)
          |——psu-1————————(sys/rack-unit-1/psu-1)
          |——psu-2————————(sys/rack-unit-1/psu-2)
```

Cisco IMC XML API Sample Flow

A typical request comes into Cisco IMC and is placed in the transactor queue in FIFO order. The transactor gets the request from the queue, interprets the request, and performs an authorization check. After the request is confirmed, the transactor updates the management information tree. This operation is done in a single transaction.

The following figure shows how Cisco IMC processes a boot server request. The following table describes the steps involved in a boot server request.

Figure 2: Sample Flow of Boot Server Request

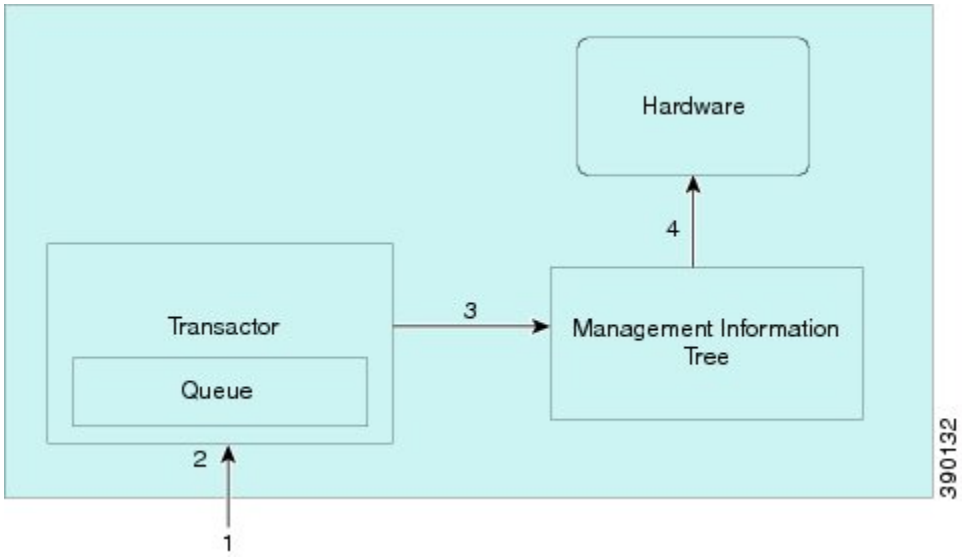


Table 1: Explanation of Boot Server Request

Step	Command/Process	Operational Power State of MO (Server)
1	CMD request: boot server	Down
2	Request queued	Down
3	State change in management information tree and make persistent the managed object (MO) state change	Down
4	Apply boot stimuli	Up

Object Naming

You can identify a specific object by its distinguished name (DN) or by its relative name (RN).

Distinguished Name

The distinguished name enables you to unambiguously identify a target object. The distinguished name has the following format consisting of a series of relative names:

```
dn = {rn}/{rn}/{rn}/{rn}...
```

In the following example, the DN provides a fully qualified path for `adaptor-1` from the top of the object tree to the object. The DN specifies the exact managed object on which the API call is operating.

```
< dn =”sys/rack-unit-1//adaptor-1”/>
```

Relative Name

The relative name identifies an object within the context of its parent object. The distinguished name is composed of a sequence of relative names.

For example, this distinguished name:

```
<dn = "sys/rack-unit-1//adaptor-1/host-eth-2"/>
```

is composed of the following relative names:

```
topSystem MO: rn="sys"
computeRackUnit MO: rn ="rack-unit-1"
adaptorUnit MO: rn="adaptor-<id>"
adaptorHostEthIf MO: rn="host-eth-<id>"
```

API Method Categories

Each method corresponds to an XML document.

Note Several code examples in this guide substitute the term `<real_cookie>` for an actual cookie (such as 1217377205/85f7ff49-e4ec-42fc-9437-da77a1a2c4bf). The XML API cookie is a 47-character string; it is not the type of cookie that web browsers store locally to maintain session information.

Authentication Methods

Authentication methods authenticate and maintain the session. For example:

- `aaaLogin`—Initial method for logging in.
- `aaaRefresh`—Refreshes the current authentication cookie.
- `aaaLogout`—Exits the current session and deactivates the corresponding authentication cookie.

Use the `aaaLogin` method to get a valid cookie. Use `aaaRefresh` to maintain the session and keep the cookie active. Use the aaaLogout method to terminate the session (also invalidates the cookie). A maximum of 4 sessions to the Cisco UCS can be opened at any one time.

Operations are performed using the HTTP post method (Cisco IMC supports both HTTP and HTTPS requests) over TCP. HTTP and HTTPS can be configured to use different port numbers, but TCP/443 (or TCP/80 for non-secure connections) is used by default. The HTTP envelope contains the XML configuration.

Tip In Cisco IMC, HTTP to HTTPS redirection is enabled by default. To capture HTTP packets between the client application and Cisco IMC, disable redirection in the Cisco IMC GUI or CLI.

Query Methods

Query methods obtain information on the current configuration state of an object. The following are query methods supported:

- `configResolveDn`—Retrieves objects by DN.
- `configResolveClass`—Retrieves objects of a given class.
- `configResolveChildren`—Retrieves the child objects of an object.
- `configResolveParent`—Retrieves the parent object of an object.

Most query methods have the argument inHierarchical (Boolean true/yes or false/no). If true, the inHierarchical argument returns all child objects.

```
<configResolveDn … inHierarchical="false"></>
<configResolveDn … inHierarchical="true"></>
```

Because the amount of data returned from Cisco IMC can be quite large, the inHierarchical argument should be used with care. For example, if the query method is used on a class or DN that refers to a managed object (MO) that is located high on the management information tree and inHierarchical is set to true, the response can contain almost the entire Cisco IMC configuration. The resources required for Cisco IMC to process the request can be high, causing Cisco IMC to take an extended amount of time to respond. To avoid delays, the query method should be performed on a smaller scale involving fewer MOs.

Tip If a query method does not respond or is taking a long time to respond, increase the timeout period on the client application or adjust the query method to involve fewer MOs.

The query API methods might also have an inRecursive argument to specify whether the call should be recursive (for example, follow objects that point back to other objects or the parent object).

Note Until a host is powered on at least once, Cisco IMC may not have complete inventory and status information. For example, if Cisco IMC is reset, it will not have detailed CPU, memory, or adapter inventory information until the next time the host is powered on. If a query method is performed on a MO corresponding to the unavailable data, the response will be blank.

Configuration Methods

The Cisco IMC XML API supports only a single method to make configuration changes to managed objects:

- `configConfMo`—Affects a single managed object (for example, a DN).

Event Subscription Methods

Applications get state change information by regular polling or event subscription. For more efficient use of resources, event subscription is the preferred method of notification. Polling should be used only under very limited circumstances.

Use `eventSubscribe` to register for events, as shown the following example:

```
<eventSubscribe
    cookie="<real_cookie>">
</eventSubscribe>
```

To receive notifications, open an HTTP or HTTPS session over TCP and keep the session open. On receiving `eventSubscribe`, starts sending all new events as they occur. You can unsubscribe from these events using the eventUnsubscribe method.

Each event has a unique event ID. Event IDs operate as counters and are included in all method responses. When an event is generated, the event ID counter increments and is assigned as the new event ID. This sequential numbering enables tracking of events and ensures that no event is missed.

An event channel connection opened by a user will be closed automatically by after 600 seconds of inactivity associated with the event channel session cookie. To prevent automatic closing of the event channel connection by , the user must either send the aaaKeepAlive request for the same event channel session cookie within 600 seconds or send any other XML API method to using the same event channel session cookie.

Note In releases 1.5(1.x) and later, the Cisco IMC API sends event notifications for fault-related events only.

Success or Failure Response

When responds to an XML API request, the response indicates failure if the request is impossible to complete. A successful response indicates only that the request is valid, not that the operation is complete. For example, it may take some time for a server to finish a power-on request. The power state changes from down to up only after the server actually powers on.

Successful Response

When a request has executed successfully, Cisco IMC returns an XML document with the information requested or a confirmation that the changes were made. The following is an example of a `configResolveDn` query on the distinguished name `sys/rack-unit-1/adaptor-2/ext-eth-0`:

```
<configResolveDn
     dn="sys/rack-unit-1/adaptor-2/ext-eth-0"
     cookie="<real_cookie>"
     inHierarchical="false"/>
```

The response includes the following information:

```
<configResolveDn
    cookie="<real_cookie>"
```

```
    response="yes"
    dn="sys/rack-unit-1/adaptor-2/ext-eth-0">
    <outConfig>
        <adaptorExtEthIf
            id="0"
            ifType="physical"
            linkState="up"
            mac="00:22:BD:D6:42:DA"
            name=""
            operState="up"
            portId="0"
            purpose="general"
            transport="CE"
            type=""
            dn="sys/rack-unit-1/adaptor-2/ext-eth-0" >
        </adaptorExtEthIf>
    </outConfig>
</configResolveDn>
```

Failed Requests

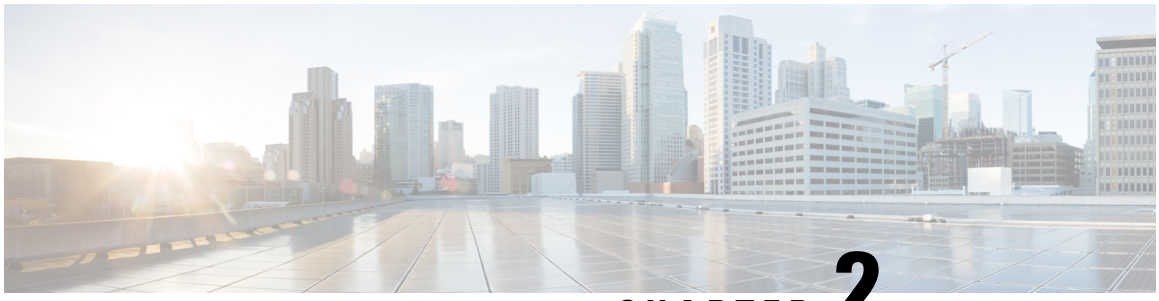
The response to a failed request includes XML attributes for errorCode and errorDescr. The following is an example of a response to a failed request:

```
<configConfMo dn="sys/rack-unit-1/adaptor-1/ext-eth-0"
     cookie="<real_cookie>"
     response="yes"
     errorCode="103"
     invocationResult="unidentified-fail"
     errorDescr="can't create; object already exists.">
</configConfMo>
```

Empty Results

A query request for a nonexistent object is not treated as a failure by Cisco IMC. If the object does not exist, Cisco IMC returns a success message, but the XML document contains an empty data field (`<outConfig> </outConfig>`) to indicate that the requested object was not found. The following example shows the response to an attempt to resolve the distinguished name on a nonexistent rack-mount server:

```
<configResolveDn
    cookie="<real_cookie>"
    response="yes"
    dn="sys/rack-unit-1/adaptor-9999">
    <outConfig>
    </outConfig>
</configResolveDn>
```



CHAPTER 2

Using the Cisco IMC XML API Methods

This chapter includes the following sections:

- Authentication Methods, on page 9
- Query Methods, on page 11

Authentication Methods

Authentication allows XML API interaction with the Cisco IMC. It provides a way to set permissions and control the operations that can be performed.

Note Most code examples in this guide substitute the term `<real_cookie>` for an actual cookie (such as 1217377205/85f7ff49-e4ec-42fc-9437-da77a1a2c4bf). The Cisco UCS cookie is a 47-character string; it is not the type of cookie that web browsers store locally to maintain session information.

Login

To log in, the XML API client establishes a TCP connection to the Cisco IMC HTTP (or HTTPS) server and posts an XML document containing the `aaaLogin` method.

In the following example, the Telnet utility is used to establish a TCP connection to port 80 of the Cisco IMC with IP address 192.0.20.72. The path used is /nuova.

```
$ telnet 192.0.20.72 80
POST /nuova HTTP/1.1
USER-Agent: lwp-request/2.06
HOST: 192.0.20.72
Content-Length: 62
Content-Type: application/x-www-form-urlencoded
```

Next, the client specifies the `aaaLogin` method and provides a user name and password:

```
<aaaLogin
    inName='admin'
    inPassword='password'>
</aaaLogin>
```

Note Do not include XML version or DOCTYPE lines in the XML API document. The inName and inPassword attributes are parameters.

Each XML API document represents an operation to be performed. When the request is received as an XML API document, Cisco IMC reads the request and performs the actions as provided in the method. Cisco IMC responds with a message in XML document format and indicates success or failure of the request.

The following is a typical successful response:

```
1 <aaaLogin
2    response="yes"
3    outCookie="<real_cookie>"
4       outRefreshPeriod="600"
5       outPriv="admin">
6 </aaaLogin>
```

Each line in the response should be interpreted as follows:

1. Specifies the method used to login.
2. Confirms that this is a response.
3. Provides the session cookie.
4. Specifies the recommended cookie refresh period. The default login session length is 600 seconds.
5. Specifies the privilege level assigned to the user account (this can be admin, user, or readonly).
6. Closing tag.

Alternatively, you can use the cURL utility to log in to the XML API, as shown in the following example:

```
curl -d "<aaaLogin inName='admin' inPassword='password'></aaaLogin>" http://192.0.20.72/nuova
```

If HTTPS is enabled, you must use HTTPS in the cURL command, as shown in the following example:

```
curl -d "<aaaLogin inName='admin' inPassword='password'></aaaLogin>" https://192.0.20.72/nuova
```

Refreshing the Session

Sessions are refreshed with the `aaaRefresh` method, using the 47-character cookie obtained either from the `aaaLogin` response or a previous refresh.

```
<aaaRefresh
    cookie="<real_cookie>"
    inCookie="<real_cookie>"
    inName='admin'
    inPassword='password'>
</aaaRefresh>
```

Logging Out of the Session

Use the following method to log out of a session:

```
<aaaLogout
    cookie="<real_cookie>"
    inCookie="<real_cookie>"
</aaaLogout>
```

Unsuccessful Responses

Failed login:

```
<aaaLogin
    cookie=""
    response="yes"
    errorCode="551"
    invocationResult="unidentified-fail"
    errorDescr="Authentication failed">
</aaaLogin>
```

Nonexistent object (blank return indicates no object with the specified DN):

```
<configResolveDn
    cookie="<real_cookie>"
    response="yes"
    dn="sys/rack-unit-1/adaptor-9999">
    <outConfig>
    </outConfig>
</configResolveDn>
```

Bad request:

```
<configConfMo
    cookie="<real_cookie>"
    response="yes"
    dn="sys/rack-unit-1/adaptor-1/ext-eth-0">
    errorCode="103"
    invocationResult="unidentified-fail"
    errorDescr="can't create; object already exists.">
</configConfMo>
```

Query Methods

Using `configResolveChildren`

When resolving children of objects in the MIT, note the following:

- This method obtains all child objects of a named object that are instances of the named class. If a class name is omitted, all child objects of the named object are returned.

- inDn attribute specifies the named object from which the child objects are retrieved (required).
- classId attribute specifies the name of the child object class to return (optional).
- Authentication cookie (from `aaaLogin` or `aaaRefresh`) is required.
- inHierarchical attribute (default = false) if true, specifies that results are hierarchical.
- Enumerated values, `classIds`, and bit masks are displayed as strings.

See the example request/response in configResolveChildren, on page 25.

Using `configResolveClass`

When resolving a class, note the following:

- All objects of the specified class type are retrieved.
- classId specifies the object class name to return (required).
- Authentication cookie (from `aaaLogin` or `aaaRefresh`) is required.
- inHierarchical attribute (default = false) if true, specifies that results are hierarchical.
- Enumerated values, `classIds`, and bit masks are displayed as strings.

Result sets can be large. Be precise when defining result sets. For example, to obtain only a list of adapters, use **`adaptorUnit`** as the attribute value for classId in the query. This example queries for all instances of the `adaptorUnit` class:

```
<configResolveClass
 cookie="real_cookie"
 inHierarchical="false"
 classId="adaptorUnit"/>
```

See the example request/response in configResolveClass, on page 27.

Using `configResolveDn`

When resolving a DN, note the following:

- The object specified by the DN is retrieved.
- Specified DN identifies the object instance to be resolved (required).
- Authentication cookie (from `aaaLogin` or `aaaRefresh`) is required.
- inHierarchical attribute (default = false) if true, specifies that results are hierarchical.
- Enumerated values, `classIds`, and bit masks are displayed as strings.

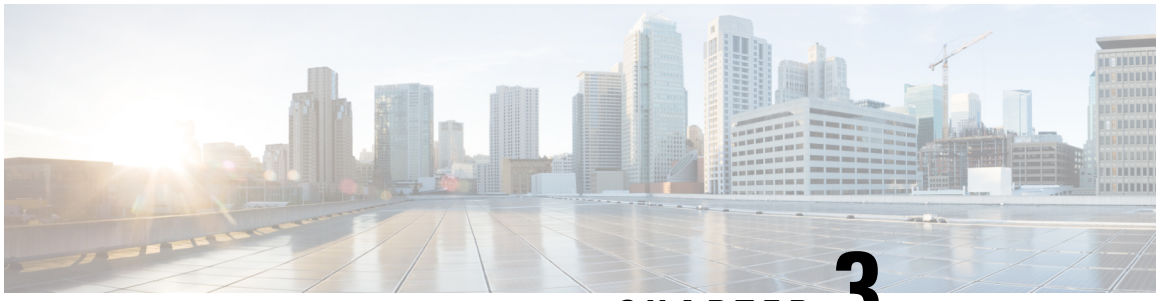
See the example request/response in configResolveDn, on page 28.

Using `configResolveParent`

When resolving the parent object of an object, note the following:

- This method retrieves the parent object of a specified DN.
- dn attribute is the DN of the child object (required).
- Authentication cookie (from `aaaLogin` or `aaaRefresh`) is required.
- inHierarchical attribute (default = false) if true, specifies that results are hierarchical.
- Enumerated values, `classIds`, and bit masks are displayed as strings.

See the example request/response in configResolveParent, on page 29.



CHAPTER 3

Cisco IMC XML API Method Descriptions

This chapter includes the following sections:

- aaaGetComputeAuthTokens, on page 15
- `aaaKeepAlive`, on page 16
- `aaaLogin`, on page 17
- `aaaLogout`, on page 19
- `aaaRefresh`, on page 20
- `configConfMo`, on page 21
- `configConfMos`, on page 22
- `configResolveChildren`, on page 25
- `configResolveClass`, on page 27
- `configResolveDn`, on page 28
- `configResolveParent`, on page 29
- `eventSubscribe`, on page 30
- `eventUnsubscribe`, on page 31

aaaGetComputeAuthTokens

The `aaaGetComputeAuthTokens` method returns authentication tokens that are used to launch the KVM. This generates two temporary authentication tokens that are valid for 60 seconds. The first is the KVM user name and the second token is the password. Using the authorization tokens as credentials, you can access the URL from where you can download the Java Network Launch Protocol (JNLP) file. You can download the JNLP file from the URL and launch it to start a KVM session.

Note

- You cannot obtain tokens if the vKVM option is disabled on the Cisco IMC.
- You must have user or admin privileges to the Cisco IMC to obtain the authentication tokens. Users with read-only privileges will not be able to obtain the tokens.
- The authorization tokens expire is 60 seconds; you cannot use the tokens after 60 seconds to access the URL. If you try to access after 60 seconds, the login fails and you get a authentication failure or timeout message.

Request Syntax

```
<xs:element name="aaaGetComputeAuthTokens" type="aaaGetComputeAuthTokens"
substitutionGroup="externalMethod"/>
     <xs:complexType name="aaaGetComputeAuthTokens" mixed="true">
         <xs:attribute name="cookie" type="stringMin0Max47" use="required"/>
         <xs:attribute name="response" type="YesOrNo"/>
     </xs:complexType>
```

Response Syntax

```
<xs:element name="aaaGetComputeAuthTokens" type="aaaGetComputeAuthTokens"
substitutionGroup="externalMethod"/>
        <xs:complexType name="aaaGetComputeAuthTokens" mixed="true">
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="outTokens">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                         <xs:minLength value="0"/>
                         <xs:maxLength value="510"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
        </xs:complexType>
```

Examples

Request:

```
aaaGetComputeAuthTokens
cookie="<real_cookie>" />
```

Response:

```
<aaaGetComputeAuthTokens cookie="<real_cookie>" outTokens="1804289383,846930886"
response="yes"> </aaaGetComputeAuthTokens>
```

aaaKeepAlive

The `aaaKeepAlive` method keeps the session active until the default session time expires, using the same cookie after the method call.

Request Syntax

```
<xs:element name="aaaKeepAlive" type="aaaKeepAlive" substitutionGroup="externalMethod"/>
        <xs:complexType name="aaaKeepAlive" mixed="true">
            <xs:attribute name="cookie" type="stringMin0Max47" use="required"/>
            <xs:attribute name="response" type="YesOrNo"/>
        </xs:complexType>
```

Response Syntax

```
<xs:element name="aaaKeepAlive" type="aaaKeepAlive" substitutionGroup="externalMethod"/>
        <xs:complexType name="aaaKeepAlive" mixed="true">
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="errorCode" type="xs:unsignedInt"/>
            <xs:attribute name="errorDescr" type="xs:string"/>
            <xs:attribute name="invocationResult" type="xs:string"/>
        </xs:complexType>
```

Examples

Request

```
<aaaKeepAlive
cookie="<real_cookie>">
</aaaKeepAlive>
```

Response

```
<aaaKeepAlive cookie="<real_cookie>" response="yes"> </aaaKeepAlive>
```

aaaLogin

The `aaaLogin` method is the login process and is required to begin a session. This action establishes the HTTP (or HTTPS) session between the client and Cisco IMC.

Note When the password expiry feature is enabled, the `aaaLogin` API indicates the expiry of password in the XML API response.

Request Syntax

```
<xs:element name="aaaLogin" type="aaaLogin" substitutionGroup="externalMethod"/>
        <xs:complexType name="aaaLogin" mixed="true">
            <xs:attribute name="inName" use="required">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                         <xs:pattern value="[\-\.:_a-zA-Z0-9]{0,16}"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="inPassword" use="required">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                         <xs:minLength value="0"/>
                         <xs:maxLength value="510"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="cookie" type="stringMin0Max47"/>
```

```
            <xs:attribute name="response" type="YesOrNo"/>
        </xs:complexType>
```

Response Syntax

```
<xs:element name="aaaLogin" type="aaaLogin" substitutionGroup="externalMethod"/>
        <xs:complexType name="aaaLogin" mixed="true">
            <xs:attribute name="outCookie" type="xs:string"/>
            <xs:attribute name="outRefreshPeriod" type="xs:unsignedInt"/>
        <xs:attribute name="outPriv">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:pattern value="(read-only|admin|user){0,1}"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:attribute>
            <xs:attribute name="outDomains" type="xs:string"/>
            <xs:attribute name="outChannel">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                         <xs:enumeration value="fullssl"/>
                         <xs:enumeration value="noencssl"/>
                         <xs:enumeration value="plain"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="outEvtChannel">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                         <xs:enumeration value="fullssl"/>
                         <xs:enumeration value="noencssl"/>
                         <xs:enumeration value="plain"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="outSessionId">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                         <xs:minLength value="0"/>
                         <xs:maxLength value="32"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="outVersion" type="xs:string"/>
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="errorCode" type="xs:unsignedInt"/>
            <xs:attribute name="errorDescr" type="xs:string"/>
            <xs:attribute name="invocationResult" type="xs:string"/>
        </xs:complexType>
```

Examples

Request

```
<aaaLogin inName='admin' inPassword='password'/>
```

Response

```
<aaaLogin cookie="" response="yes" outCookie="<real_cookie>" outRefreshPeriod="600"
outPriv="admin" outSessionId="17" outVersion="3.0(0.149)"> </aaaLogin>
```

aaaLogout

The `aaaLogout` method is a process to close a web session by passing the session cookie as input. It is not automatic; the user has to explicitly invoke the `aaaLogout` method to terminate the session.

Request Syntax

```
<xs:element name="aaaLogout" type="aaaLogout" substitutionGroup="externalMethod"/>
        <xs:complexType name="aaaLogout" mixed="true">
            <xs:attribute name="inCookie" type="stringMin0Max47" use="required"/>
            <xs:attribute name="cookie" type="stringMin0Max47"/>
            <xs:attribute name="response" type="YesOrNo"/>
        </xs:complexType>
```

Response Syntax

```
<xs:element name="aaaLogout" type="aaaLogout" substitutionGroup="externalMethod"/>
        <xs:complexType name="aaaLogout" mixed="true">
            <xs:attribute name="outStatus">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                         <xs:enumeration value="success"/>
                         <xs:enumeration value="failure"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="errorCode" type="xs:unsignedInt"/>
            <xs:attribute name="errorDescr" type="xs:string"/>
            <xs:attribute name="invocationResult" type="xs:string"/>
        </xs:complexType>
```

Examples

Request

```
<aaaLogout cookie="<real_cookie>" inCookie="<real_cookie>"></aaaLogout>
```

Response

```
<aaaLogout cookie="<real_cookie>" response="yes" outStatus="success"> </aaaLogout>
```

aaaRefresh

The aaaRefresh method keeps sessions active (within the default session time frame) by user activity. There is a default of 600 seconds that counts down when inactivity begins. If the 600 seconds expire, Cisco IMC enters a sleep mode. It requires signing back in, which restarts the countdown. It continues using the same session ID.

Note

- Using this method expires the previous cookie and issues a new cookie.
- When the password expiry feature is enabled, the aaaRefreshAPI indicates the expiry of password in the XML API response.

Request Syntax

```
<xs:element name="aaaRefresh" type="aaaRefresh" substitutionGroup="externalMethod"/>
        <xs:complexType name="aaaRefresh" mixed="true">
            <xs:attribute name="inName" use="required">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                         <xs:pattern value="[\-\.:_a-zA-Z0-9]{0,16}"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="inPassword" use="required">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                         <xs:minLength value="0"/>
                         <xs:maxLength value="510"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="inCookie" type="stringMin0Max47" use="required"/>
            <xs:attribute name="cookie" type="stringMin0Max47"/>
            <xs:attribute name="response" type="YesOrNo"/>
        </xs:complexType>
```

Response Syntax

```
<xs:element name="aaaRefresh" type="aaaRefresh" substitutionGroup="externalMethod"/>
        <xs:complexType name="aaaRefresh" mixed="true">
            <xs:attribute name="outCookie" type="xs:string"/>
            <xs:attribute name="outRefreshPeriod" type="xs:unsignedInt"/>
            <xs:attribute name="outPriv">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                        <xs:pattern value="(read-only|admin|user){0,1}"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="outDomains" type="xs:string"/>
            <xs:attribute name="outChannel">
                <xs:simpleType>
```

```
                    <xs:restriction base="xs:string">
                         <xs:enumeration value="fullssl"/>
                         <xs:enumeration value="noencssl"/>
                         <xs:enumeration value="plain"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="outEvtChannel">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                         <xs:enumeration value="fullssl"/>
                         <xs:enumeration value="noencssl"/>
                         <xs:enumeration value="plain"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="errorCode" type="xs:unsignedInt"/>
            <xs:attribute name="errorDescr" type="xs:string"/>
            <xs:attribute name="invocationResult" type="xs:string"/>
        </xs:complexType>
```

Examples

Request

```
<aaaRefresh
    cookie="<real_cookie>"
    inCookie="<real_cookie>"
    inName='admin'
    inPassword='password'>
</aaaRefresh>

<aaaRefresh cookie="<real_cookie>" inCookie="<real_cookie>" inName="admin"
inPassword="password">
</aaaRefresh>
```

Response

```
<aaaRefresh
    cookie="<real_cookie>"
    response="yes"
    outCookie="<real_cookie>"
    outRefreshPeriod="600"
    outPriv="admin">
</aaaRefresh>
```

configConfMo

The `configConfMo` method configures the specified managed object in a single subtree (for example, DN).

Request Syntax

```
<xs:element name="configConfMo" type="configConfMo" substitutionGroup="externalMethod"/>
        <xs:complexType name="configConfMo" mixed="true">
```

```
            <xs:all>
                <xs:element name="inConfig" type="configConfig" minOccurs="1"/>
            </xs:all>
            <xs:attribute name="inHierarchical">
                <xs:simpleType>
                    <xs:union memberTypes="xs:boolean YesOrNo"/>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="cookie" type="stringMin0Max47" use="required"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="dn" type="referenceObject" use="required"/>
        </xs:complexType>
```

Response Syntax

```
<xs:element name="configConfMo" type="configConfMo" substitutionGroup="externalMethod"/>
        <xs:complexType name="configConfMo" mixed="true">
            <xs:all>
                <xs:element name="outConfig" type="configConfig" minOccurs="0"/>
            </xs:all>
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="errorCode" type="xs:unsignedInt"/>
            <xs:attribute name="errorDescr" type="xs:string"/>
            <xs:attribute name="invocationResult" type="xs:string"/>
            <xs:attribute name="dn" type="referenceObject"/>
        </xs:complexType>
```

Examples

Request

```
<configConfMo
 cookie="<real_cookie>"
 dn='sys/rack-unit-1/locator-led'>
 <inConfig>
 <equipmentLocatorLed
 adminState='on' dn='sys/rack-unit-1/locator-led'>
 </equipmentLocatorLed>
 </inConfig>
 </configConfMo>
```

Response

```
<configConfMo dn="sys/rack-unit-1/locator-led"
cookie="1461754266/2f609b81-3176-1176-8007-4cc92474a254" response="yes">
<outConfig>
<equipmentLocatorLed dn="sys/rack-unit-1/locator-led" adminState="inactive" color="unknown"
 id="1" name="" operState="off" status="modified"/></outConfig>
</configConfMo>
```

configConfMos

The configConfMos method configures managed objects in multiple subtrees using DNs.

Request Syntax

```
<xs:element name="configConfMos" type="configConfMos" substitutionGroup="externalMethod"/>
        <xs:complexType name="configConfMos" mixed="true">
            <xs:all>
                <xs:element name="inConfigs" type="configMap" minOccurs="0">
                    <xs:unique name="unique_map_key_2">
                         <xs:selector xpath="pair"/>
                         <xs:field xpath="@key"/>
                    </xs:unique>
                </xs:element>
            </xs:all>
            <xs:attribute name="inHierarchical">
                <xs:simpleType>
                    <xs:union memberTypes="xs:boolean">
                         <xs:simpleType>
                             <xs:restriction base="xs:string">
                                 <xs:enumeration value="no"/>
                                 <xs:enumeration value="yes"/>
                             </xs:restriction>
                         </xs:simpleType>
                    </xs:union>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
        </xs:complexType>
```

Response Syntax

```
<xs:element name="configConfMos" type="configConfMos" substitutionGroup="externalMethod"/>
        <xs:complexType name="configConfMos" mixed="true">
            <xs:all>
                <xs:element name="outConfigs" type="configMap" minOccurs="0">
                    <xs:unique name="unique_map_key_5">
                         <xs:selector xpath="pair"/>
                         <xs:field xpath="@key"/>
                    </xs:unique>
                </xs:element>
            </xs:all>
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="errorCode" type="xs:unsignedInt"/>
            <xs:attribute name="errorDescr" type="xs:string"/>
            <xs:attribute name="invocationResult" type="xs:string"/>
        </xs:complexType>
```

Note

- Rolling back to the previously existing configuration when the multiple configuration fails, is not supported.
- **operStatus** in the output indicates whether or not the configuration has succeeded. This could have the following statuses:
- Success—indicates that the configuration of multiple MOs was successful.
- Partial success—indicates that a few configurations failed, displays the failed configurations and the reason for failure.
- Failure—indicates that all the configurations failed.

Examples

Request

```
<configConfMos
    cookie="<real_cookie>">
    <inConfigs>
    <pair key="sys/user-ext/user-13">
      <aaaUser priv="admin" id="13" name="TESTUSER13" pwd="testTEST15"
       accountStatus="active" dn="sys/user-ext/user-13"/>
    </pair>
    <pair key="sys/user-ext/user-14">
      <aaaUser priv="admin" id="14" name="TESTUSER14" pwd="testTEST15"
       accountStatus="active" dn="sys/user-ext/user-14"/>
    </pair>
    <pair key="sys/svc-ext/snmp-svc/snmpv3-user-5">
      <commSnmpUser id="5" name="testuser_5" securityLevel="authpriv"
       auth="MD5" authPwd="testtest" privacy="DES" privacyPwd="testTest5"/>
    </pair>
    <pair key="sys/svc-ext/snmp-svc/snmpv3-user-1">
      <commSnmpUser id="1" name="testuser_1" securityLevel="authpriv"
      auth="MD5" authPwd="testtest" privacy="DES" privacyPwd="testTest5"/>
    </pair>
    <pair key="sys/rack-unit-1/boot-precision">
      <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
        rebootOnUpdate="no" status="modified">
        <lsbootHdd name="testhdd_2" order="2"/>
        <lsbootHdd name="testhdd_1" order="1"/>
      </lsbootDevPrecision>
    </pair>
  </inConfigs>
</configConfMos>
```

Response

```
<configConfMos
    cookie="<real_cookie>"
   <outConfigs>
     <pair key="sys/user-ext/user-13">
      <aaaUser id="13" accountStatus="active" name="TESTUSER13"
       priv="admin" pwd="" adminAction="no-op"
       dn="sys/user-ext/user-13" status="modified"/>
```

```
    </pair>
    <pair key="sys/user-ext/user-14">
      <aaaUser id="14" accountStatus="inactive" name="" priv="" pwd=""
      adminAction="no-op" dn="sys/user-ext/user-14" status="modified"/>
    </pair>
    <pair key="sys/svc-ext/snmp-svc/snmpv3-user-5">
      <commSnmpUser id="5" name="testuser_5" securityLevel="authpriv"
      auth="MD5" authPwd="" privacy="DES" privacyPwd=""
      adminAction="no-op" dn="sys/svc-ext/snmp-svc/snmpv3-user-5"
      status="modified"/>
    </pair>
    <pair key="sys/svc-ext/snmp-svc/snmpv3-user-1">
      <commSnmpUser id="1" name="" securityLevel="" auth="" authPwd=""
      privacy="" privacyPwd="" adminAction="no-op"
      dn="sys/svc-ext/snmp-svc/snmpv3-user-1" status="modified"/>
    </pair>
    <pair key="sys/rack-unit-1/boot-precision">
      <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
       name="boot-precision" purpose="operational" rebootOnUpdate="no"
       reapply="no" configuredBootMode="Legacy"
       lastConfiguredBootOrderSource="CIMC" status="modified">
        <lsbootVMedia name="CDDVD" type="VMEDIA" subtype="kvm-mapped-dvd"
        access="read-only-local" order="3" state="Disabled" rn="vm-CDDVD"
        status="modified"/>
        <lsbootHdd name="testhdd_1" type="LOCALHDD" order="1"
         state="Disabled" rn="hdd-testhdd_1" status="modified"/>
        <lsbootHdd name="testhdd_2" type="LOCALHDD" order="2"
         state="Disabled" rn="hdd-testhdd_2" status="modified"/>
        <lsbootHdd name="HDD1" type="LOCALHDD" slot="HBA" order="4"
         state="Disabled" rn="hdd-HDD1" status="modified"/>
      </lsbootDevPrecision>
    </pair>
    <operStatus>all success</operStatus>
  </outConfigs>
</configConfMos>
```

configResolveChildren

The `configResolveChildren` method retrieves children of managed objects under a specific DN in the managed information tree.

Request Syntax

```
<xs:element name="configResolveChildren" type="configResolveChildren"
substitutionGroup="externalMethod"/>
        <xs:complexType name="configResolveChildren" mixed="true">
            <xs:attribute name="inDn" type="referenceObject" use="required"/>
            <xs:attribute name="inHierarchical">
                <xs:simpleType>
                    <xs:union memberTypes="xs:boolean YesOrNo"/>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="cookie" type="stringMin0Max47" use="required"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="classId" type="namingClassId"/>
        </xs:complexType>
```

Response Syntax

```
<xs:element name="configResolveChildren" type="configResolveChildren"
substitutionGroup="externalMethod"/>
        <xs:complexType name="configResolveChildren" mixed="true">
            <xs:all>
                <xs:element name="outConfigs" type="configSet" minOccurs="0"/>
            </xs:all>
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="errorCode" type="xs:unsignedInt"/>
            <xs:attribute name="errorDescr" type="xs:string"/>
            <xs:attribute name="invocationResult" type="xs:string"/>
            <xs:attribute name="classId" type="namingClassId"/>
        </xs:complexType>
```

Examples

Request

```
<configResolveChildren cookie="<real_cookie>" inHierarchical="false" inDn="sys"/>
```

Response

```
<configResolveChildren cookie="1461754266/2f609b81-3176-1176-8007-4cc92474a254"
response="yes"> <outConfigs> <computeRackUnit dn="sys/rack-unit-1" adminPower="policy"
availableMemory="16384" model="UCSC-server-name" memorySpeed="1333" name="UCS server_name"
 numOfAdaptors="1" numOfCores="8" numOfCoresEnabled="8" numOfCpus="2" numOfEthHostIfs="2"
numOfFcHostIfs="2" numOfThreads="8" operPower="on"
originalUuid="3FDC58B1-26CF-4CFA-BFA9-B028047280B1" presence="equipped" serverId="1"
serial="FCH1917V0P1" totalMemory="16384" usrLbl="" uuid="3FDC58B1-26CF-4CFA-BFA9-B028047280B1"
 vendor="Cisco Systems Inc" cimcResetReason="graceful-reboot " assetTag="in demo"
></computeRackUnit><aaaUserEp dn="sys/user-ext" ></aaaUserEp><aaaLdap dn="sys/ldap-ext"
adminState="disabled" basedn="" domain="" filter="sAMAccountName" attribute="CiscoAvPair"
timeout="60" encryption="enabled" locateDirectoryUsingDNS="no"
dnsDomainSource="extracted-domain" dnsSearchDomain="" dnsSearchForest="" ldapServer1=""
ldapServerPort1="389" ldapServer2="" ldapServerPort2="389" ldapServer3=""
ldapServerPort3="389" ldapServer4="" ldapServerPort4="3268" ldapServer5=""
ldapServerPort5="3268" ldapServer6="" ldapServerPort6="3268" bindMethod="login-credentials"
 bindDn="" password="" groupAuth="disabled" groupAttribute="memberOf" groupNestedSearch="128"
 ></aaaLdap><commSvcEp dn="sys/svc-ext" ></commSvcEp><certificateManagement dn="sys/cert-mgmt"
 description="Certificate Management" ></certificateManagement><mgmtImporter
dn="sys/import-config" adminState="disabled" fsmStageDescr="" fsmRmtInvErrCode=""
fsmRmtInvErrDescr="" fsmDescr="import-config" proto="none" hostname="" remoteFile="" user=""
 pwd="" passphrase="" ></mgmtImporter><mgmtBackup dn="sys/export-config" adminState="disabled"
 fsmStageDescr="" fsmRmtInvErrCode="" fsmRmtInvErrDescr="" fsmDescr="export-config"
proto="none" hostname="" remoteFile="" user="" pwd="" passphrase=""
></mgmtBackup><mgmtInventory dn="sys/inventory" adminState="triggered" proto="none"
hostname="" remoteFile="" user="" pwd="" fsmStatus="COMPLETED" progress="100%"
></mgmtInventory><huuController dn="sys/huu" description="Host Upgrade Utility (HUU)"
></huuController><iodController dn="sys/iod" description="Non-Interactive Offline Diagnostics
 (IOD)" ></iodController></outConfigs> </configResolveChildren>
```

configResolveClass

The configResolveClass method returns requested managed object in a given class. If inHierarchical=true, the results contain children.

Request Syntax

```
<xs:element name="configResolveClass" type="configResolveClass"
substitutionGroup="externalMethod"/>
        <xs:complexType name="configResolveClass" mixed="true">
            <xs:attribute name="inHierarchical">
                <xs:simpleType>
                    <xs:union memberTypes="xs:boolean YesOrNo"/>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="cookie" type="stringMin0Max47" use="required"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="classId" type="namingClassId" use="required"/>
        </xs:complexType>
```

Response Syntax

```
<xs:element name="configResolveClass" type="configResolveClass"
substitutionGroup="externalMethod"/>
        <xs:complexType name="configResolveClass" mixed="true">
            <xs:all>
                <xs:element name="outConfigs" type="configSet" minOccurs="0"/>
            </xs:all>
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="errorCode" type="xs:unsignedInt"/>
            <xs:attribute name="errorDescr" type="xs:string"/>
            <xs:attribute name="invocationResult" type="xs:string"/>
            <xs:attribute name="classId" type="namingClassId"/>
        </xs:complexType>
```

Examples

Request

```
<configResolveClass cookie="<real_cookie>" inHierarchical="false" classId="topSystem"/>
```

Response

```
<configResolveClass cookie="<real_cookie>" response="yes" classId="topSystem">
 <outConfigs> <topSystem dn="sys" address="10.10.10.10" currentTime="Wed Apr 27 10:51:08
2016 "
  localTime="Wed Apr 27 13:51:08 2016 EAT +0300" timeZone="Africa/Addis Ababa"
mode="stand-alone"
  name="Cxxx-FCH1917V0P1" >
 </topSystem>
</outConfigs>
 </configResolveClass>
```

configResolveDn

The `configResolveDn` method retrieves a single managed object for a specified DN.

Request Syntax

```
<xs:element name="configResolveDn" type="configResolveDn" substitutionGroup="externalMethod"/>

        <xs:complexType name="configResolveDn" mixed="true">
            <xs:attribute name="inHierarchical">
                <xs:simpleType>
                    <xs:union memberTypes="xs:boolean YesOrNo"/>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="cookie" type="stringMin0Max47" use="required"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="dn" type="referenceObject" use="required"/>
        </xs:complexType>
```

Response Syntax

```
<xs:element name="configResolveDn" type="configResolveDn"
substitutionGroup="externalMethod"/>
        <xs:complexType name="configResolveDn" mixed="true">
            <xs:all>
                <xs:element name="outConfig" type="configConfig" minOccurs="0"/>
            </xs:all>
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="errorCode" type="xs:unsignedInt"/>
            <xs:attribute name="errorDescr" type="xs:string"/>
            <xs:attribute name="invocationResult" type="xs:string"/>
            <xs:attribute name="dn" type="referenceObject"/>
        </xs:complexType>
```

Examples

Request

```
<configResolveDn cookie="1461754266/2f609b81-3176-1176-8007-4cc92474a254"
inHierarchical="false" dn="sys/rack-unit-1"/>
```

Response

```
<configResolveDn cookie="<real_cookie>" response="yes" dn="sys/rack-unit-1">
<outConfig> <computeRackUnit dn="sys/rack-unit-1" adminPower="policy" availableMemory="16384"

 model="UCSC-server-name" memorySpeed="1333" name="UCS server_name" numOfAdaptors="1"
numOfCores="8"
 numOfCoresEnabled="8" numOfCpus="2" numOfEthHostIfs="2" numOfFcHostIfs="2" numOfThreads="8"

 operPower="on" originalUuid="3FDC58B1-26CF-4CFA-BFA9-B028047280B1" presence="equipped"
 serverId="1" serial="FCH1917V0P1" totalMemory="16384" usrLbl=""
```

```
 uuid="3FDC58B1-26CF-4CFA-BFA9-B028047280B1" vendor="Cisco Systems Inc"
 cimcResetReason="graceful-reboot " assetTag="in demo" >
 </computeRackUnit>
</outConfig>
</configResolveDn>
```

configResolveParent

For a specified DN, the `configResolveParent` method retrieves the parent of the managed object.

Request Syntax

```
<xs:element name="configResolveParent" type="configResolveParent"
substitutionGroup="externalMethod"/>
        <xs:complexType name="configResolveParent" mixed="true">
            <xs:attribute name="inHierarchical">
                <xs:simpleType>
                    <xs:union memberTypes="xs:boolean YesOrNo"/>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="cookie" type="stringMin0Max47" use="required"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="dn" type="referenceObject" use="required"/>
        </xs:complexType>
```

Response Syntax

```
<xs:element name="configResolveParent" type="configResolveParent"
substitutionGroup="externalMethod"/>
        <xs:complexType name="configResolveParent" mixed="true">
            <xs:all>
                <xs:element name="outConfig" type="configConfig" minOccurs="0"/>
            </xs:all>
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="errorCode" type="xs:unsignedInt"/>
            <xs:attribute name="errorDescr" type="xs:string"/>
            <xs:attribute name="invocationResult" type="xs:string"/>
            <xs:attribute name="dn" type="referenceObject"/>
        </xs:complexType>
```

Examples

Request

```
<configResolveParent cookie="<real_cookie>" inHierarchical="false" dn="sys/rack-unit-1"/>
```

Response

```
<configResolveParent cookie="<real_cookie>" response="yes" dn="sys/rack-unit-1">
 <outConfig>
<topSystem dn="sys" address="10.197.125.42" currentTime="Wed Apr 27 10:53:26 2016 "
  localTime="Wed Apr 27 13:53:26 2016 EAT +0300" timeZone="Africa/Addis Ababa"
mode="stand-alone"
```

```
  name="server-FCH1917V0P1" >
 </topSystem>
</outConfig>
</configResolveParent>
```

eventSubscribe

The `eventSubscribe` method allows a client to subscribe to asynchronous System Event Log (SEL) events generated by Cisco IMC.

Event subscription allows a client application to register for event notification from Cisco IMC. When an event occurs, Cisco IMC informs the client application of the event and its type. Only the actual change information is sent. The object's unaffected attributes are not included.

Use `eventSubscribe` to register for events as shown in the following example:

```
<eventSubscribe
    cookie="<real_cookie>">
</eventSubscribe>
```

Request Syntax

```
<xs:element name="eventSubscribe" type="eventSubscribe" substitutionGroup="externalMethod"/>

        <xs:complexType name="eventSubscribe" mixed="true">
            <xs:attribute name="cookie" type="stringMin0Max47" use="required"/>
            <xs:attribute name="response" type="YesOrNo"/>
        </xs:complexType>
```

Response Syntax

```
<xs:element name="eventSubscribe" type="eventSubscribe"
substitutionGroup="externalMethod"/>
        <xs:complexType name="eventSubscribe" mixed="true">
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="errorCode" type="xs:unsignedInt"/>
            <xs:attribute name="errorDescr" type="xs:string"/>
            <xs:attribute name="invocationResult" type="xs:string"/>
        </xs:complexType>
```

Examples

Request

```
<eventSubscribe
    cookie="<real_cookie>">
</eventSubscribe>
```

Response

```
NO RESPONSE OR ACKNOWLEDGMENT.
```

eventUnsubscribe

The `eventUnsubscribe` method allows a client to unsubscribe from asynchronous System Event Log (SEL) events generated by Cisco IMC, reversing event subscriptions that resulted from `eventUnsubscribe`.

Use `eventUnsubscribe` to unsubscribe from events as shown in the following example:

```
<eventUnsubscribe
    cookie="<real_cookie>">
</eventUnsubscribe>
```

Request Syntax

```
<xs:element name="eventUnsubscribe" type="eventUnsubscribe"
substitutionGroup="externalMethod"/>
        <xs:complexType name="eventUnsubscribe" mixed="true">
            <xs:attribute name="cookie" type="stringMin0Max47" use="required"/>
            <xs:attribute name="response" type="YesOrNo"/>
        </xs:complexType>
```

Response Syntax

```
<xs:element name="eventUnsubscribe" type="eventUnsubscribe"
substitutionGroup="externalMethod"/>
        <xs:complexType name="eventUnsubscribe" mixed="true">
            <xs:attribute name="cookie" type="xs:string"/>
            <xs:attribute name="response" type="YesOrNo"/>
            <xs:attribute name="errorCode" type="xs:unsignedInt"/>
            <xs:attribute name="errorDescr" type="xs:string"/>
            <xs:attribute name="invocationResult" type="xs:string"/>
        </xs:complexType>
```

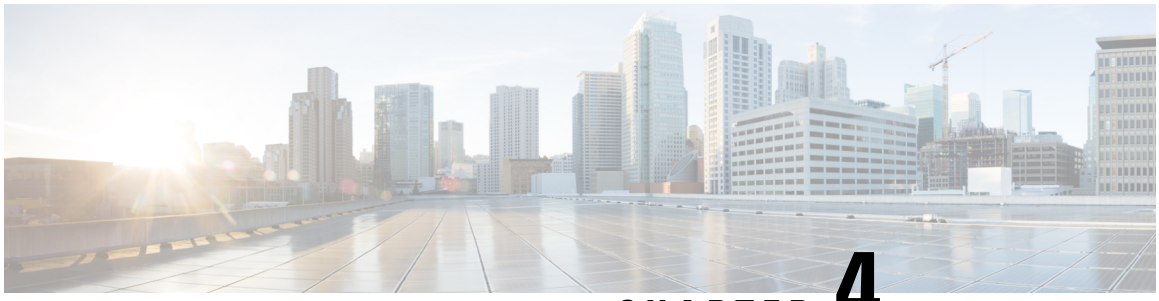
Examples

Request

```
<eventUnsubscribe
    cookie="<real_cookie>">
</eventUnsubscribe>
```

Response

```
NO RESPONSE OR ACKNOWLEDGMENT.
```



CHAPTER 4

Cisco IMC XML Schema Definition Files

This chapter includes the following sections:

- About the Cisco IMC XML Schema Definition Files, on page 33
- Examples of RACK-IN.xsd Usage, on page 33
- Examples of RACK-OUT.xsd Usage, on page 36

About the Cisco IMC XML Schema Definition Files

The C-Series XML API provides users with input XML Schema Definition (xsd) files for every model and a schema definition file for the output:

- `RACK-IN.xsd` — This document defines the XML document structure for a valid XML request that the Cisco IMC XML API accepts. It also specifies the classes and attributes that you can provide to the XML API configConfMo (Set) requests.
- `RACK-OUT.xsd` — This document defines the XML document structure for a valid XML response that the Cisco IMC XML API displays. It also specifies the classes and attributes that must appear in the XML API responses.

You can obtain these files from Cisco IMC at:

RACK-IN.xsd — **https://<Cisco IMC-IP>/visore/RACK-IN.xsd**

RACK-OUT — **https://<Cisco IMC-IP>/visore/RACK-OUT.xsd**

You also can download these files from the Cisco Developer Network, at: http://developer.cisco.com/web/unifiedcomputing/c-series-cimc-xml-api.

You can use one of the available open source tools to validate the XML document against the XML schema files. In the examples used in this section, xmllint available for download at: http://www.xmlsoft.org is used as the tool for validation. You also can use the xml schema validation feature of a programming language, for example xerces in Java, for this validation.

Examples of RACK-IN.xsd Usage

Validating an XML Request Using RACK-IN.xsd

Example of Use of the RACK-IN.xsd for an Invalid configResolveClass Request

Request:

```
$cat myXMLRequest.xml
<configResolveClass cookie="1360626069/7189c2b0-d57b-157b-8002-f4759de53d50"
inHierarchical="false"/>
```

Validating the request:

```
/usr/bin/xmllint -schema  ./RACK-IN.xsd  myXMLRequest.xml
<configResolveClass cookie="1360626069/7189c2b0-d57b-157b-8002-f4759de53d50"
inHierarchical="false"/>
```

Response:

```
myXMLRequest.xml:1: element configResolveClass:
Schemas validity error : Element 'configResolveClass': The attribute 'classId' is required
 but missing.
```

In the preceding example, validation of the XML request fails and displays an error because the 'classId' is missing in the request.

Example of Use of the RACK-IN.xsd for a Valid configResolveClass Request

Request:

```
$cat myXMLRequest.xml
<configResolveClass cookie="1360626069/7189c2b0-d57b-157b-8002-f4759de53d50"
inHierarchical="false" classId="topSystem"/>
```

Request:

```
/usr/bin/xmllint -schema ./RACK-IN.xsd  myXMLRequest.xml
<configResolveClass cookie="1360626069/7189c2b0-d57b-157b-8002-f4759de53d50"
inHierarchical="false" classId="topSystem"/>
```

In the preceding example, validation of the XML request for a classResolveClass is successful and the response is displayed.

Example of Use of the RACK-IN.xsd for an Invalid configConfMo Request

Request:

```
$cat setRackUnit.xml
<configConfMo cookie="1300242644/ad04d239-d1aa-498d-b074-ccb923066003"
dn="sys/rack-unit-1" inHierarchical="false">
  <inConfig>
     <computeRackUnit adminPower="down" usrLbl="UCS server For Demo"
      availableMemory="16384" dn="sys/rack-unit-1"/>
  </inConfig>
</configConfMo>
```

Validating the request:

```
/usr/bin/xmllint -schema ./RACK-IN.xsd  /setRackUnit.xml
<configConfMo  cookie="1300242644/ad04d239-d1aa-498d-b074-ccb923066003"
dn="sys/rack-unit-1"inHierarchical="false">
  <inConfig>
    <computeRackUnit adminPower="down" usrLbl="UCS server For Demo"
     availableMemory="16384" dn="sys/rack-unit-1"/>
  </inConfig>
</configConfMo>
```

Response:

```
/setRackUnit.xml:3: element computeRackUnit: Schemas validity error :
Element 'computeRackUnit', attribute 'availableMemory': The attribute 'availableMemory' is
```

```
 not allowed.
/setRackUnit.xml fails to validate
```

The availableMemory attribute is read-only in the computeRackUnitclass. You can view the read/write attributes in computeRackUnit that can be set using configCongMo XML by looking at the computeRackUnit definition in RACK-IN.xsd. A sample snippet is as follows:

```
<!--computeRackUnit-->
        <xs:element name="computeRackUnit" type="computeRackUnit"
substitutionGroup="managedObject"/>
        <xs:complexType name="computeRackUnit" mixed="true">

            <xs:attribute name="adminPower">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                         <xs:enumeration value="up"/>
                         <xs:enumeration value="down"/>
                         <xs:enumeration value="soft-shut-down"/>
                         <xs:enumeration value="cycle-immediate"/>
                         <xs:enumeration value="hard-reset-immediate"/>
                         <xs:enumeration value="bmc-reset-immediate"/>
                         <xs:enumeration value="bmc-reset-default"/>
                         <xs:enumeration value="cmos-reset-immediate"/>
                         <xs:enumeration value="diagnostic-interrupt"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>

            <xs:attribute name="usrLbl">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                         <xs:pattern value="[
!#$%&amp;\(\)\*\+,\-\./:;\?@\[\]_\{\|\}~a-zA-Z0-9]{0,64}"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>

            <xs:attribute name="dn" type="referenceObject"/>
            <xs:attribute name="rn" type="referenceRn"/>
            <xs:attribute name="status" type="objectStatus"/>
        </xs:complexType>
```

Example of Use of the RACK-IN.xsd for an Invalid configConfMo Request

Request:

```
$ cat setBootOrder.xml
<configConfMo cookie="1360205300/79c672f0-d519-1519-8004-30339ee53d50"
inHierarchical="true" dn="sys/rack-unit-1/boot-policy">
  <inConfig>
    <lsbootDef dn="sys/rack-unit-1/boot-policy"   name="boot-policy"  purpose="operational"
 rebootOnUpdate="no">
      <lsbootVirtualMedia access="read-only" order="2" type="virtual-media"
rn="vm-read-only"/>
      <lsbootVirtualMedia access="read-write" order="3" type="virtual-media"
rn="vm-read-write"/>
      <lsbootLan rn="lan-read-only" access="read-only" order="4" prot="pxe" type="lan"/>
      <lsbootStorage rn="storage-read-write" access="read-write" order="1" type="storage">
       <lsbootLocalStorage rn="local-storage"/>
      </lsbootStorage>
      <lsbootEfi rn="efi-read-only" access="read-only" order="5" type="efi"/>
    </lsbootDef>
  </inConfig>
</configConfMo>
```

Validating the request:

```
/usr/bin/xmllint -schema ./RACK-IN.xsd ./setBootOrder.xml
<configConfMo cookie="1360205300/79c672f0-d519-1519-8004-30339ee53d50"
inHierarchical="true" dn="sys/rack-unit-1/boot-policy">
  <inConfig>
    <lsbootDef dn="sys/rack-unit-1/boot-policy" name="boot-policy" purpose="operational"
rebootOnUpdate="no">
      <lsbootVirtualMedia access="read-only" order="2" type="virtual-media"
rn="vm-read-only"/>
      <lsbootVirtualMedia access="read-write" order="3" type="virtual-media"
rn="vm-read-write"/>
      <lsbootLan rn="lan-read-only" access="read-only" order="4" prot="pxe" type="lan"/>
      <lsbootStorage rn="storage-read-write" access="read-write" order="1" type="storage">
        <lsbootLocalStorage rn="local-storage"/>
      </lsbootStorage>
      <lsbootEfi rn="efi-read-only" access="read-only" order="5" type="efi"/>
    </lsbootDef>
  </inConfig>
</configConfMo>
```

Response:

```
./setBootOrder.xml:3: element lsbootDef: Schemas validity error :
Element 'lsbootDef', attribute 'name': The attribute 'name' is not allowed.
./setBootOrder.xml:3: element lsbootDef: Schemas validity error :
Element 'lsbootDef', attribute 'purpose': The attribute 'purpose' is not allowed.
./setBootOrder.xml fails to validate
```

Name and purpose attributes of class lsBootDef are read-only and cannot be used in the configConMo/set request.

Example of Use of the RACK-IN.xsd for a Valid configConfMo Request

Request:

```
usr/bin/xmllint -schema ./RACK-IN.xsd  /setRackUnit.xml
<configConfMo  cookie="1300242644/ad04d239-d1aa-498d-b074-ccb923066003"
 dn="sys/rack-unit-1" inHierarchical="false">
  <inConfig>
    <computeRackUnit adminPower="down" usrLbl="UCS server For Demo" dn="sys/rack-unit-1"/>
</inConfig>
</configConfMo>
```

xsd file validates the request and completes the configuration.

Examples of RACK-OUT.xsd Usage

Validating an XML Request Using RACK_OUT.xsd

Example of Use of the RACK-OUT.xsd for a configResolveClass Request

Request:

```
<configResolveClass cookie="1360632361/e892fa10-d57c-157c-8003-f4759de53d50"
inHierarchical="false" classId="computeRackUnit"/>'
https://172.xx.219.xx/nuova | xmllint -format -  |  xmllint -schema ./RACK-OUT.xsd -
```

Response:

```
<configResolveClass cookie="1360632361/e892fa10-d57c-157c-8003-f4759de53d50"
response="yes" classId="computeRackUnit">
  <outConfigs>
    <computeRackUnit dn="sys/rack-unit-1" adminPower="policy" availableMemory="16384"
model="UCSC-server-name"
     memorySpeed="1333" name="UCS server_name" numOfAdaptors="1" numOfCores="16"
numOfCoresEnabled="16" numOfCpus="2"
     numOfEthHostIfs="2" numOfFcHostIfs="3" numOfThreads="32" operPower="on"
     originalUuid="2E5D2295-F32D-48C9-BE8E-BAD36BE174FB" presence="equipped" serverId="1"
serial="FCH1551V030"
    totalMemory="16384" usrLbl="SL2_=+@#$-;,./\" uuid="2E5D2295-F32D-48C9-BE8E-BAD36BE174FB"

     vendor="Cisco Systems Inc"/>
  </outConfigs>
</configResolveClass>
```

Rack-out.xsd validates the output successfully.

Example of Use of the RACK-OUT.xsd for a configResolveClass Request

Request:

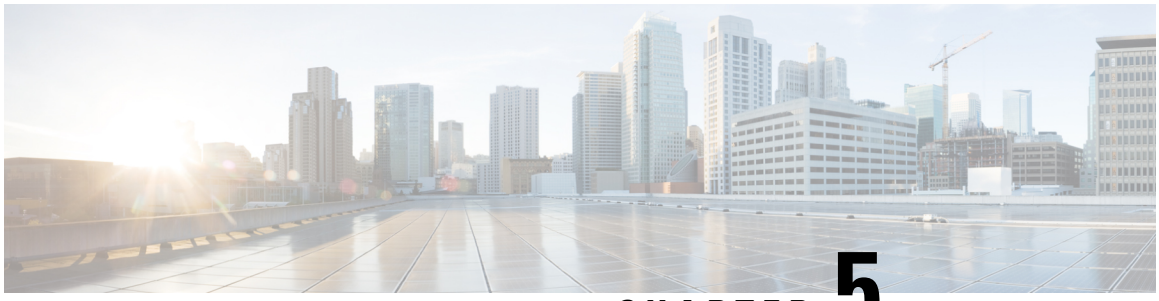
```
$ /usr/bin/curl -k -d'<configResolveClass
cookie="1361150931/a5bacff0-d5f5-15f5-8007-f4759de53d50"
inHierarchical="true" classId="topSystem"/>'  https://172.29.219.74/nuova >
Cxxx_complete_MIT.xml
real    0m35.065s
user    0m0.016s
sys     0m0.044s
```

Validating the response:

```
$ ls -l Cxxx_complete_MIT.xml
-rw-r--r--. 1 sajaffer eng58 64905 Feb 17 17:46 Cxxx_complete_MIT.xml

$ /usr/bin/xmllint -schema   RACK-OUT.xsd   Cxxx_complete_MIT.xml 1>/dev/null
Cxxx_complete_MIT.xml validates
```

The preceding XML requests retrieve the complete management information tree of a C-Series server and validate the response against RACK-OUT.xsd



CHAPTER 5

Cisco IMC XML Object-Access Privileges

This chapter includes the following sections:

- Privileges Summary Table, on page 39
- Privileges, on page 39

Privileges Summary Table

When users are assigned to a role, that role allows certain privileges. Those privileges allow the user access to specific system resources and authorize permission to perform tasks on those resources. The following table lists each privilege and the initial default user role that has been given that privilege.

Internal Name	Label	Description
admin, on page 39	ADMIN	Access to everything
read-only, on page 40	READ_ONLY	Read-only access
user, on page 40	USER	Limited configuration access

Privileges

admin

Purpose

System administration

Responsible Role

Administrator

Controlled Objects

This role is system level. The administrator controls all objects.

read-only

Purpose

Read-only access

Responsible Role

This is not a selectable privilege. All roles have read-only access to all objects. Roles that have read-write privileges on some objects also have read-only access to all other objects.

user

Purpose

Restricted configuration

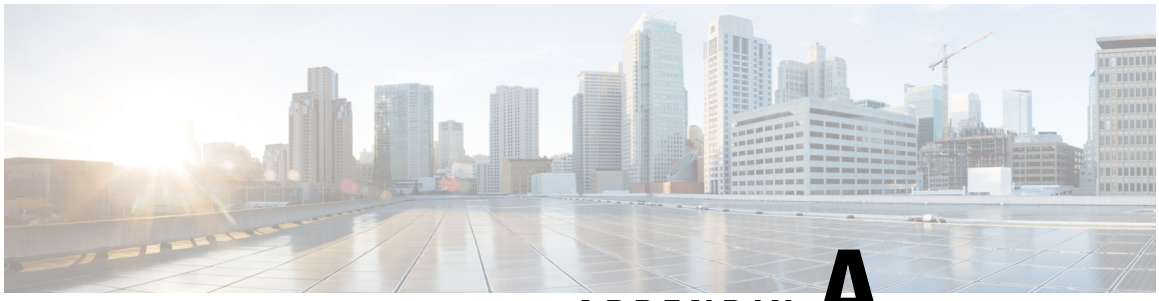
Responsible Role

User

Controlled Objects

This role can perform the following tasks:

- View all information
- Manage the power control options such as power on, power cycle, and power off
- Launch the KVM console and virtual media
- Clear all logs
- Ping



APPENDIX A

Examples of Common Tasks

- Viewing Pulse Width Modulation (PWM), on page 42
- Viewing Temperature Details of Third Party Adapters, on page 44
- Viewing Port Status for third Party Adapters, on page 45
- Viewing Enhanced FRU Data for Third Party Adapters, on page 46
- Configuring QinQ Support, on page 48
- Creating a User, on page 49
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- Secure Boot Certificate Management, on page 51
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- Configuring Non-IPMI User Mode and Virtual Media XML API Examples, on page 85
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- Examples of Common Server Management Tasks Contd., on page 177
- Examples of Common Server Management Tasks Contd., on page 230
- Examples of Common Server Management Tasks Contd., on page 247
- Persistent Memory Module XML API Examples, on page 252

Viewing Pulse Width Modulation (PWM)

Viewing Pulse Width Modulation - PWM

Beginning with release 4.3.5.240021, Cisco IMC now includes an additional sensor property for the fan - Pulse Width Modulation (PWM). PWM is the absolute measure of the fan on and off duration to control the speed.

Request

```
curl -k -d "<configResolveClass cookie='4e6d928b6d/9f061631-040e-fbd8-7ad2-24fa946d5152'
inHierarchical='true' classId='equipmentFanModule'/>" https://10.10.10.10/nuova | xmllint
-schema 69_RACK-OUT.xsd  -
```

Response

```
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  6293    0  6164  100   129   9172    191 --:--:-- --:--:-- --:--:--  9364
<?xml version="1.0"?>
<configResolveClass cookie="4e6d928b6d/9f061631-040e-fbd8-7ad2-24fa946d5152" response="yes"
 classId="equipmentFanModule">
<outConfigs>
<equipmentFanModule dn="sys/rack-unit-1/fan-module-1-1" id="1" model="not-supported"
presence="equipped" operability="operable" power="on"
thermal="not-supported" voltage="not-supported" serial="not-supported" vendor="not-supported"

tray="1" pwm="44"><equipmentFan rn="fan-1" id="1" model="not-supported" presence="equipped"

operability="operable" module="1" power="on" thermal="not-supported" voltage="not-supported"

serial="not-supported" vendor="not-supported" tray="1"/><equipmentFan rn="fan-2" id="2"
model="not-supported" presence="equipped" operability="operable" module="1" power="on"
thermal="not-supported" voltage="not-supported" serial="not-supported" vendor="not-supported"

tray="1"/></equipmentFanModule><equipmentFanModule dn="sys/rack-unit-1/fan-module-1-2"
id="2"
model="not-supported" presence="equipped" operability="operable" power="on"
thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1" pwm="44">
<equipmentFan rn="fan-1" id="1" model="not-supported" presence="equipped"
operability="operable"
module="2" power="on" thermal="not-supported" voltage="not-supported" serial="not-supported"

vendor="not-supported" tray="1"/><equipmentFan rn="fan-2" id="2" model="not-supported"
presence="equipped" operability="operable" module="2" power="on" thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1"/>
</equipmentFanModule><equipmentFanModule dn="sys/rack-unit-1/fan-module-1-3" id="3"
model="not-supported" presence="equipped" operability="operable" power="on"
thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1" pwm="44">
<equipmentFan rn="fan-1" id="1" model="not-supported" presence="equipped"
operability="operable"
module="3" power="on" thermal="not-supported" voltage="not-supported" serial="not-supported"

vendor="not-supported" tray="1"/><equipmentFan rn="fan-2" id="2" model="not-supported"
presence="equipped" operability="operable" module="3" power="on" thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1"/>
</equipmentFanModule><equipmentFanModule dn="sys/rack-unit-1/fan-module-1-4" id="4"
model="not-supported" presence="equipped" operability="operable" power="on"
```

```
thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1" pwm="44">
<equipmentFan rn="fan-1" id="1" model="not-supported" presence="equipped"
operability="operable"
module="4" power="on" thermal="not-supported" voltage="not-supported" serial="not-supported"

vendor="not-supported" tray="1"/><equipmentFan rn="fan-2" id="2" model="not-supported"
presence="equipped" operability="operable" module="4" power="on" thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1"/>
</equipmentFanModule><equipmentFanModule dn="sys/rack-unit-1/fan-module-1-5" id="5"
model="not-supported" presence="equipped" operability="operable" power="on"
thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1" pwm="44">
<equipmentFan rn="fan-1" id="1" model="not-supported" presence="equipped"
operability="operable"
module="5" power="on" thermal="not-supported" voltage="not-supported" serial="not-supported"

vendor="not-supported" tray="1"/><equipmentFan rn="fan-2" id="2" model="not-supported"
presence="equipped" operability="operable" module="5" power="on" thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1"/>
</equipmentFanModule><equipmentFanModule dn="sys/rack-unit-1/fan-module-1-6" id="6"
model="not-supported" presence="equipped" operability="operable" power="on"
thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1" pwm="44">
<equipmentFan rn="fan-1" id="1" model="not-supported" presence="equipped"
operability="operable"
module="6" power="on" thermal="not-supported" voltage="not-supported" serial="not-supported"

vendor="not-supported" tray="1"/><equipmentFan rn="fan-2" id="2" model="not-supported"
presence="equipped" operability="operable" module="6" power="on" thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1"/>
</equipmentFanModule><equipmentFanModule dn="sys/rack-unit-1/fan-module-1-7" id="7"
model="not-supported" presence="equipped" operability="operable" power="on"
thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1" pwm="44">
<equipmentFan rn="fan-1" id="1" model="not-supported" presence="equipped"
operability="operable"
module="7" power="on" thermal="not-supported" voltage="not-supported" serial="not-supported"

vendor="not-supported" tray="1"/><equipmentFan rn="fan-2" id="2" model="not-supported"
presence="equipped" operability="operable" module="7" power="on" thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1"/>
</equipmentFanModule><equipmentFanModule dn="sys/rack-unit-1/fan-module-1-8" id="8"
model="not-supported" presence="equipped" operability="operable" power="on"
thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1" pwm="44">
<equipmentFan rn="fan-1" id="1" model="not-supported" presence="equipped"
operability="operable"
module="8" power="on" thermal="not-supported" voltage="not-supported" serial="not-supported"

vendor="not-supported" tray="1"/><equipmentFan rn="fan-2" id="2" model="not-supported"
presence="equipped" operability="operable" module="8" power="on" thermal="not-supported"
voltage="not-supported" serial="not-supported" vendor="not-supported" tray="1"/>
</equipmentFanModule>
</outConfigs>
</configResolveClass>
- validates
```

Viewing Temperature Details of Third Party Adapters

Viewing Temperature Details of Third Party Adapters

Request

```
<configResolveClass cookie='73efb6636a/9ea9ab6b-5c71-3039-df98-a40b4e03f3f8'
inHierarchical='true' classId='pciAdapterTemperature'/>"
https://10.10.10.10/nuova
```

Response

```
<pciAdapterTemperature id="1" temperature="53"
dn="sys/rack-unit-1/pci-adapter-fru-5/pci-adapter-temperature-1" >
</pciAdapterTemperature><pciAdapterTemperature id="2" temperature="0"
dn="sys/rack-unit-1/pci-adapter-fru-5/pci-adapter-temperature-2" >
</pciAdapterTemperature><pciAdapterTemperature id="3" temperature="0"
dn="sys/rack-unit-1/pci-adapter-fru-5/pci-adapter-temperature-3" >
</pciAdapterTemperature><pciAdapterTemperature id="1" temperature="83"
dn="sys/rack-unit-1/pci-adapter-fru-3/pci-adapter-temperature-1" >
</pciAdapterTemperature><pciAdapterTemperature id="2" temperature="0"
dn="sys/rack-unit-1/pci-adapter-fru-3/pci-adapter-temperature-2" >
</pciAdapterTemperature><pciAdapterTemperature id="3" temperature="0"
dn="sys/rack-unit-1/pci-adapter-fru-3/pci-adapter-temperature-3" >
</pciAdapterTemperature><pciAdapterTemperature id="1" temperature="61"
dn="sys/rack-unit-1/pci-adapter-fru-1/pci-adapter-temperature-1" >
</pciAdapterTemperature><pciAdapterTemperature id="2" temperature="0"
dn="sys/rack-unit-1/pci-adapter-fru-1/pci-adapter-temperature-2" >
</pciAdapterTemperature><pciAdapterTemperature id="3" temperature="0"
dn="sys/rack-unit-1/pci-adapter-fru-1/pci-adapter-temperature-3" >
</pciAdapterTemperature></outConfigs>
</configResolveClass>
```

Beginning with release 4.3.5.240021, Cisco IMC displays temperature details for network adapters - DPUs or SuperNICs.

Sample Request

```
curl -k -d "<configResolveClass cookie='cb869e554f/a3acd0ba-ad5a-23e8-4ea0-e9b099c12ad3'
inHierarchical='true'
classId='pciAdapterTemperature'/>" https://10.10.10.10/nuova |xmllint -schema 113_RACK-OUT.xsd
 -
```

Sample Response

```
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   716    0   584  100   132    993    224 --:--:-- --:--:-- --:--:--  1217
<?xml version="1.0"?>
<configResolveClass cookie="cb869e554f/a3acd0ba-ad5a-23e8-4ea0-e9b099c12ad3" response="yes"
 classId="pciAdapterTemperature">
<outConfigs>
<pciAdapterTemperature dn="sys/rack-unit-1/pci-adapter-fru-5/pci-adapter-temperature-1"
id="1" temperature="62"/>
<pciAdapterTemperature dn="sys/rack-unit-1/pci-adapter-fru-5/pci-adapter-temperature-2"
id="2" temperature="0"/>
<pciAdapterTemperature dn="sys/rack-unit-1/pci-adapter-fru-5/pci-adapter-temperature-3"
id="3" temperature="0"/>
</outConfigs>
</configResolveClass>
- validates
```

Sample Request

```
curl -k -d "<configResolveClass cookie='469c410904/75f3b9a9-6209-4123-f909-dcf4a8375428'
inHierarchical='true'
classId='pciAdapterTemperature'/>" https://10.10.10.10/nuova |xmllint -schema 113_RACK-OUT.xsd
 -
```

Sample Response

```
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  1399    0  1267  100   132    761     79  0:00:01  0:00:01 --:--:--   841
<?xml version="1.0"?>
<configResolveClass cookie="469c410904/75f3b9a9-6209-4123-f909-dcf4a8375428" response="yes"
 classId="pciAdapterTemperature">
<outConfigs>
<pciAdapterTemperature dn="sys/rack-unit-1/pci-adapter-fru-1/pci-adapter-temperature-1"
id="1" temperature="71"/>
<pciAdapterTemperature dn="sys/rack-unit-1/pci-adapter-fru-1/pci-adapter-temperature-2"
id="2" temperature="53"/>
<pciAdapterTemperature dn="sys/rack-unit-1/pci-adapter-fru-1/pci-adapter-temperature-3"
id="3" temperature="0"/>
<pciAdapterTemperature dn="sys/rack-unit-1/pci-adapter-fru-1/pci-adapter-temperature-4"
id="4" temperature="1"/>
<pciAdapterTemperature dn="sys/rack-unit-1/pci-adapter-fru-3/pci-adapter-temperature-1"
id="1" temperature="66"/>
<pciAdapterTemperature dn="sys/rack-unit-1/pci-adapter-fru-3/pci-adapter-temperature-2"
id="2" temperature="49"/>
<pciAdapterTemperature dn="sys/rack-unit-1/pci-adapter-fru-3/pci-adapter-temperature-3"
id="3" temperature="0"/>
<pciAdapterTemperature dn="sys/rack-unit-1/pci-adapter-fru-3/pci-adapter-temperature-4"
id="4" temperature="1"/>
</outConfigs>
</configResolveClass>
- validates
```

Viewing Port Status for third Party Adapters

Viewing Port Status Details for Third Party Adapters

Request

```
<configResolveClass cookie='73efb6636a/9ea9ab6b-5c71-3039-df98-a40b4e03f3f8'
inHierarchical='true' classId='pciAdapterPortStatus'/>" https://10.10.10.10/nuova
```

Response

```
<outConfigs>
<pciAdapterPortStatus id="0" portStatus="down" linkSpeed="NA"
dn="sys/rack-unit-1/pci-adapter-fru-8/pci-adapter-portstatus-0" >
</pciAdapterPortStatus><pciAdapterPortStatus id="1" portStatus="down"
linkSpeed="NA" dn="sys/rack-unit-1/pci-adapter-fru-8/pci-adapter-portstatus-1" >
</pciAdapterPortStatus><pciAdapterPortStatus id="2" portStatus="down" linkSpeed="NA"
dn="sys/rack-unit-1/pci-adapter-fru-8/pci-adapter-portstatus-2" ></pciAdapterPortStatus>
<pciAdapterPortStatus id="3" portStatus="down" linkSpeed="NA"
dn="sys/rack-unit-1/pci-adapter-fru-8/pci-adapter-portstatus-3" >
</pciAdapterPortStatus><pciAdapterPortStatus id="0" portStatus="up" linkSpeed="1000 Mbps"
dn="sys/rack-unit-1/pci-adapter-fru-7/pci-adapter-portstatus-0" ></pciAdapterPortStatus>
<pciAdapterPortStatus id="1" portStatus="down" linkSpeed="NA"
dn="sys/rack-unit-1/pci-adapter-fru-7/pci-adapter-portstatus-1" >
</pciAdapterPortStatus><pciAdapterPortStatus id="0" portStatus="down" linkSpeed="NA"
```

```
dn="sys/rack-unit-1/pci-adapter-fru-5/pci-adapter-portstatus-0" >
</pciAdapterPortStatus><pciAdapterPortStatus id="1" portStatus="down" linkSpeed="NA"
dn="sys/rack-unit-1/pci-adapter-fru-5/pci-adapter-portstatus-1" ></pciAdapterPortStatus>
<pciAdapterPortStatus id="0" portStatus="down" linkSpeed="NA"
dn="sys/rack-unit-1/pci-adapter-fru-3/pci-adapter-portstatus-0" >
```

Beginning with release 4.3.5.240021, Cisco IMC displays port status details for network adapters - DPUs or SuperNICs.

Sample Request

```
curl -k -d "<configResolveClass cookie='cb869e554f/a3acd0ba-ad5a-23e8-4ea0-e9b099c12ad3'
 inHierarchical='true' classId='pciAdapterTemperature'/>"
https://10.10.10.10/nuova |xmllint -schema 113_RACK-OUT.xsd -
```

Sample Response

```
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   510    0   349  100   161    696    321 --:--:-- --:--:-- --:--:--  1017
<?xml version="1.0"?>
<configResolveDn cookie="cb869e554f/a3acd0ba-ad5a-23e8-4ea0-e9b099c12ad3" response="yes"
dn="sys/rack-unit-1/pci-adapter-fru-5/pci-adapter-portstatus-0">
  <outConfig>
    <pciAdapterPortStatus dn="sys/rack-unit-1/pci-adapter-fru-5/pci-adapter-portstatus-0"
id="0" portStatus="down" linkSpeed="NA"/>
  </outConfig>
</configResolveDn>
- validates
```

Viewing Enhanced FRU Data for Third Party Adapters

Viewing Enhanced FRU Data for Third Party Adapters

Request

```
curl -k -d "<configResolveClass cookie='a212b40f4c/2b43df65-8ba0-9cbd-0685-0b3359a2fa0d'
inHierarchical='true' classId='pciAdapterFruInventory'/>" https://10.10.10.10/nuova
```

Response

```
<configResolveClass cookie="a212b40f4c/2b43df65-8ba0-9cbd-0685-0b3359a2fa0d"
response="yes" classId="pciAdapterFruInventory">
<outConfigs>
<pciAdapterFruInventory dn="sys/rack-unit-1/pci-adapter-fru-2" id="2" deviceId="0x1572"
vendorId="0x8086" subDeviceId="0x20A" subVendorId="0x1137" ><pciAdapterPortStatus
rn="pci-adapter-portstatus-0" ></pciAdapterPortStatus><pciAdapterPortStatus
rn="pci-adapter-portstatus-1" ></pciAdapterPortStatus></pciAdapterFruInventory>
<pciAdapterFruInventory dn="sys/rack-unit-1/pci-adapter-fru-7" id="7" deviceId="0x1592"
 vendorId="0x8086" subDeviceId="0x2BF" subVendorId="0x1137" ><pciAdapterTemperature
rn="pci-adapter-temperature-1" id="1" temperature="54" ></pciAdapterTemperature>
<pciAdapterTemperature rn="pci-adapter-temperature-2" id="2" temperature="0" >
</pciAdapterTemperature><pciAdapterTemperature rn="pci-adapter-temperature-3" id="3"
temperature="0" ></pciAdapterTemperature><pciAdapterPortStatus rn="pci-adapter-portstatus-0"
 >
</pciAdapterPortStatus><pciAdapterPortStatus rn="pci-adapter-portstatus-1" >
</pciAdapterPortStatus></pciAdapterFruInventory><pciAdapterFruInventory
dn="sys/rack-unit-1/pci-adapter-fru-MRAID2" id="MRAID2" deviceId="0xA5"
vendorId="0x1000" subDeviceId="0x2EB" subVendorId="0x1137" >
</pciAdapterFruInventory><pciAdapterFruInventory dn="sys/rack-unit-1/pci-adapter-fru-MRAID1"
```

```
id="MRAID1" deviceId="0xA5" vendorId="0x1000" subDeviceId="0x2EB" subVendorId="0x1137" >
</pciAdapterFruInventory><pciAdapterFruInventory dn="sys/rack-unit-1/pci-adapter-fru-5"
partNumber="30-100326-01" serialNumber="MLX27330024" manufacturer="MLNX" vendor="MLX"
name="MCX713104AS-ADAT : 4x25GbE SFP56 Gen4x16, PCIe VPI NIC; No Crypto"
fwVersion="28.39.2048"
id="5" deviceId="0x1021" vendorId="0x15B3" subDeviceId="0x2F5" subVendorId="0x1137" >
<pciAdapterPortStatus rn="pci-adapter-portstatus-0" ></pciAdapterPortStatus>
<pciAdapterPortStatus rn="pci-adapter-portstatus-1" ></pciAdapterPortStatus>
<pciAdapterPortStatus rn="pci-adapter-portstatus-2" ></pciAdapterPortStatus>
<pciAdapterPortStatus rn="pci-adapter-portstatus-3" ></pciAdapterPortStatus>
</pciAdapterFruInventory><pciAdapterFruInventory dn="sys/rack-unit-1/pci-adapter-fru-1"
partNumber="30-100325-01" serialNumber="MLX27370072" manufacturer="MLNX" vendor="MLX"
name="MCX755106AS-HEAT:  2x200GbE QSFP112 Gen5x16, PCIe VPI NIC; No Crypto"
fwVersion="28.39.2048" id="1" deviceId="0x1021" vendorId="0x15B3" subDeviceId="0x2F4"
subVendorId="0x1137" ><pciAdapterTemperature rn="pci-adapter-temperature-1" id="1"
temperature="63" ></pciAdapterTemperature><pciAdapterTemperature
rn="pci-adapter-temperature-2"
 id="2" temperature="0" ></pciAdapterTemperature><pciAdapterTemperature
rn="pci-adapter-temperature-3" id="3" temperature="0" ></pciAdapterTemperature>
<pciAdapterPortStatus rn="pci-adapter-portstatus-0" ></pciAdapterPortStatus>
<pciAdapterPortStatus rn="pci-adapter-portstatus-1" ></pciAdapterPortStatus>
</pciAdapterFruInventory><pciAdapterFruInventory dn="sys/rack-unit-1/pci-adapter-fru-4"
partNumber="30-100312-01" serialNumber="MLJ27150026" manufacturer="MLNX" vendor="MLX"
name="Cisco-NVDA MCX631102AS-ADAT CX6 Lx 2x25GbE SFP28 x8 PCIe NIC" fwVersion="26.39.2048"

id="4" deviceId="0x101F" vendorId="0x15B3" subDeviceId="0x2F1" subVendorId="0x1137" >
<pciAdapterPortStatus rn="pci-adapter-portstatus-0" ></pciAdapterPortStatus>
<pciAdapterPortStatus rn="pci-adapter-portstatus-1" ></pciAdapterPortStatus>
</pciAdapterFruInventory>
</outConfigs>
</configResolveClass>
```

Beginning with release 4.3.5.240021, Cisco IMC displays enhanced FRU Data for network adapters - DPUs or SuperNICs.

Sample Request

```
curl -k -d '<configResolveDn cookie="a8c45cec58/e25e7aeb-4a59-0c3c-b466-91773c12a6d9"
inHierarchical="true" dn="sys/rack-unit-1/pci-adapter-fru-5"/>'
https://10.10.10.10/nuova | xmllint --schema 113_RACK-OUT.xsd
```

Sample Response

```
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  1036    0   900  100   136    997    150 --:--:-- --:--:-- --:--:--  1148
<?xml version="1.0"?>
<configResolveDn cookie="a8c45cec58/e25e7aeb-4a59-0c3c-b466-91773c12a6d9" response="yes"
dn="sys/rack-unit-1/pci-adapter-fru-5">
<outConfig>
<pciAdapterFruInventory dn="sys/rack-unit-1/pci-adapter-fru-5"
partNumber="900-9D3B6-00CV-AA0" serialNumber="MT2345XZ0MBR"
manufacturer="MLNX" vendor="MLX"
name="BlueField-3 P-Series DPU 200GbE/NDR200 dual-port QSFP112, PCIe Gen5.0 x16 FHHL, Crypto
 Enabled, 32GB DDR5, BMC, Tall Bracket"
fwVersion="32.42.1000">
<pciAdapterTemperature rn="pci-adapter-temperature-1"/>
<pciAdapterTemperature rn="pci-adapter-temperature2"/>
<pciAdapterTemperature rn="pci-adapter-temperature-3"/>
<pciAdapterPortStatus rn="pci-adapter-portstatus-0"/>
<pciAdapterPortStatus rn="pci-adapter-portstatus-1"/>
</pciAdapterFruInventory>
</outConfig>
</configResolveDn>
- validates
```

Sample Request

```
curl -k -d "<configResolveClass cookie='469c410904/75f3b9a9-6209-4123-f909-dcf4a8375428'
inHierarchical='true' classId='pciAdapterFruInventory'/>"
https://10.10.10.10/nuova |xmllint -schema 113_RACK-OUT.xsd
```

Sample Response

```
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  1750    0  1617  100   133   1054     86  0:00:01  0:00:01 --:--:--  1141
<?xml version="1.0"?>
<configResolveClass cookie="469c410904/75f3b9a9-6209-4123-f909-dcf4a8375428" response="yes"
 classId="pciAdapterFruInventory">
<outConfigs>
<pciAdapterFruInventory dn="sys/rack-unit-1/pci-adapter-fru-MLOM" id="MLOM"
deviceId="0x15FF" vendorId="0x8086" subDeviceId="0x2D9"
subVendorId="0x1137"><pciAdapterPortStatus rn="pci-adapter-portstatus-0"/>
<pciAdapterPortStatus rn="pci-adapter-portstatus-1"/>
</pciAdapterFruInventory>
<pciAdapterFruInventory dn="sys/rack-unit-1/pci-adapter-fru-1"
name="AMD Pensando DSC2A-2Q200 PCIe DPU"
vendor="UCSC-P-DSC2A200" serialNumber="FPH2406000D"
partNumber="30-100365-01" manufacturer="UCSC-P-DSC2A200">
<pciAdapterTemperature rn="pci-adapter-temperature-1"/>
<pciAdapterTemperature rn="pci-adapter-temperature-2"/>
<pciAdapterTemperature rn="pci-adapter-temperature-3"/>
<pciAdapterTemperature rn="pci-adapter-temperature-4"/>
</pciAdapterFruInventory>
<pciAdapterFruInventory dn="sys/rack-unit-1/pci-adapter-fru-3"
name="AMD Pensando DSC2A-2Q200 PCIe DPU"
vendor="UCSC-P-DSC2A200" serialNumber="FPH24060016"
partNumber="30-100365-01" manufacturer="UCSC-P-DSC2A200">
<pciAdapterTemperature rn="pci-adapter-temperature-1"/>
<pciAdapterTemperature rn="pci-adapter-temperature-2"/>
<pciAdapterTemperature rn="pci-adapter-temperature-3"/>
<pciAdapterTemperature rn="pci-adapter-temperature-4"/>
</pciAdapterFruInventory>
</outConfigs>
</configResolveClass>
- validates
```

Configuring QinQ Support

Configuring VIC QinQ Tunneling Support

Request

```
<configConfMo cookie="838572054f/ccd14a6a-f564-cde9-703e-6d70f719b014"
inHierarchical="false" dn="sys/rack-unit-1/adaptor-2/host-eth-eth0/general"><inConfig>
<adaptorEthGenProfile qinqOffload="Enabled" qinqVlan="‟4094” /></inConfig></configConfMo>
```

Response

```
<configConfMo dn="sys/rack-unit-1/adaptor-2/host-eth-eth0/general"
cookie="838572054f/ccd14a6a-f564-cde9-703e-6d70f719b014" response="yes">
<outConfig>
<adaptorEthGenProfile dn="sys/rack-unit-1/adaptor-2/host-eth-eth0/general"
vmq="disabled" multiQueue="disabled" arfs="disabled" uplinkFailover="N/A"
uplinkFailbackTimeout="N/A" order="0" trustedClassOfService="disabled" rateLimit="OFF"
vlan="2" vlanMode="TRUNK" pciLink="1" nvgre="disabled" vxlan="disabled"
```

```
geneveOffload="disabled"
ptp="disabled" qinqOffload="enabled" qinqVlan="4094" status="modified"
></adaptorEthGenProfile>
</outConfig>
</configConfMo>
```

Creating a User

Creating a User

Creating a User - Type CIMC, SNMP,IPMI

Request

```
<configConfMo cookie="2bce81022c/1133915a-b9e6-c62b-f3c4-3fb162f77dcf"
inHierarchical="false"
dn="sys/user-ext/user-14">
  <inConfig>
    <aaaUser id="14" accountStatus="active" name="test14"
priv="admin" pwd="Cisco@11010"
dn="sys/user-ext/user-14" userType="CIMC,SNMP,IPMI" ipmiPwd="Ucs@1234"
auth="HMAC128_SHA224" authPwd="Rack@123" privacy="CFB128_AES128"
privacyPwd="Ucs@1234" />
  </inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/user-ext/user-14"
cookie="2bce81022c/1133915a-b9e6-c62b-f3c4-3fb162f77dcf"
response="yes">
  <outConfig>
    <aaaUser id="14" accountStatus="active" name="test14" priv="admin" pwd=""
adminAction="no-op"
dn="sys/user-ext/user-14" userType="CIMC,SNMP,IPMI" auth="HMAC128_SHA224"
privacy="CFB128_AES128"
ipmiPwd="" authPwd ="" ipmiPwd="" privacyPwd=""  status="modified"/>
  </outConfig>
</configConfMo>
```

Creating a User - Type SNMP

Request

```
<configConfMo cookie='real_cookie'
dn='sys/user-ext/user-5'>
<inConfig>
<aaaUser name='snmp' pwd='real_password' priv='admin' userType='SNMP' id='5'
auth='SHA-224' authPwd='real_password' accountStatus='active' dn='sys/user-ext/user-5'>
</aaaUser>
</inConfig>
</configConfMo>
```

Response

```
<configConfMo cookie="real_cookie" response="yes" dn="sys/user-ext/user-5">
<outConfig>
<aaaUser dn="sys/user-ext/user-5" id="5" accountStatus="active" name="snmp"
priv="admin" userType="SNMP" auth="SHA-224" privacy="" authPwd="" privacyPwd="" pwd=""
adminAction="no-op" status="modified" ></aaaUser>
```

```
</outConfig>
</configConfMo>
```

Password Change

Changing the Password After Restore Factory Default

Request

Login:

```
curl -k -d "<aaaLogin inName='admin' inPassword='xyz'/>"
https://10.10.10.10/nuova
<aaaLogin cookie="" response="yes" outCookie="7a62a55062/c4966684-e05e-42f3-3034-27aa36ab3689"

outRefreshPeriod="600" outPriv="admin" outSessionId="3"
outVersion="531.04.558-dev-abcd.202209141408"
outStatus="Warning : Please change default password."> </aaaLogin>
```

Changing Password

```
curl -k -d '
<configConfMo cookie="cc6532f3e0/6211cc8e-391a-0ca0-91aa-27fa3454bd40"
dn="sys/user-ext/user-1" inHierarchical="false">
<inConfig>
<aaaUser name="admin" id="1" pwd="xyz@123" ></aaaUser>
</inConfig>
</configConfMo>
' https://10.10.10.10/nuova
<configConfMo dn="sys/user-ext/user-1"
cookie="cc6532f3e0/6211cc8e-391a-0ca0-91aa-27fa3454bd40" response="yes">
<outConfig>
<aaaUser id="1" accountStatus="active"
name="admin" priv="admin" pwd="" adminAction="no-op"
dn="sys/user-ext/user-1" status="modified" ></aaaUser></outConfig>
</configConfMo>
```

Note

- After the password is updated, the session is closed and no more queries are processed using this same cookie. Any open sessions in other user interfaces is also closed.

Changing Password on Password Expiry

Request

Login:

```
curl -k -d "<aaaLogin inName='admin' inPassword='xyz@123'/>"
https://10.10.10.10/nuova
<aaaLogin cookie="" response="yes"
outCookie="48d3bbb79b/ab09da3b-61f5-a4e0-23ae-f943ab37be95"
outRefreshPeriod="600" outPriv="admin" outSessionId="1"
outVersion="531.04.558-dev-abcd.202209141408"
outStatus="Warning :  Your Cisco-IMC password has expired.
```

```
Please reset your password IMMEDIATELY to be able to access your service.">
 </aaaLogin>
```

Changing Password:

```
curl -k -d '
<configConfMo cookie="ab52d8fd5b/6927984f-86da-cf8f-7208-714d76291f9c"
dn="sys/user-ext/user-1" inHierarchical="false">
<inConfig>
<aaaUser name="admin" id="1" pwd="Cisco@1234" ></aaaUser>
</inConfig>
</configConfMo>
' https://10.10.10.10/nuova
<configConfMo dn="sys/user-ext/user-1"
cookie="ab52d8fd5b/6927984f-86da-cf8f-7208-714d76291f9c" response="yes">
<outConfig>
<aaaUser id="1" accountStatus="active" name="admin" priv="admin"
pwd="" adminAction="no-op" dn="sys/user-ext/user-1" status="modified" >
</aaaUser></outConfig>
</configConfMo>
```

Note

- After the password is updated, the session is closed and no more queries are processed using this same cookie. Any open sessions in other user interfaces is also closed.

Secure Boot Certificate Management

Getting the Secure Boot Certificate Management Class ID

Request

```
curl -k -d '<configResolveClass cookie="2bb52d05c9/f17b33c3-ce33-51fe-c2af-7a0c6f23fc90"
inHierarchical="false" classId="secureBootCertificateManagement"/>'
https://10.10.10.10/system
```

Response

```
<configResolveClass cookie="2bb52d05c9/f17b33c3-ce33-51fe-c2af-7a0c6f23fc90"
response="yes" classId="secureBootCertificateManagement">
<outConfigs>
<secureBootCertificateManagement dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt"
uploadStatus="NA" uploadProgress="0%" errorDescription="NA"/></outConfigs>
</configResolveClass>
```

Getting the Upload Secure Boot Certificate Class ID

Request

```
curl -k -d '<configResolveClass cookie="2bb52d05c9/f17b33c3-ce33-51fe-c2af-xxxxxxxxxx"
inHierarchical="false" classId="uploadSecureBootCertificate"/>'
https://10.10.10.10/system
```

Response

<configResolveClass cookie="2bb52d05c9/f17b33c3-ce33-51fe-c2af-xxxxxxxxxx" response="yes" classId="uploadSecureBootCertificate"> <outConfigs> <uploadSecureBootCertificate dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/upload-secure-boot-cert" adminAction="no-op" protocol="none" remoteServer="" remoteFile="" user="" pwd="" certificateId="" certificateContent="Certificate Content" uploadStatus="NA" uploadProgress="0%"/></outConfigs> </configResolveClass>

Uploading a Secure Boot Certificate

Request

```
<configConfMo cookie="ab9ff990fd/605f202e-3d2e-6522-260b-xxxxxxx"
dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/upload-secure-boot-cert"
inHierarchical="false">
<inConfig>
<uploadSecureBootCertificate adminAction="content-cert-upload" certificateContent="

-----BEGIN CERTIFICATE-----

Paste Certificate Content here

-----END CERTIFICATE-----
" certificateId="7" dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/upload-secure-boot-cert">
</uploadSecureBootCertificate>
</inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/upload-secure-boot-cert"
cookie="a931ba8e05/1303a82b-1a09-8264-a823-xxxxxxxxxx" response="yes">
<outConfig>
<uploadSecureBootCertificate dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/
upload-secure-boot-cert" adminAction="no-op" protocol="none" remoteServer="" remoteFile=""

user="" pwd="" certificateId="" certificateContent="Certificate Content"
uploadStatus="Completed"
uploadProgress="100%" status="modified"/></outConfig>
</configConfMo>
```

Viewing the Secure Boot Certificate

Request

```
curl -k -d '<configResolveClass cookie="2bb52d05c9/f17b33c3-ce33-51fe-c2af-7a0c6f23fc90"
inHierarchical="false" classId="secureBootCACertificateInfo"/>' https://10.10.10.10/system
```

Response

```
<configResolveClass cookie="2bb52d05c9/f17b33c3-ce33-51fe-c2af-7a0c6f23fc90" response="yes"

classId="secureBootCACertificateInfo">
<outConfigs>
<secureBootCACertificateInfo certificateId="1" serialNumber="" countryCode="NA" state="NA"

locality="NA" organization="NA" commonName="NA" issuerCountryCode="NA" issuerState="NA"
issuerLocality="NA" issuerOrganization="NA" issuerCommonName="NA" validFrom="NA" validTo="NA"
```

```
dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/secure-boot-cert-info-1"/>
<secureBootCACertificateInfo certificateId="2" serialNumber="NA" countryCode="NA" state="NA"

locality="NA" organization="NA" commonName="NA" issuerCountryCode="NA" issuerState="NA"
issuerLocality="NA" issuerOrganization="NA" issuerCommonName="NA" validFrom="NA" validTo="NA"

dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/secure-boot-cert-info-2"/>
<secureBootCACertificateInfo certificateId="3" serialNumber="NA" countryCode="NA" state="NA"

locality="NA" organization="NA" commonName="NA" issuerCountryCode="NA" issuerState="NA"
issuerLocality="NA" issuerOrganization="NA" issuerCommonName="NA" validFrom="NA" validTo="NA"

dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/secure-boot-cert-info-3"/>
<secureBootCACertificateInfo certificateId="4" serialNumber="NA" countryCode="NA" state="NA"

locality="NA" organization="NA" commonName="NA" issuerCountryCode="NA" issuerState="NA"
issuerLocality="NA" issuerOrganization="NA" issuerCommonName="NA" validFrom="NA" validTo="NA"

dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/secure-boot-cert-info-4"/>
<secureBootCACertificateInfo certificateId="5" serialNumber="04" countryCode="IN"
state="State"
locality="Locality" organization="ORGCSR" commonName="*Certificate_Name"
issuerCountryCode="US"
issuerState="California" issuerLocality="Newyork" issuerOrganization="Digicert"
issuerCommonName="*Certificate_Name" validFrom="Apr 28 04:25:36 2020 GMT"
validTo="Apr 28 04:25:36 2022 GMT"
dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/secure-boot-cert-info-5"/>
<secureBootCACertificateInfo certificateId="6" serialNumber="NA" countryCode="NA" state="NA"

locality="NA" organization="NA" commonName="NA" issuerCountryCode="NA" issuerState="NA"
issuerLocality="NA" issuerOrganization="NA" issuerCommonName="NA" validFrom="NA" validTo="NA"

dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/secure-boot-cert-info-6"/>
<secureBootCACertificateInfo certificateId="7" serialNumber="NA" countryCode="NA"
state="NA" locality="NA" organization="NA" commonName="NA" issuerCountryCode="NA"
issuerState="NA" issuerLocality="NA" issuerOrganization="NA" issuerCommonName="NA"
validFrom="NA" validTo="NA"
dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/secure-boot-cert-info-7"/>
<secureBootCACertificateInfo certificateId="8" serialNumber="NA" countryCode="NA" state="NA"

locality="NA" organization="NA" commonName="NA" issuerCountryCode="NA" issuerState="NA"
issuerLocality="NA" issuerOrganization="NA" issuerCommonName="NA" validFrom="NA" validTo="NA"

dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/secure-boot-cert-info-8"/>
<secureBootCACertificateInfo certificateId="9" serialNumber="NA" countryCode="NA" state="NA"

locality="NA" organization="NA" commonName="NA" issuerCountryCode="NA" issuerState="NA"
issuerLocality="NA" issuerOrganization="NA" issuerCommonName="NA" validFrom="NA" validTo="NA"

dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/secure-boot-cert-info-9"/>
<secureBootCACertificateInfo certificateId="10" serialNumber="NA" countryCode="NA" state="NA"

locality="NA" organization="NA" commonName="NA" issuerCountryCode="NA" issuerState="NA"
issuerLocality="NA" issuerOrganization="NA" issuerCommonName="NA" validFrom="NA" validTo="NA"

dn="sys/rack-unit-1/bios/secure-boot-cert-mgmt/secure-boot-cert-info-10"/>
</outConfigs>
</configResolveClass>
```

Managing Remote Syslog Certificate

Setting Secure Remotesyslog Primary Server

Note TCP protocol must be set to enable Secure syslog.

Enabling Syslog with TCP Primary Server

Request

```
<configConfMo cookie='75060986c1/754a14c8-0b92-4d24-b139-e2905a965c10' inHierarchical='false'

dn='sys/svc-ext/syslog/client-primary'> <inConfig>
<commSyslogClient name='primary' adminState='enabled'
hostname='10.10.10.10' port='6514' proto='tcp'
dn='sys/svc-ext/syslog/client-primary'/> </inConfig> </configConfMo>
```

Response

```
<configConfMo dn="sys/svc-ext/syslog/client-primary"
cookie="75060986c1/754a14c8-0b92-4d24-b139-e2905a965c10" response="yes">
<outConfig>
<commSyslogClient adminState="enabled" hostname="10.10.10.10"
name="primary" port="6514" proto="tcp" secureEnabled="disabled"
certificatePresence="no" sslHandshakeStatus="NA" adminAction="no-op"
dn="sys/svc-ext/syslog/client-primary" status="modified" >
</commSyslogClient></outConfig>
</configConfMo>
```

Enabling Secure Syslog Primary Server

Request

```
<configConfMo cookie='ed4af4ede4/00ee6783-cf29-e2e0-c071-63e0dd7fcb41'
dn='sys/svc-ext/syslog/secure-rsyslog' inHierarchical='false'> <inConfig>
<enableSecuredRsyslog adminState='enabled' selectServer='1'
dn='sys/svc-ext/syslog/secure-rsyslog'>
</enableSecuredRsyslog></inConfig></configConfMo>
```

Response

```
<configConfMo dn="sys/svc-ext/syslog/secure-rsyslog"
cookie="ed4af4ede4/00ee6783-cf29-e2e0-c071-63e0dd7fcb41" response="yes">
<outConfig>
<enableSecuredRsyslog dn="sys/svc-ext/syslog/secure-rsyslog"
adminState="enabled" selectServer="" status="modified" >
</enableSecuredRsyslog></outConfig>
</configConfMo>
```

Setting Secure Remotesyslog Secondary Server

Note TCP protocol must be set to enable Secure syslog.

Enable Syslog with TCP Secondary Server

Request

```
<configConfMo cookie='ed4af4ede4/00ee6783-cf29-e2e0-c071-63e0dd7fcb41'
 inHierarchical='false' dn='sys/svc-ext/syslog/client-secondary'> <inConfig>
<commSyslogClient name='secondary' adminState='enabled' hostname='10.10.10.11'
port='6514' proto='tcp' dn='sys/svc-ext/syslog/client-secondary'/> </inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/svc-ext/syslog/client-secondary"
cookie="ed4af4ede4/00ee6783-cf29-e2e0-c071-63e0dd7fcb41" response="yes">
<outConfig>
<commSyslogClient adminState="enabled" hostname="10.10.10.11"
name="secondary" port="6514" proto="tcp" secureEnabled="disabled"
certificatePresence="no" sslHandshakeStatus="NA" adminAction="no-op"
 dn="sys/svc-ext/syslog/client-secondary" status="modified" >
</commSyslogClient></outConfig>
</configConfMo>
```

Enabling Secure Syslog Secondary Server

Request

```
<configConfMo cookie='5116687ea4/19c46c01-58bb-5290-ffd2-db5b37cc7a27'
dn='sys/svc-ext/syslog/secure-rsyslog' inHierarchical='false'> <inConfig>
<enableSecuredRsyslog adminState='enabled'
selectServer='2' dn='sys/svc-ext/syslog/secure-rsyslog'>
</enableSecuredRsyslog></inConfig></configConfMo>
```

Response

```
<configConfMo dn="sys/svc-ext/syslog/secure-rsyslog"
cookie="5116687ea4/19c46c01-58bb-5290-ffd2-db5b37cc7a27" response="yes">
<outConfig>
<enableSecuredRsyslog dn="sys/svc-ext/syslog/secure-rsyslog"
adminState="enabled" selectServer="" status="modified" >
</enableSecuredRsyslog></outConfig>
</configConfMo>
```

Uploading Remote Syslog Certificate

Request

```
'<configConfMo
cookie="36f8c563a3/c179b9fb-2364-5356-43cd-0d2349b88d86"
dn="sys/svc-ext/syslog/upload-rsyslog-ca-cert" inHierarchical="false">
```

```
<inConfig> <uploadRsyslogCACertificate adminAction="remote-cert-upload"
protocol="scp" remoteServer="10.10.10.10"
remoteFile="/home/xyz/test-cert.pem" user="abc" pwd="password"
selectServer="0" dn="sys/svc-ext/syslog/upload-rsyslog-ca-cert">
</uploadRsyslogCACertificate>
 </inConfig> </configConfMo>'
```

Note You can use the following values for the parameter `selectServer` parameter:

- `0`: Indicates primary and secondary server.
- `1`: Indicates primary server.
- `2`: Indicates secondary server.

Response

```
<configConfMo dn="sys/svc-ext/syslog/upload-rsyslog-ca-cert"
cookie="819016008e/afc70624-ae64-a6ad-a988-8baf2936661a" response="yes">
<outConfig>
<uploadRsyslogCACertificate dn="sys/svc-ext/syslog/upload-rsyslog-ca-cert"
adminAction="no-op" protocol="none" remoteServer="" remoteFile=""
user="" pwd="" selectServer="" certificateContent="Certificate Content"
uploadStatus="COMPLETED" uploadProgress="100%" status="modified" >
</uploadRsyslogCACertificate></outConfig>
</configConfMo>
```

Deleting Remote Syslog Certificate

Request

```
'<configConfMo
cookie="a9c67589b4/963bf304-119d-1ed0-933e-0ac907164491"
inHierarchical="false" dn="sys/svc-ext/syslog/delete-rsyslog-ca-cert">
<inConfig> <deleteRsyslogCACertificate
dn="sys/svc-ext/syslog/delete-rsyslog-ca-cert"
adminState="triggered" selectServer="0" >
</deleteRsyslogCACertificate></inConfig> </configConfMo>'
```

Note You can use the following values for the parameter `selectServer`:

- `0`: Indicates primary and secondary server.
- `1`: Indicates primary server.
- `2`: Indicates secondary server.

Response

```
<configConfMo dn="sys/svc-ext/syslog/delete-rsyslog-ca-cert"
cookie="a9c67589b4/963bf304-119d-1ed0-933e-0ac907164491" response="yes">
<outConfig>
```

```
<deleteRsyslogCACertificate dn="sys/svc-ext/syslog/delete-rsyslog-ca-cert"
adminState="triggered" selectServer=""
status="modified" ></deleteRsyslogCACertificate></outConfig>
</configConfMo>
```

Configuring Network Adapter Properties - Admin Link Training

Enabling Admin Link Training on External Ethernet Interfaces

Request

```
<configConfMo cookie='f9c011cea1/9f019147-a2a6-b2c5-4291-461eb96da395' inHierarchical='false'

dn='sys/rack-unit-1/adaptor-MLOM/ext-eth-2/link-training'><inConfig><adaptorLinkTraining
adminLinkTraining='on'
dn='sys/rack-unit-1/adaptor-MLOM/ext-eth-2/link-training'></adaptorLinkTraining></inConfig>
 </configConfMo>
```

Response

```
<configConfMo dn="sys/rack-unit-1/adaptor-MLOM/ext-eth-2/link-training"
cookie="f9c011cea1/9f019147-a2a6-b2c5-4291-461eb96da395" response="yes">
<outConfig>
<adaptorLinkTraining dn="sys/rack-unit-1/adaptor-MLOM/ext-eth-2/link-training"
adminLinkTraining="On" operLinkTraining="Off" status="modified"
></adaptorLinkTraining></outConfig>
</configConfMo>
```

Setting Admin FEC Mode on External Ethernet Interfaces

ConfigResolve parent

Request

```
<configResolveParent cookie='df2665019b/db4e749c-cd7e-4510-f9ea-08b5925cb823'
dn='sys/rack-unit-1/adaptor-MLOM/ext-eth-3/link-training'
inHierarchical='true'></configResolveParent>
```

Response

```
<configResolveParent cookie="df2665019b/db4e749c-cd7e-4510-f9ea-08b5925cb823" response="yes"

dn="sys/rack-unit-1/adaptor-MLOM/ext-eth-3/link-training">
<outConfig>
<adaptorExtEthIf portId="3" ifType="physical" linkState="up"
mac="68:87:C6:BB:32:2F" transport="CE" adminSpeed="Auto" operSpeed="10Gbps"
adminFecMode="cl91" operFecMode="Off"
dn="sys/rack-unit-1/adaptor-MLOM/ext-eth-3"><adaptorConnectorInfo
rn="connector-info" present="YES" supported="YES" type="SFP-H10GB-CU3M      "
vendor="CISCO-TYCO
 " partNumber="1-2053783-2     " partRevision="V   "/><adaptorLinkTraining rn="link-training"

adminLinkTraining="Auto" operLinkTraining="Off"/></adaptorExtEthIf></outConfig>
</configResolveParent>
```

ConfigResolve children

Request

```
<configResolveChildren  cookie='df2665019b/db4e749c-cd7e-4510-f9ea-08b5925cb823'
dn='sys/rack-unit-1/adaptor-MLOM/ext-eth-1' inHierarchical='false'>
</configResolveChildren>
```

Response

```
<configResolveChildren cookie="df2665019b/db4e749c-cd7e-4510-f9ea-08b5925cb823"
response="yes">
<outConfigs>
<adaptorConnectorInfo dn="sys/rack-unit-1/adaptor-MLOM/ext-eth-1/connector-info"
present="YES" supported="YES" type="SFP-H10GB-CU3M
" vendor="CISCO-TYCO      " partNumber="1-2053783-2
" partRevision="T   "/><adaptorLinkTraining
dn="sys/rack-unit-1/adaptor-MLOM/ext-eth-1/link-training"
adminLinkTraining="Auto" operLinkTraining="Off"/><adaptorPortProfiles
 dn="sys/rack-unit-1/adaptor-MLOM/ext-eth-1/port-profiles"
portProfilesCount="0" portProfilesName=""/></outConfigs>
</configResolveChildren>
```

Configuring TLS v1.2 and v1.3

Enabling TLS v1.2

Beginning with release 4.2(2a), Cisco IMC supports enabling or disabling TLS v1.2 and customize the cipher values.

Request

```
<configConfMo dn="sys/svc-ext/tls-svc"
cookie="3b09d91cd1/3857fc26-68c5-2cab-412e-1d5f30844ad6"
inHierarchical="false">
<inConfig>
<commTlsConfig dn="sys/svc-ext/tls-svc" tlsv2Enabled="enabled"></commTlsConfig>
</inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/svc-ext/tls-svc"
cookie="3b09d91cd1/3857fc26-68c5-2cab-412e-1d5f30844ad6"
response="yes">
<outConfig>
<commTlsConfig dn="sys/svc-ext/tls-svc" tlsv2Enabled="enabled" tlsConfigSupported="TLSv1.2,

TLSv1.3" status="modified"/></outConfig>
</configConfMo>
- validates
```

Disabling TLS v1.2

Request

```
<configConfMo dn="sys/svc-ext/tls-svc"
cookie="3cdb71b895/01efdfe4-f375-f886-915c-7fe41fae00e1"
```

```
 inHierarchical="false">
<inConfig>
<commTlsConfig dn="sys/svc-ext/tls-svc" tlsv2Enabled="disabled"></commTlsConfig>
</inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/svc-ext/tls-svc"
cookie="3cdb71b895/01efdfe4-f375-f886-915c-7fe41fae00e1"
response="yes">
<outConfig>
<commTlsConfig dn="sys/svc-ext/tls-svc" tlsv2Enabled="disabled" tlsConfigSupported=" TLSv1.3"

status="modified"/></outConfig>
</configConfMo>
- validates
```

Disabling TLS v1.2 When Common Criteria (CC) is Enabled

Request

```
<configConfMo dn="sys/svc-ext/tls-svc"
cookie="016e17cca5/a349db48-8189-4638-f7d0-d656117f7fbb"
 inHierarchical="false">
<inConfig>
<commTlsConfig dn="sys/svc-ext/tls-svc" tlsv2Enabled="disabled"></commTlsConfig>
</inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/svc-ext/tls-svc"
cookie="3b09d91cd1/3857fc26-68c5-2cab-412e-1d5f30844ad6"
response="yes">
<outConfig>
<commTlsConfig dn="sys/svc-ext/tls-svc" tlsv2Enabled="disabled" tlsConfigSupported="TLSv1.3"

status="modified"/></outConfig>
</configConfMo>
- validates
```

Setting TLS v1.2: Cipher Mode

Request

```
<configConfMo dn="sys/svc-ext/tls-svc"
cookie="eb14e0ab27/ecbbcffe-d3cf-d714-b2f1-da43214dbe49"
inHierarchical="false">
<inConfig>
<commTlsConfig dn="sys/svc-ext/tls-svc" tlsv2CipherMode="Medium"></commTlsConfig>
</inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/svc-ext/tls-svc"
cookie="eb14e0ab27/ecbbcffe-d3cf-d714-b2f1-da43214dbe49" response="yes">
```

```
<outConfig>
<commTlsConfig dn="sys/svc-ext/tls-svc" tlsv2Enabled="enabled" tlsConfigSupported="TLSv1.2,

TLSv1.3" tlsv2CipherMode="Medium" tlsv2CipherList="ALL:!DH:!EDH:!ADH:!EXPORT40:!EXPORT56:!LOW:
!RC4:AES128-SHA:AES128:+HIGH:+MEDIUM:+EXP:+eNULL"
tlsv3CipherSuite="TLS_AES_256_GCM_SHA384:TLS_
AES_128_GCM_SHA256:TLS_AES_128_CCM_SHA256:TLS_AES_128_CCM_8_SHA256"
status="modified"/></outConfig>
</configConfMo>
- validates
```

Setting TLS v1.3 Cipher Suite

Request

```
<configConfMo dn="sys/svc-ext/tls-svc"
cookie="273947dce0/d8adb688-6fe7-c8e1-3e11-511f4f99a298"
 inHierarchical="false">
<inConfig>
<commTlsConfig dn="sys/svc-ext/tls-svc"
tlsv3CipherSuite="TLS_AES_128_CCM_8_SHA256"></commTlsConfig>
</inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/svc-ext/tls-svc"
cookie="273947dce0/d8adb688-6fe7-c8e1-3e11-511f4f99a298" response="yes">
<outConfig>
<commTlsConfig dn="sys/svc-ext/tls-svc" tlsv2Enabled="enabled" tlsConfigSupported="TLSv1.2,

TLSv1.3" tlsv2CipherMode="Medium" tlsv2CipherList="ALL:!DH:!EDH:!ADH:!EXPORT40:!EXPORT56:!LOW:
!RC4:AES128-SHA:AES128:+HIGH:+MEDIUM:+EXP:+eNULL" tlsv3CipherSuite="TLS_AES_128_CCM_8_SHA256"

status="modified"/></outConfig>
</configConfMo>
- validates
```

Configuring Physical NIC Mode

Enabling Physical NIC Mode Setting

Request

```
"<configConfMo cookie='f893ac28b8/f015e479-9500-f701-fc37-e6cf0d8f2b0a'
dn='sys/rack-unit-1/adaptor-2/general' inHierarchical='true'>
<inConfig> <adaptorGenProfile dn='sys/rack-unit-1/adaptor-2/general'
fipMode='Disabled' vntagMode='Disabled' lldp='Disabled'
portChannelEnable='Disabled' physicalNicMode='enabled'/>
</inConfig> </configConfMo>" https://10.10.10.10/nuova -schema
/home/user/xyz/PNMRACK-OUT.xsd-
```

Viewing Physical NIC Mode Setting

Request

```
"<configResolveClass cookie='498cff7c25/a96e84c3-26a2-156c-deaa-39568e365a64'
inHierarchical='true' classId='adaptorGenProfile'/>"
https://10.10.10.10/nuova -schema /home/user/xyz/PNMRACK-OUT.xsd -
```

Uploading and Mapping New Image File for FlexMMC

Getting the Authentication Cookie

```
curl -k -X POST -d '<aaaLogin inName="admin" inPassword="password"/>'
https://10.10.10.10/nuova
```

Uploading the File in to IMC Partition

Use the cookie to upload the file to IMC partition.

```
curl -k -d '<configConfMo cookie="d6de151e01/fce94609-b178-67ec-779e-c41c566f8e51"
dn="sys/rack-unit-1/board/storage-flexmmc/download-file">
<inConfig><storageFlexMMCDownloadFile
 adminAction="download-file" dn="sys/rack-unit-1/board/storage-flexmmc/download-file"
map="nfs" remoteShare="10.10.10.10:/nfsshare" remoteFile="server-CMC.1.1.0.0.iso"
mountOptions="noauto" location="IMC Images"/> </inConfig> </configConfMo>'
https://10.10.10.10/nuova | xmllint -schema RACK-OUT.xsd -
```

Reviewing the File Upload Status

```
curl -k -d '<configResolveClass cookie="d6de151e01/fce94609-b178-67ec-779e-c41c566f8e51"
 inHierarchical="false" classId="storageFlexMMCDownloadFile"/>' https://10.10.10.10/nuova
|
 xmllint -schema RACK-OUT.xsd -
```

Mapping the File

```
curl -k -d '<configConfMo cookie="d6de151e01/fce94609-b178-67ec-779e-c41c566f8e51"
dn="sys/rack-unit-1/board/storage-flexmmc/file-3"> <inConfig> <storageFlexMMCFile
adminAction="
map-file" dn="sys/rack-unit-1/board/storage-flexmmc/file-3" fileId="3"/> </inConfig>
 </configConfMo>' https://10.10.10.10/nuova | xmllint -schema RACK-OUT.xsd -
```

Reboot the server and verify the mapped device is present in **F6**.

Setting Physical Drive Status Auto Config Mode

Beginning with release 4.2(1a), Cisco IMC supports Physical Drive Status Auto Config Mode.

Note This mode is available only on some servers.

The examples in this section show how to use the Cisco IMC XML API to set Physical Drive Status Auto Config Mode. Each example shows the XML API request followed by the response from Cisco IMC.

To enable the Physical Drive Status Auto Config Mode, two new attributes are added under storageController Managed Object:

- `physicalDriveStatusAutoConfigCapable` - To display the capability
- `physicalDriveStatusAutoConfigMode` - To display the configured auto configuration mode

Viewing the details of the auto config capability and mode of the controller

Request

```
curl -k -d '<configResolveClass cookie="c37dd69229/a4ac0b23-62e3-0939-0b82-89adc050f070"
inHierarchical="false" classId="storageController"/>' https://10.10.10.10/nuova
|xmllint -schema conf/platform/m6_platform/RACK-OUT.xsd -
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100  1251    0  1122  100   129   1120    128  0:00:01  0:00:01 --:--:--  1122
```

Response

```
<?xml version="1.0"?>
<configResolveClass cookie="c37dd69229/a4ac0b23-62e3-0939-0b82-89adc050f070"
response="yes" classId="storageController">
<outConfigs>
<storageController id="MRAID2" typePlusSlotId="SAS-MRAID2" pid="UCSC-RAID-M6T"
model="Cisco M6 12G SAS RAID Controller with 4GB FBWC (16 Drives)"
productPID="UCSC-RAID-M6T" pciSlot="MRAID2" presence="equipped" raidSupport="yes"
 serial="SK94876114" type="SAS" controllerType="RAID" vendor="LSI Logic"
selfEncryptEnabled="no" physicalDriveStatusAutoConfigCapable="yes"
 physicalDriveStatusAutoConfigMode="jbod" adminAction="no-op"
 dn="sys/rack-unit-1/board/storage-SAS-MRAID2"/>
<storageController id="MSTOR-RAID" typePlusSlotId="SATA-MSTOR-RAID"
 pid="UCS-M2-HWRAID" model="Cisco Boot optimized M.2 Raid controller"
productPID="UCS-M2-HWRAID" pciSlot="MSTOR-RAID" presence="equipped"
raidSupport="yes" serial="FCH23257H5Q" type="SATA" controllerType="M2HWRAID"
 vendor="Marvell" selfEncryptEnabled="no" physicalDriveStatusAutoConfigCapable="no"
 adminAction="no-op" dn="sys/rack-unit-1/board/storage-SATA-MSTOR-RAID"/></outConfigs>
</configResolveClass>
- validates
```

Configuring auto configuration mode as unconfigured-good

Request

```
<configConfMo cookie="c37dd69229/a4ac0b23-62e3-0939-0b82-89adc050f070"
inHierarchical="false" dn="sys/rack-unit-1/board/storage-SAS-MRAID2">
    <inConfig>
          <storageController dn="sys/rack-unit-1/board/storage-SAS-MRAID2"
adminAction="set-physical-drive-status-auto-config-mode"
physicalDriveStatusAutoConfigMode="unconfigured-good"/>
     </inConfig>
</configConfMo>
```

Response

```
<?xml version="1.0"?>
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-MRAID2"
cookie="c37dd69229/a4ac0b23-62e3-0939-0b82-89adc050f070" response="yes">
<outConfig>
<storageController id="MRAID2" typePlusSlotId="SAS-MRAID2"
pid="UCSC-RAID-M6T" model="Cisco M6 12G SAS RAID Controller with 4GB FBWC
(16 Drives)" productPID="UCSC-RAID-M6T" pciSlot="MRAID2" presence="equipped"
 raidSupport="yes" serial="SK94876114" type="SAS" controllerType="RAID"
vendor="LSI Logic" selfEncryptEnabled="no"
```

```
physicalDriveStatusAutoConfigCapable="yes"
physicalDriveStatusAutoConfigMode="unconfigured-good"
 adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-MRAID2"
status="modified"/></outConfig>
</configConfMo>
- validates
```

Configuring auto configuration mode as JBOD

Request

```
<configConfMo cookie="c37dd69229/a4ac0b23-62e3-0939-0b82-89adc050f070"
inHierarchical="false" dn="sys/rack-unit-1/board/storage-SAS-MRAID2">
    <inConfig>
          <storageController dn="sys/rack-unit-1/board/storage-SAS-MRAID2"
 adminAction="set-physical-drive-status-auto-config-mode"
 physicalDriveStatusAutoConfigMode="jbod"/>
     </inConfig>
</configConfMo>
```

Response

```
<?xml version="1.0"?>
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-MRAID2"
cookie="c37dd69229/a4ac0b23-62e3-0939-0b82-89adc050f070" response="yes">
<outConfig>
<storageController id="MRAID2" typePlusSlotId="SAS-MRAID2"
pid="UCSC-RAID-M6T" model="Cisco M6 12G SAS RAID Controller with 4GB FBWC (16 Drives)"
 productPID="UCSC-RAID-M6T" pciSlot="MRAID2" presence="equipped"
raidSupport="yes" serial="SK94876114" type="SAS" controllerType="RAID"
vendor="LSI Logic" selfEncryptEnabled="no" physicalDriveStatusAutoConfigCapable="yes"
physicalDriveStatusAutoConfigMode="jbod" adminAction="no-op"
dn="sys/rack-unit-1/board/storage-SAS-MRAID2" status="modified"/></outConfig>
</configConfMo>
- validates
```

Configuring auto configuration mode as raid0-writeback

Request

```
<configConfMo cookie="c37dd69229/a4ac0b23-62e3-0939-0b82-89adc050f070"
inHierarchical="false" dn="sys/rack-unit-1/board/storage-SAS-MRAID2">
    <inConfig>
          <storageController dn="sys/rack-unit-1/board/storage-SAS-MRAID2"
adminAction="set-physical-drive-status-auto-config-mode"
physicalDriveStatusAutoConfigMode="raid0-writeback"/>
     </inConfig>
</configConfMo>
```

Response

Auto configuration on unsupported controller

Request

```
<configConfMo cookie="c37dd69229/a4ac0b23-62e3-0939-0b82-89adc050f070"
 inHierarchical="false" dn="sys/rack-unit-1/board/storage-SATA-MSTOR-RAID">
    <inConfig>
          <storageController dn="sys/rack-unit-1/board/storage-SATA-MSTOR-RAID"
adminAction="set-physical-drive-status-auto-config-mode"
physicalDriveStatusAutoConfigMode="raid0-writeback"/>
     </inConfig>
</configConfMo>
```

Response

```
<?xml version="1.0"?>
<configConfMo dn="sys/rack-unit-1/board/storage-SATA-MSTOR-RAID"
 cookie="c37dd69229/a4ac0b23-62e3-0939-0b82-89adc050f070" response="yes"
errorCode="2999" invocationResult="unidentified-fail"
errorDescr="Invalid request: This storage controller does NOT support
set-physical-drive-status-auto-config-mode operation "/>
- validates
```

MCTP SPDM Certificate Management

Beginning with release 4.2(1a), Cisco IMC supports MCTP SPDM Certificate Management.

The example in this section show how to use the Cisco IMC XML API to add MCTP SPDM certificates. The example shows the XML API request followed by the response from Cisco IMC.

To enable MCTP SPDM Certificate Management, four new managed objects are added:

- `mctpCertificateManagement`
- `uploadEndPointRootCACertificate`
- `endPointRootCACertificate`
- `endPointRootCACertificateInfo`
- `endpoint`
- `endPointCertificateChain`

Viewing the details of the certificate chain for the endpoint with slot id as MRAID

Request

```
<configResolveClass cookie="1d487631d0/ec28cbed-91c1-289f-db1a-ee1dce0c23fc"
inHierarchical="false" classId="endPointCertificateChain"/>
```

Response

```
<configResolveClass cookie="1d487631d0/ec28cbed-91c1-289f-db1a-ee1dce0c23fc"
response="yes" classId="endPointCertificateChain">
  <outConfigs>
    <endPointCertificateChain depth="0" serialNumber="10:03"
countryCode="US" state="Colorado" locality="Colorado Springs"
organization="Broadcom Inc." organizationalUnit="NA" commonName="Aero Device"
issuerCountryCode="US" issuerState="Colorado" issuerLocality="NA"
issuerOrganization="Broadcom Inc." issuerOrganizationalUnit="DCSG"
issuerCommonName="Aero Model" validFrom="Oct 23 01:01:28 2019 GMT"
 validTo="Mar 10 01:01:28 2047 GMT" dn="sys/mctp-cert-mgmt/ep-MRAID/cert-chain-0"/>
    <endPointCertificateChain depth="1" serialNumber="10:04"
countryCode="US" state="Colorado" locality="NA" organization="Broadcom Inc."
organizationalUnit="NA" commonName="Aero Model" issuerCountryCode="US"
issuerState="Colorado" issuerLocality="Colorado Springs"
issuerOrganization="Broadcom Inc." issuerOrganizationalUnit="NA"
issuerCommonName="NA" validFrom="Oct 23 00:36:24 2019 GMT"
validTo="Aug 3 00:36:24 2126 GMT" dn="sys/mctp-cert-mgmt/ep-MRAID/cert-chain-1"/>
    <endPointCertificateChain depth="2"
serialNumber="7C:34:E9:BF:E7:44:CF:F3:17:17:6B:BA:80:AA:23:03:CF:8C:96:F3"
countryCode="US" state="Colorado" locality="Colorado Springs"
organization="Broadcom Inc." organizationalUnit="NA" commonName="NA"
```

```
 issuerCountryCode="US" issuerState="Colorado" issuerLocality="Colorado Springs"
 issuerOrganization="Broadcom Inc." issuerOrganizationalUnit="NA"
issuerCommonName="NA" validFrom="Oct 23 00:25:13 2019 GMT"
validTo="Apr 29 00:25:13 2129 GMT" dn="sys/mctp-cert-mgmt/ep-MRAID/cert-chain-2"/>
  </outConfigs>
</configResolveClass>
```

Configuring TACACS+ Authentication

Beginning with release 4.1(3a), Cisco IMC supports Terminal Access Controller Access-Control System Plus (TACACS+) Authentication. The examples in this section show how to use the Cisco IMC XML API to configure TACACS+ authentication. Each example shows the XML API request followed by the response from Cisco IMC.

This section includes the following examples:

- Get aaaTacacsPlus, on page 65
- Get aaaTacacsPlusServer Details, on page 65
- Set aaaTacacsPlus, on page 66
- Configure aaaTacacsPlusServer, on page 68
- Delete a Server, on page 68
- Get aaaUserAuthPrecedence Details, on page 69
- Configure authPrece, on page 69

Get aaaTacacsPlus

Request

```
<configResolveClass cookie="12584ca24b/c72b7605-3c37-3217-dc04-5b9bca663446"
inHierarchical="false" classId="aaaTacacsPlus"/>
```

Response

```
<configResolveClass cookie="12584ca24b/c72b7605-3c37-3217-dc04-5b9bca663446"
response="yes" classId="aaaTacacsPlus">
<outConfigs>
<aaaTacacsPlus dn="sys/tacacs-ext" adminState="enabled" fallbackAuthentication="disabled"
timeout="5"/>
</outConfigs>
</configResolveClass>
```

Get aaaTacacsPlusServer Details

Request

```
<configResolveClass cookie="12584ca24b/c72b7605-3c37-3217-dc04-5b9bca663446"
inHierarchical="false" classId="aaaTacacsPlusServer"/>
```

Response

```
<configResolveClass cookie="12584ca24b/c72b7605-3c37-3217-dc04-5b9bca663446"
response="yes" classId="aaaTacacsPlusServer">
<outConfigs>
<aaaTacacsPlusServer id="1" ipAddress="" port="" key="" adminAction="no-op"
dn="sys/tacacs-ext/server-1"/><aaaTacacsPlusServer id="2" ipAddress="xx.xx.xx.xx"
port="49" key="******" adminAction="no-op" dn="sys/tacacs-ext/server-2"/>
<aaaTacacsPlusServer id="3" ipAddress="" port="" key="" adminAction="no-op"
dn="sys/tacacs-ext/server-3"/><aaaTacacsPlusServer id="4" ipAddress="" port="" key=""
adminAction="no-op" dn="sys/tacacs-ext/server-4"/><aaaTacacsPlusServer id="5" ipAddress=""

port="" key="" adminAction="no-op" dn="sys/tacacs-ext/server-5"/><aaaTacacsPlusServer id="6"

ipAddress="10.10.10.10" port="49" key="******"
adminAction="no-op" dn="sys/tacacs-ext/server-6"/>
</outConfigs>
</configResolveClass>
```

Set aaaTacacsPlus

Configure aaaTacacsPlus

Request

```
<configConfMo cookie="12584ca24b/c72b7605-3c37-3217-dc04-5b9bca663446"
inHierarchical="false" dn="sys/tacacs-ext">
<inConfig>
<aaaTacacsPlus dn="sys/tacacs-ext" adminState="disabled" fallbackAuthentication="enabled"
timeout="180"></aaaTacacsPlus>
</inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/tacacs-ext" cookie="12584ca24b/c72b7605-3c37-3217-dc04-5b9bca663446"

response="yes">
<outConfig>
<aaaTacacsPlus dn="sys/tacacs-ext" adminState="disabled" fallbackAuthentication="enabled"
timeout="180" status="modified"/>
</outConfig>
</configConfMo>
```

Configure Both aaaTacacsPlus and aaaTacacsPlusServer

Request

```
<configConfMo cookie="966f8cfa3b/ad44b60e-9779-c0c8-f6f0-f8827da7e340"
inHierarchical="true" dn="sys/tacacs-ext">
<inConfig>
     <aaaTacacsPlus dn="sys/tacacs-ext" adminState="enabled" fallbackAuthentication=
"disabled" timeout="50">
            <aaaTacacsPlusServer dn="sys/tacacs-ext/server-1" ipAddress="xx.xx.xx.xx"
port="25" key="server-1"/>
            <aaaTacacsPlusServer dn="sys/tacacs-ext/server-2" ipAddress="xx.xx.xx.xx"
port="30" key="server-2"/>
            <aaaTacacsPlusServer dn="sys/tacacs-ext/server-3" ipAddress="xx.xx.xx.xx"
port="40" key="server-3"/>
</aaaTacacsPlus>
</inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/tacacs-ext" cookie="966f8cfa3b/ad44b60e-9779-c0c8-f6f0-f8827da7e340"
 response="yes">
<outConfig>
<aaaTacacsPlus dn="sys/tacacs-ext" adminState="enabled" fallbackAuthentication="disabled"
timeout="50" status="modified"><aaaTacacsPlusServer id="1" ipAddress="xx.xx.xx.xx" port="25"

key="******" adminAction="no-op" rn="server-1" status="modified"/><aaaTacacsPlusServer
id="2"
ipAddress="10.10.1.20" port="30" key="******" adminAction="no-op" rn="server-2"
status="modified"/><aaaTacacsPlusServer id="3" ipAddress="xx.xx.xx.xx" port="40"
key="******" adminAction="no-op" rn="server-3" status="modified"/><aaaTacacsPlusServer
id="4" ipAddress="" port="" key="" adminAction="no-op" rn="server-4" status="modified"/>
<aaaTacacsPlusServer id="5" ipAddress="" port="" key="" adminAction="no-op" rn="server-5"
status="modified"/><aaaTacacsPlusServer id="6" ipAddress="xx.xx.xx.xx" port="49" key="******"

adminAction="no-op" rn="server-6" status="modified"/>
</aaaTacacsPlus>
</outConfig>
</configConfMo>
```

Add/Modify/Delete in a Single Request

Request

```
<configConfMo cookie="966f8cfa3b/ad44b60e-9779-c0c8-f6f0-f8827da7e340"
inHierarchical="true" dn="sys/tacacs-ext">
<inConfig>
<aaaTacacsPlus dn="sys/tacacs-ext" adminState="enabled" fallbackAuthentication="disabled"
timeout="50">
     <aaaTacacsPlusServer dn="sys/tacacs-ext/server-1" ipAddress="xx.xx.xx.xx" port="25"
key="server-1"/>
     <aaaTacacsPlusServer dn="sys/tacacs-ext/server-2" ipAddress="xx.xx.xx.xx" port="30"
key="server-2"/>
      <aaaTacacsPlusServer dn="sys/tacacs-ext/server-3" adminAction="clear"/>
      <aaaTacacsPlusServer dn="sys/tacacs-ext/server-4" ipAddress="xx.xx.xx.xx" port="40"
key="server-3"/>
</aaaTacacsPlus>
</inConfig>
</configConfMo>
```

Response

```
Response:
<configConfMo dn="sys/tacacs-ext" cookie="966f8cfa3b/ad44b60e-9779-c0c8-f6f0-f8827da7e340"

response="yes">
<outConfig>
<aaaTacacsPlus dn="sys/tacacs-ext" adminState="enabled" fallbackAuthentication="disabled"
timeout="50" status="modified"><aaaTacacsPlusServer id="1" ipAddress="xx.xx.xx.xx" port="25"

key="******" adminAction="no-op" rn="server-1" status="modified"/><aaaTacacsPlusServer
id="2"
 ipAddress="xx.xx.xx.xx" port="30" key="******" adminAction="no-op" rn="server-2"
status="modified"/><aaaTacacsPlusServer id="3" ipAddress="" port="" key=""
adminAction="no-op" rn="server-3" status="modified"/><aaaTacacsPlusServer id="4"
ipAddress="xx.xx.xx.xx" port="40" key="******" adminAction="no-op" rn="server-4"
status="modified"/><aaaTacacsPlusServer id="5" ipAddress="" port="" key=""
adminAction="no-op" rn="server-5" status="modified"/><aaaTacacsPlusServer id="6"
ipAddress="xx.xx.xx.xx" port="49" key="******" adminAction="no-op" rn="server-6"
status="modified"/></aaaTacacsPlus>
</outConfig>
</configConfMo>
```

Configure Using configConfMos

Request

```
<configConfMos cookie='966f8cfa3b/ad44b60e-9779-c0c8-f6f0-f8827da7e340'
inHierarchical="true" >
<inConfigs>
<pair key='sys/tacacs-ext'>
<aaaTacacsPlus dn="sys/tacacs-ext" adminState="enabled" fallbackAuthentication="disabled"
timeout="50">
<aaaTacacsPlusServer dn="sys/tacacs-ext/server-1" ipAddress="xx.xx.xx.xx" port="25"
key="server-1"/>
<aaaTacacsPlusServer dn="sys/tacacs-ext/server-2" adminAction="clear"/>
</aaaTacacsPlus>
</pair>
</inConfigs>
</configConfMos>
```

Response

```
<configConfMos cookie="966f8cfa3b/ad44b60e-9779-c0c8-f6f0-f8827da7e340"
response="yes"><outConfigs><pair key="sys/tacacs-ext"><aaaTacacsPlus dn="sys/tacacs-ext"
adminState="enabled" fallbackAuthentication="disabled" timeout="50" status="modified">
<aaaTacacsPlusServer id="1" ipAddress="xx.xx.xx.xx" port="25" key="******"
adminAction="no-op" rn="server-1" status="modified"/><aaaTacacsPlusServer id="2"
ipAddress="" port="" key="" adminAction="no-op" rn="server-2" status="modified"/>
<aaaTacacsPlusServer id="3" ipAddress="" port="" key="" adminAction="no-op" rn="server-3"
 status="modified"/><aaaTacacsPlusServer id="4" ipAddress="xx.xx.xx.xx" port="40"
key="******" adminAction="no-op" rn="server-4" status="modified"/><aaaTacacsPlusServer
id="5" ipAddress="" port="" key="" adminAction="no-op" rn="server-5" status="modified"/>
<aaaTacacsPlusServer id="6" ipAddress="xx.xx.xx.xx" port="49" key="******"
adminAction="no-op" rn="server-6" status="modified"/></aaaTacacsPlus></pair>
<operationStatus>success</operationStatus></outConfigs></configConfMos>
```

Configure aaaTacacsPlusServer

Request

```
<configConfMo cookie="966f8cfa3b/ad44b60e-9779-c0c8-f6f0-f8827da7e340"
inHierarchical="true" dn="sys/tacacs-ext/server-5">
<inConfig>
<aaaTacacsPlusServer dn="sys/tacacs-ext/server-5" ipAddress="xx.xx.xx.xx" port="50"
key="server-5"/>
</inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/tacacs-ext/server-5" cookie="966f8cfa3b/ad44b60e-9779-c0c8-
f6f0-f8827da7e340" response="yes">
<outConfig>
<aaaTacacsPlusServer id="5" ipAddress="xx.xx.xx.xx" port="50" key="******"
adminAction="no-op" dn="sys/tacacs-ext/server-5" status="modified"/></outConfig>
</configConfMo>
```

Delete a Server

Request

```
<configConfMo cookie="966f8cfa3b/ad44b60e-9779-c0c8-f6f0-f8827da7e340"
inHierarchical="true" dn="sys/tacacs-ext/server-x">
<inConfig>
<aaaTacacsPlusServer dn="sys/tacacs-ext/server-x" adminAction="clear"/>
```

```
</inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/tacacs-ext/server-5" cookie="966f8cfa3b/ad44b60e-9779-c0c8-
f6f0-f8827da7e340" response="yes">
<outConfig>
<aaaTacacsPlusServer id="x" ipAddress="" port="" key="" adminAction="no-op"
dn="sys/tacacs-ext/server-x" status="modified"/></outConfig>
</configConfMo>
```

Get aaaUserAuthPrecedence Details

Request

```
<configResolveClass cookie="ea375e792a/efa7af1b-aee9-73c0-d19f-5c26635007f3"
inHierarchical="false" classId="aaaUserAuthPrecedence"/>
```

Response

```
<configResolveClass cookie="ea375e792a/efa7af1b-aee9-73c0-d19f-5c26635007f3"
response="yes" classId="aaaUserAuthPrecedence">
<outConfigs>
<aaaUserAuthPrecedence dn="sys/user-ext/auth-precedence" authPrecedence1="tacacs-user-db"
authPrecedence2="local-user-db" authPrecedence3="ldap-user-db"/>
</outConfigs>
</configResolveClass>
```

Configure authPrece

Configure authPrece

Request

```
<configConfMo cookie="c6a92c0169/c0bc57b5-4a92-47f5-9117-00411dc166e8"
inHierarchical="false" dn="sys/user-ext/auth-precedence">
<inConfig>
<aaaUserAuthPrecedence dn="sys/user-ext/auth-precedence" authPrecedence1="tacacs-user-db"
authPrecedence3="ldap-user-db"></aaaUserAuthPrecedence>
</inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/user-ext/auth-precedence" cookie="c6a92c0169/c0bc57b5-4a92-
47f5-9117-00411dc166e8" response="yes">
<outConfig>
<aaaUserAuthPrecedence dn="sys/user-ext/auth-precedence" authPrecedence1="tacacs-user-db"
authPrecedence2="local-user-db" authPrecedence3="ldap-user-db" status="modified"/>
</outConfig>
</configConfMo>
```

Configuring HTTP and HTTPS Services

Beginning with release 4.1(3a), Cisco IMC supports HTTP services for communication. The examples in this section show how to use the Cisco IMC XML API to configure HTTP services. Each example shows the XML API request followed by the response from Cisco IMC.

This section includes the following examples:

- Retrieving HTTP and HTTPS Details, on page 70
- Enabling HTTP, on page 70

Retrieving HTTP and HTTPS Details

Get HTTP details

```
<configResolveClass cookie="ed70e99f8c/ad1478bf-2f69-94e3-853a-bae5f226ce1f"
inHierarchical="false" classId="commHttp"/>
```

Response

```
<configResolveClass cookie="ed70e99f8c/ad1478bf-2f69-94e3-853a-bae5f226ce1f"
response="yes" classId="commHttp"> <outConfigs> <commHttp dn="sys/svc-ext/http-svc"
adminState="disabled" descr="HTTP Service" name="http" port="80" redirectState="enabled"
sessionTimeout="1800" maximumSessions="4" activeSessions="0" proto="tcp" ></commHttp><
/outConfigs> </configResolveClass>
```

Get HTTPS Detail

```
<configResolveClass cookie="ed70e99f8c/ad1478bf-2f69-94e3-853a-bae5f226ce1f"
inHierarchical="false" classId="commHttps"/>
```

Response

```
<configResolveClass cookie="ed70e99f8c/ad1478bf-2f69-94e3-853a-bae5f226ce1f"
response="yes" classId="commHttps"> <outConfigs> <commHttps dn="sys/svc-ext/https-svc"
adminState="enabled" descr="Secure HTTP Service" name="https" port="443"
sessionTimeout="1800" maximumSessions="4" activeSessions="1" proto="tcp" >
</commHttps></outConfigs> </configResolveClass>
```

Enabling HTTP

Enabling HTTP when HTTPS is Enabled

```
<configConfMo cookie="ed70e99f8c/ad1478bf-2f69-94e3-853a-bae5f226ce1f"
 inHierarchical="false" dn="sys/svc-ext/http-svc">
<inConfig>
<commHttp dn="sys/svc-ext/http-svc"  adminState="enabled" ></commHttp>
</inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/svc-ext/http-svc"
cookie="ed70e99f8c/ad1478bf-2f69-94e3-853a-bae5f226ce1f"
response="yes">
<outConfig>
<commHttp dn="sys/svc-ext/http-svc" adminState="enabled" descr="HTTP Service"
name="http" port="80" redirectState="enabled" sessionTimeout="1800" maximumSessions="4"
activeSessions="1" proto="tcp" status="modified" ></commHttp></outConfig>
</configConfMo>
```

Configuring HTTP Boot Device

Beginning with release 4.1(3b), Cisco IMC supports HTTP Boot Capability. HTTP Boot is supported in UEFI Boot Mode only.

The examples in this section show how to use the Cisco IMC XML API to configure HTTP boot device. Each example shows the XML API request followed by the response from Cisco IMC.

Configuring HTTP Boot device without any specific parameters

Request

```
<configConfMo cookie="6b3d5c4773/1652fca0-2e3e-a98b-0a4a-2e2c359e6f1b" inHierarchical="false"
 dn="sys/rack-unit-1/boot-precision/http-http_test">
   <inConfig>
      <lsbootHttp dn="sys/rack-unit-1/boot-precision/http-http_test" state="enabled" />
   </inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/rack-unit-1/boot-precision/http-http_test"
cookie="6b3d5c4773/1652fca0-2e3e-a98b-0a4a-2e2c359e6f1b" response="yes">
<outConfig>
<lsbootHttp name="http_test" type="HTTP" order="1" state="Enabled"
dn="sys/rack-unit-1/boot-precision/http-http_test" status="modified"/></outConfig>
</configConfMo>
- validates
```

Configuring HTTP Boot device with required parameters for DHCP

Request

```
<configConfMo cookie="6b3d5c4773/1652fca0-2e3e-a98b-0a4a-2e2c359e6f1b" inHierarchical="false"
 dn="sys/rack-unit-1/boot-precision/http-http_test">
   <inConfig>
     <lsbootHttp dn="sys/rack-unit-1/boot-precision/http-http_test" state="enabled" slot="10"
 port="10" macAddress="ab:cd:ef:ac:df:ad" ipConfigType="DHCP"/>
   </inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/rack-unit-1/boot-precision/http-http_test"
cookie="6b3d5c4773/1652fca0-2e3e-a98b-0a4a-2e2c359e6f1b" response="yes">
   <outConfig>
        <lsbootHttp name="http_test" type="HTTP" macAddress="ab:cd:ef:ac:df:ad" slot="10"
port="10" order="1" state="Enabled" ipConfigType="DHCP"
dn="sys/rack-unit-1/boot-precision/http-http_test" status="modified"/>
    </outConfig>
</configConfMo>
- validates
```

Viewing the HTTP Boot Device Details

Request

```
curl -k -d '<configResolveClass cookie="11470293a5/d2941a5c-b0a1-2f77-c102-a823394633f7"
inHierarchical="false" classId="lsbootHttp"/>' https://10.10.10.10/nuova | xmllint -schema
 conf/common/RACK-OUT.xsd -
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
```

```
                                 Dload  Upload   Total   Spent    Left  Speed
100   663    0   541  100   122    142     32  0:00:03  0:00:03 --:--:--   142
```

Response

```
<?xml version="1.0"?>
<configResolveClass cookie="11470293a5/d2941a5c-b0a1-2f77-c102-a823394633f7" response="yes"
 classId="lsbootHttp">
<outConfigs>
<lsbootHttp name="http_test" type="HTTP" macAddress="aa:aa:aa:aa:aa:aa" iptype="IPv6"
slot="10" port="10" order="1" state="Enabled" ipConfigType="Static" uri="http://cisco.com"
 ipaddress="2001:420:5446:2014::330:12" netmaskOrIPv6Prefix="64"
gateway="2001:420:5446:2014::330:1" dnsserver="2001:420:c0e0:1008::118"
dn="sys/rack-unit-1/boot-precision/http-http_test"/></outConfigs>
</configResolveClass>
- validates
```

Modifying the HTTP Boot Device

Request

```
<configConfMo cookie="54127d7d5d/84476585-7e70-2981-7e66-82b487981198" inHierarchical="false"
 dn="sys/rack-unit-1/boot-precision">
   <inConfig>
       <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" rebootOnUpdate="no">
     <lsbootHttp dn="sys/rack-unit-1/boot-precision/http-http_test" state="enabled" slot="L"
 port="20" macAddress="ab:cd:ca:ac:df:ad" ipConfigType="DHCP" />
      </lsbootDevPrecision>
   </inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="54127d7d5d/84476585-7e70-2981-7e66-82b487981198" response="yes">
     <outConfig>
          <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" name="boot-precision"
purpose="operational" rebootOnUpdate="no" reapply="no" configuredBootMode="Uefi"
lastConfiguredBootOrderSource="BIOS" status="modified"/>
      </outConfig>
</configConfMo>
- validates
```

Configuring HTTP Boot Devices of IP type IPv4 and IPv6 with Required Parameters for Static

Request

```
<configConfMo cookie="c95a430d80/8cac361a-46de-1814-17b5-840d22b24b46" inHierarchical="true"
 dn="sys/rack-unit-1/boot-precision">
   <inConfig>
       <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" rebootOnUpdate="no">
     <lsbootHttp dn="sys/rack-unit-1/boot-precision/http-http_test" state="enabled" slot="L"
 port="20" macAddress="ab:cd:ca:ac:df:ad" ipConfigType="Static"
ipaddress="2001:420:5446:2014::330:12" netmaskOrIPv6Prefix="128"
gateway="2001:420:5446:2014::330:1" dnsserver="2001:420:c0e0:1008::118" iptype="IPv6"
uri="http://cisco.com/a.iso"/>
      <lsbootHttp dn="sys/rack-unit-1/boot-precision/http-http_MLOM" state="enabled"
slot="MLOM" port="10" macAddress="aa:aa:aa:aa:aa:aa" ipConfigType="Static"
uri="http://cisco.com/b.iso" iptype="IPv4" ipaddress="10.1.1.10"
netmaskOrIPv6Prefix="255.255.255.0" gateway="10.1.1.1" dnsserver="10.20.20.1"/>
      </lsbootDevPrecision>
   </inConfig>
</configConfMo>
```

Response

```
Response:

<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="c95a430d80/8cac361a-46de-1814-17b5-840d22b24b46" response="yes">
<outConfig>
<lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" name="boot-precision"
purpose="operational" rebootOnUpdate="no" reapply="no" configuredBootMode="Legacy"
lastConfiguredBootOrderSource="CIMC" status="modified"><lsbootHttp name="http_test"
type="HTTP" macAddress="ab:cd:ca:ac:df:ad" iptype="IPv6" slot="L" port="20" order="1"
state="Enabled" ipConfigType="Static" uri="http://cisco.com/a.iso"
ipaddress="2001:420:5446:2014::330:12" netmaskOrIPv6Prefix="128"
gateway="2001:420:5446:2014::330:1" dnsserver="2001:420:c0e0:1008::118" rn="http-http_test"
 status="modified"/><lsbootHttp name="http_MLOM" type="HTTP" macAddress="aa:aa:aa:aa:aa:aa"
 iptype="IPv4" slot="MLOM" port="10" order="2" state="Enabled" ipConfigType="Static"
uri="http://cisco.com/b.iso" ipaddress="10.1.1.10" netmaskOrIPv6Prefix="255.255.255.0"
gateway="10.1.1.1" dnsserver="10.20.20.1" rn="http-http_MLOM"
status="modified"/></lsbootDevPrecision></outConfig>
</configConfMo>
- validates
```

Configure with Parent and child hierarchy

Request

```
<configConfMo cookie="54127d7d5d/84476585-7e70-2981-7e66-82b487981198" inHierarchical="false"
 dn="sys/rack-unit-1/boot-precision">
   <inConfig>
       <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" rebootOnUpdate="no">
     <lsbootHttp dn="sys/rack-unit-1/boot-precision/http-http_test" state="enabled" slot="10"
 port="10" macAddress="ab:cd:ef:ac:df:ad" ipConfigType="DHCP" />
      </lsbootDevPrecision>
   </inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="54127d7d5d/84476585-7e70-2981-7e66-82b487981198" response="yes">
    <outConfig>
        <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" name="boot-precision"
purpose="operational" rebootOnUpdate="no" reapply="no" configuredBootMode="Uefi"
lastConfiguredBootOrderSource="BIOS" status="modified"/>
    </outConfig>
</configConfMo>
- validates
```

Modifying HTTP Boot Devices of IP type IPv4 and IPv6 with Required Parameters for Static

Request

```
<configConfMo cookie="c95a430d80/8cac361a-46de-1814-17b5-840d22b24b46" inHierarchical="true"
 dn="sys/rack-unit-1/boot-precision">
   <inConfig>
       <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" rebootOnUpdate="no">
     <lsbootHttp dn="sys/rack-unit-1/boot-precision/http-http_test" state="enabled" slot="L"
 port="20" macAddress="ab:cd:ca:ac:df:ad" ipConfigType="Static"
ipaddress="2001:420:5446:2014::330:13" netmaskOrIPv6Prefix="64"
gateway="2001:420:5446:2014::330:2" dnsserver="2001:420:c0e0:1008::120" iptype="IPv6"
uri="http://cisco.com/c.iso"/>
      <lsbootHttp dn="sys/rack-unit-1/boot-precision/http-http_MLOM" state="enabled"
slot="MLOM" port="10" macAddress="aa:aa:aa:aa:aa:aa" ipConfigType="Static"
uri="http://cisco.com/b.iso" iptype="IPv4" ipaddress="10.1.1.20"
netmaskOrIPv6Prefix="255.255.255.0" gateway="10.1.1.2" dnsserver="10.20.20.2"/>
      </lsbootDevPrecision>
```

```
   </inConfig>
</configConfMo>
```

Response

```
<?xml version="1.0"?>
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="c95a430d80/8cac361a-46de-1814-17b5-840d22b24b46" response="yes">
<outConfig>
<lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" name="boot-precision"
purpose="operational" rebootOnUpdate="no" reapply="no" configuredBootMode="Legacy"
lastConfiguredBootOrderSource="CIMC" status="modified"><lsbootHttp name="http_test"
type="HTTP" macAddress="ab:cd:ca:ac:df:ad" iptype="IPv6" slot="L" port="20" order="1"
state="Enabled" ipConfigType="Static" uri="http://cisco.com/c.iso"
ipaddress="2001:420:5446:2014::330:13" netmaskOrIPv6Prefix="64"
gateway="2001:420:5446:2014::330:2" dnsserver="2001:420:c0e0:1008::120" rn="http-http_test"
 status="modified"/><lsbootHttp name="http_MLOM" type="HTTP" macAddress="aa:aa:aa:aa:aa:aa"
 iptype="IPv4" slot="MLOM" port="10" order="2" state="Enabled" ipConfigType="Static"
uri="http://cisco.com/b.iso" ipaddress="10.1.1.20" netmaskOrIPv6Prefix="255.255.255.0"
gateway="10.1.1.2" dnsserver="10.20.20.2" rn="http-http_MLOM"
status="modified"/></lsbootDevPrecision></outConfig>
</configConfMo>
- validates
```

Deleting a Boot Device

Request

```
<configConfMo cookie="54127d7d5d/84476585-7e70-2981-7e66-82b487981198" inHierarchical="false"
 dn="sys/rack-unit-1/boot-precision">
   <inConfig>
       <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" rebootOnUpdate="no">
         <lsbootHttp dn="sys/rack-unit-1/boot-precision/http-http_test" status="deleted"/>
      </lsbootDevPrecision>
   </inConfig>
</configConfMo>
```

Response

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="54127d7d5d/84476585-7e70-2981-7e66-82b487981198" response="yes">
<outConfig>
<lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" name="boot-precision"
purpose="operational" rebootOnUpdate="no" reapply="no" configuredBootMode="Uefi"
lastConfiguredBootOrderSource="BIOS" status="modified"/></outConfig>
</configConfMo>
- validates
```

Configuring SSH Keys

To support configuring of SSH keys for a user, Cisco IMC 4.1.2 XML API provides a new managed object, **aaaUserSSHKey**. This new managed object is available with the DN - **sys/user-ext/user-1/ssh-key-1**.

The examples in this section show how to use the Cisco IMC XML API to configure SSH keys. Each example shows the XML API request followed by the response from Cisco IMC.

This section includes the following examples:

- Configuring SSH Key index 1 using content-key-upload for User 1, on page 75
- Deleting the SSH key index 1 for User 1, on page 75

- Configuring SSH Key 2 for User 1 from Remote Location, on page 76
- Configuring SSH Key 2 using configConfMos with content-key-upload, on page 76
- Deleting SSH Key 2 for User 1 using configConfMos, on page 77
- Configure SSH Key 2 using configConfMos for User 1 from Remote Location, on page 77

Configuring SSH Key index 1 using content-key-upload for User 1

Request:

```
<configConfMo cookie="55a599cb83/75867bc0-8528-e91e-da88-8ec6a98b9f1f"
 inHierarchical="false" dn="sys/user-ext/user-1/ssh-key-1">
<inConfig>
<aaaUserSSHKey dn="sys/user-ext/user-1/ssh-key-1"
 adminAction="content-key-upload"
sshKey="ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQD8byYqBdnio8+Zo0dH3/
4PiyvXWBVEkOG2VvHcM294rQIjU16wjc/Kpcxy/
citl4N86+rVSIk+C2ud0O1Ixzlbr8EFpeRJ5Q645c2qbiLS0yLcTT6deLWL28SPcGZ9RlHsit6+xGPuhcIEq79Wf1/
ciYCgRbdX5CyDcH7qFYivc6F+WrsfzDFJa0F/
SicoLUaJBf2OLVgQV1aV8gJwtj88xCWmZ9GofuLIVwwF9c+TqGPxeYWf+NZt7eQy5j+pHrx/
VKG5O9hz+qjC966BzKXq25BifwmS1ZoDY49p9DkpOB/Qrr+Com/
HpHez6oozAJizXva6lP7+/1m7WkbUJyxR jdakua@IPv6Setup"></aaaUserSSHKey>
</inConfig>
</configConfMo>
```

Response:

```
<?xml version="1.0"?>
<configConfMo dn="sys/user-ext/user-1/ssh-key-1"
cookie="55a599cb83/75867bc0-8528-e91e-da88-8ec6a98b9f1f" response="yes">
<outConfig>
<aaaUserSSHKey id="1"
sshKey="ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQD8byYqBdnio8+Zo0dH3/
4PiyvXWBVEkOG2VvHcM294rQIjU16wjc/Kpcxy/
citl4N86+rVSIk+C2ud0O1Ixzlbr8EFpeRJ5Q645c2qbiLS0yLcTT6deLWL28SPcGZ9RlHsit6+xGPuhcIEq79Wf1/
ciYCgRbdX5CyDcH7qFYivc6F+WrsfzDFJa0F/
SicoLUaJBf2OLVgQV1aV8gJwtj88xCWmZ9GofuLIVwwF9c+TqGPxeYWf+NZt7eQy5j+pHrx/
VKG5O9hz+qjC966BzKXq25BifwmS1ZoDY49p9DkpOB/Qrr+Com/
HpHez6oozAJizXva6lP7+/1m7WkbUJyxR jdakua@IPv6Setup  "
adminAction="no-op" protocol="none" remoteServer="" remoteFile=""
user="" pwd="" dn="sys/user-ext/user-1/ssh-key-1" status="modified"/>
</outConfig>
</configConfMo>
- validates
```

Deleting the SSH key index 1 for User 1

Request:

```
<configConfMo
cookie="14d926a2fd/d58efaf0-0379-22b3-a46a-d707e11a2193"
inHierarchical="false" dn="sys/user-ext/user-1/ssh-key-1">
<inConfig>
<aaaUserSSHKey dn="sys/user-ext/user-1/ssh-key-1"
adminAction="clear" ></aaaUserSSHKey>
</inConfig>
</configConfMo>
```

Response:

```
<?xml version="1.0"?>
<configConfMo dn="sys/user-ext/user-1/ssh-key-1"
```

```
cookie="14d926a2fd/d58efaf0-0379-22b3-a46a-d707e11a2193" response="yes">
<outConfig>
<aaaUserSSHKey id="1" sshKey="" adminAction="no-op"
protocol="none" remoteServer="" remoteFile="" user="" pwd=""
dn="sys/user-ext/user-1/ssh-key-1" status="modified"/></outConfig>
</configConfMo>
- validates
```

Configuring SSH Key 2 for User 1 from Remote Location

Request:

```
<configConfMo
cookie="604e5e6b96/ae7ead8c-5694-e797-6b34-9046b12810da"
 inHierarchical="false" dn="sys/user-ext/user-1/ssh-key-2">
<inConfig>
<aaaUserSSHKey dn="sys/user-ext/user-1/ssh-key-2"
adminAction="remote-key-upload" protocol="scp"
remoteServer="10.197.125.105" remoteFile="/home/srivatss/publickey.pem"
 user="srivatss" pwd="password"></aaaUserSSHKey>
</inConfig>
</configConfMo>
```

Response:

```
<?xml version="1.0"?>
<configConfMo dn="sys/user-ext/user-1/ssh-key-2"
 cookie="604e5e6b96/ae7ead8c-5694-e797-6b34-9046b12810da" response="yes">
<outConfig>
<aaaUserSSHKey id="2"
sshKey="ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDFOK17ZYbMMfGcxGrfxlupMqFyl1ZN
IJohPxAStu41OkItF9VrrhrfF1ZKOpogJinx3s0OcPfGLMSWEQkUq1zGlL8rAESZbi6z36WGFeZ9
3amJ3nfxDU7JWD9KHmINixpX5XbbZeKQJvfSTptanmkjTQ8sq2iSMK0HL+G35i8BXmwIBLuEM+SWI
EYjLaDAZ6aLKPxxddTrFxWTP9QpzJAfQGlXXZSYauYb6OMNUxjgqFtB2XCiROZTzcj4n1XQRbzU+
56HvHmowcOPhO81Btbun+xvksTeXbV3e9DVymjQK1qD2yY5h/EJdC0+9wGPyVmaT2bAOu4HbTsz8
u4HFkTf jdakua@IPv6Setup  "
adminAction="no-op" protocol="none" remoteServer="" remoteFile=""
user="" pwd="" dn="sys/user-ext/user-1/ssh-key-2" status="modified"/>
</outConfig>
</configConfMo>
- validates
```

Configuring SSH Key 2 using configConfMos with content-key-upload

Request:

```
<configConfMos
cookie="2f96decb91/c7120c07-b4bb-35e7-c33d-a03dee411971"
inHierarchical="false">
<inConfigs>
      <pair key="sys/user-ext/user-1/ssh-key-2">
          <aaaUserSSHKey id="2" rn="ssh-key-2" adminAction="content-key-upload"
sshKey="ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQC/
wh89lwly7q5yMWUQbcZYJiEUOWnjuJlrHmdtn2F1ZyFRdIfEd/
flgpLST88pK4DAX6eI5fY7/E2HhtTOYoRDVwanvwCy6jx8yYzDoDqioI+S7RBz20urI800
wp4ofEshAnxJVOqxjGsddk8X8xraCQUKEoOpgY8NY4YotEcwm41/
82cXj65sCiW818Ql72oIsDLYSeHalYR6TkBcyEwvnJ1PPqpZNbtki6sWHTvdWcne4g5VGoM0C+0sE/
YmTElQ7XMidlM2eXadW01OAyfXZaqWjn4sxCP4IkBg+Un2ip6kZ65yjQe3Kmez4Lxvvpn3+rFRB/
GYxFBEN9OQ4cuz duprasad@cisco.com"></aaaUserSSHKey>
        </pair>
   </inConfigs>
</configConfMos>
```

Response:

```
<?xml version="1.0"?>
<configConfMos cookie="2f96decb91/c7120c07-b4bb-35e7-c33d-a03dee411971"
response="yes"><outConfigs><pair key="sys/user-ext/user-1/ssh-key-2">
<aaaUserSSHKey id="2" sshKey="ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQC/
wh89lwly7q5yMWUQbcZYJiEUOWnjuJlrHmdtn2F1ZyFRdIfEd/flgpLST88pK4DAX6eI5fY7/
E2HhtTOYoRDVwanvwCy6jx8yYzDoDqioI+S7RBz20urI800wp4ofEshAnxJVOqxjGsddk8X8xraCQUK
EoOpgY8NY4YotEcwm41/82cXj65sCiW818Ql72oIsDLYSeHalYR6TkBcyEwvnJ1PPqpZNbtki6sWHTv
dWcne4g5VGoM0C+0sE/YmTElQ7XMidlM2eXadW01OAyfXZaqWjn4sxCP4IkBg+Un2ip6kZ65yjQe3Km
ez4Lxvvpn3+rFRB/GYxFBEN9OQ4cuz duprasad@cisco.com  "
adminAction="no-op" protocol="none" remoteServer="" remoteFile=""
user="" pwd="" dn="sys/user-ext/user-1/ssh-key-2" status="modified"/>
</pair><operationStatus>success</operationStatus></outConfigs>
</configConfMos>
- validates
```

Deleting SSH Key 2 for User 1 using configConfMos

Request:

```
<configConfMos
cookie="2f96decb91/c7120c07-b4bb-35e7-c33d-a03dee411971"
 inHierarchical="false">
<inConfigs>
      <pair key="sys/user-ext/user-1/ssh-key-2">
          <aaaUserSSHKey id="2" rn="ssh-key-2"
 adminAction="clear" ></aaaUserSSHKey>
        </pair>
   </inConfigs>
</configConfMos>
```

Response:

```
<?xml version="1.0"?>
<configConfMos cookie="2f96decb91/c7120c07-b4bb-35e7-c33d-a03dee411971"
response="yes"><outConfigs><pair key="sys/user-ext/user-1/ssh-key-2">
<aaaUserSSHKey id="2" sshKey="" adminAction="no-op" protocol="none"
 remoteServer="" remoteFile="" user="" pwd=""
dn="sys/user-ext/user-1/ssh-key-2" status="modified"/></pair>
<operationStatus>success</operationStatus></outConfigs></configConfMos>
- validates
```

Configure SSH Key 2 using configConfMos for User 1 from Remote Location

Request:

```
<configConfMos
cookie="2f96decb91/c7120c07-b4bb-35e7-c33d-a03dee411971"
inHierarchical="false">
<inConfigs>
      <pair key="sys/user-ext/user-1/ssh-key-2">
          <aaaUserSSHKey dn="sys/user-ext/user-1/ssh-key-2"
adminAction="remote-key-upload" protocol="scp" remoteServer="10.197.125.105"
remoteFile="/home/srivatss/publickey1.pem" user="srivatss" pwd="password">
</aaaUserSSHKey>
      </pair>
</inConfigs>
```

Response:

```
<configConfMos
cookie="2f96decb91/c7120c07-b4bb-35e7-c33d-a03dee411971"
inHierarchical="false">
<inConfigs>
      <pair key="sys/user-ext/user-1/ssh-key-2">
          <aaaUserSSHKey dn="sys/user-ext/user-1/ssh-key-2"
```

```
adminAction="remote-key-upload" protocol="scp" remoteServer="10.197.125.105"
 remoteFile="/home/srivatss/publickey1.pem" user="srivatss" pwd="password">
</aaaUserSSHKey>
      </pair>
</inConfigs>
</configConfMos>
```

Managing the External Certificate

To support upload of the external certificate and private key, Cisco IMC 4.1.2 XML API provides two new managed objects, **uploadExternalCertificate** and **uploadExternalPrivateKey**. These new managed objects are available under **certificateManagement** with the DN - **sys/cert-mgmt/external-cert-upload** and **sys/cert-mgmt/external-pvt-key-upload** respectively.

In addition to the new managed objects, Cisco IMC XML API provides an additional attribute **- adminAction - activate-external-cert** to activate the external certificate. The **adminAction** is a part of certificateManagement MO.

Details of the Managed Objects

For **uploadExternalCertificate**:

*Table 2: **uploadExternalCertificate***

Attributes	Description
adminAction	Specify any one of the following: • **remote-cert-upload** - Upload certificate by copy-pasting the text. • **content-cert-upload** - Upload certificate from a remote share location.
protocol	Specify the protocol (**tftp**, **scp**, **sftp**, **ftp** and **http**) to upload the certificate from remote location.
remoteShare	Specify the remote share.
remoteFile	Specify the remote file which contains the external certificate.
user	Specify the user name (if the chosen protocol is **scp**/**sftp**)
pwd	Specify the password (if the chosen protocol is **scp**/**sftp**)

For **uploadExternalPrivateKey**:

Table 3: ***uploadExternalPrivateKey***

Attributes	Description
adminAction	Specify any one of the following: • **remote-cert-upload** - Upload private key by copy-pasting the text. • **content-cert-upload** - Upload private key from a remote share location.
protocol	Specify the protocol (**scp** and **sftp**) to upload the private key from remote location.
remoteShare	Specify the remote share.
remoteFile	Specify the remote file which contains the private key.
user	Specify the user name.
pwd	Specify the password.

The examples in this section show how to use the Cisco IMC XML API to configure the external certificate and private key. Each example shows the XML API request followed by the response from Cisco IMC.

This section includes the following examples:

- Sample uploadExternalCertificate.xml File used for Uploading External Certificate by Pasting, on page 80
- Uploading External Certificate by Pasting, on page 80
- Sample uploadExternalCertificate.xml File used for Uploading External Certificate from Remote Server, on page 80
- Uploading External Certificate from Remote Server, on page 81
- Sample uploadExternalPrivateKey.xml File used for Uploading External Private Key by Pasting, on page 81
- Uploading Private Key by Pasting, on page 82
- Sample uploadExternalPrivateKey.xml File used for Uploading External Private Key from Remote Server, on page 82
- Uploading Private Key from Remote Server, on page 82
- Sample activateExternalCert.xml File, on page 83
- Uploading External Certificate using configConfMosusing remote-cert-upload, on page 83
- Uploading Private Key Using configConfMos using remote-cert-upload, on page 84
- Activating External Certificate using configConfMos, on page 84

Sample uploadExternalCertificate.xml File used for Uploading External Certificate by Pasting

```
<configConfMo cookie="0154b835ee/21becfc5-f7de-e50d-3d8f-a8368bf4817c"
dn="sys/cert-mgmt/external-cert-upload" inHierarchical="false">
  <inConfig>
    <uploadExternalCertificate adminAction="content-cert-upload"
certificateContent="
-----BEGIN CERTIFICATE-----
MIID8zCCAtugAwIBAgIBBDANBgkqhkiG9w0BAQwFADCBsDELMAkGA1UEBhMCSU4x
EjAQBgNVBAgMCUthcm5hdGFrYTESMBAGA1UEBwwJQmFuZ2Fsb3JlMSQwIgYDVQQK
DBtDaXNjbyBTeXN0ZW1zIEluZGlhIFB2dCBMdGQxGDAWBgNVBAsMD1VDUy1SYWNr
LVNlcnZlcjEWMBQGA1UEAwwNQ2lzY28gU3lzdGVtczEhMB8GCSqGSIb3DQEJARYS
c3JpdmF0c3NAY2lzY28uY29tMB4XDTIwMDExMzA4MTM1NVoXDTIxMDExMjA4MTM1
NVowgbExCzAJBgNVBAYTAklOMRIwEAYDVQQIEwlLYXJuYXRha2ExEjAQBgNVBAcT
CUJlbmdhbHVydTEkMCIGA1UEChMbQ2lzY28gU3lzdGVtcyBJbmRpYSBQdnQgTHRk
MRgwFgYDVQQLEw9VQ1MtUmFjay1TZXJ2ZXIxFjAUBgNVBAMTDUNpc2NvIFN5YXRl
bXMxIjAgBgkqhkiG9w0BCQEWE3NyaXZhdHNzQGNpc2NvLmNvbm0wggEiMA0GCSqG
SIb3DQEBAQUAA4IBDwAwggEKAoIBAQC6fcG9QISg6t1fi6U3+czmek2LvfhAxSGd
r2g7uMssgdTrBh59TEgZl5azal5zWaZm/1iO69D6/iabyoli8+MiQAtANnKxqWM3
STeih+3U2jOf39llIlZrAMpd4Ag/OtK5OcUtwUHM52ixm/UU61geVPZ5mJpPkzq3T
JNcv6TR90K8v0nEILm1lgoA96y64I9YN3ufSE4gm9VOS/sFughmAyYErsgvgoJpn
SQZUYxwdueBm4XV48QY7Mc7neUVYCNo7TcfBX7DC/N0BHv3hlKhGCCQ+5if63uOh
ja8ahdBoIPJqI0h70a92yBK5lv4dxSHexccw2D40kar4CzfVSqx9AgMBAAGjFTAT
MBEGCWCGSAGG+EIBAQQEAwIGQDANBgkqhkiG9w0BAQwFAAOCAQEAXdVTJevqNyI9
DEVibfjGXiKnJ2gEuYr8MdhpDeff/WrsLk7lxhOomVrDZ3iyCX99tNoCIvtOMgNs
jOu9OEjNtBulOlgwdQ9ugwp/JToohbD+2JHRK/MgrFpZmewH1oKKDNpOdayR6u9m
SNfvMNBgvxg+cMcbkif0pJU3XHlniPF6UVgj/LJDyBSGrULpnyDwTOq2UEF6g9Dc
6gOgRGYNHn7MRzigPJtyjbJsbxgPQ9C46I3Me9N2sJNaSLSVQhOxW7KonPI6USRs
e2iEAYaaCvThGE4HTwOMF9dJ24inU+SKTci1AFq2+V4I3P9v+aH5ao1H9T/p/AUP
ho6MuZ+wWg==
-----END CERTIFICATE----- "
dn="sys/cert-mgmt/external-cert-upload"/>
  </inConfig>
</configConfMo>
```

Uploading External Certificate by Pasting

Request:

```
curl -k -H "Content-Type: multipart/form-data; " --data-binary @uploadExternalCertificate.xml
https ://10.10.10.10/nuova | xmllint --schema ../conf/common/RACK-OUT.xsd -
```

Response:

```
% Total    % Received % Xferd  Average Speed   Time
Time     Time  Current Dload  Upload   Total   Spent    Left  Speed
100  2462    0   451  100  2011    216    965  0:00:02  0:00:02 --:--:--   965
<?xml version="1.0"?>
<configConfMo dn="sys/cert-mgmt/external-cert-upload"
cookie="86f83c3d04/37903252-df40-8f3c-ea28-038cb3764e8f" response="yes">
<outConfig>
<uploadExternalCertificate dn="sys/cert-mgmt/external-cert-upload"
adminAction="no-op" protocol="none" remoteServer="" remoteFile=""
user="" pwd="" uploadStatus="COMPLETED" uploadProgress="100%"
certificateContent="Certificate Content" status="modified"/></outConfig>
</configConfMo>
- validates
```

Sample uploadExternalCertificate.xml File used for Uploading External Certificate from Remote Server

```
<configConfMo cookie="0154b835ee/21becfc5-f7de-e50d-3d8f-a8368bf4817c"
dn="sys/cert-mgmt/external-cert-upload" inHierarchical="false">
  <inConfig>
    <uploadExternalCertificate adminAction="remote-cert-upload" protocol="scp"
```

```
 user="srivatss" remoteServer="10.10.10.10"
remoteFile="/home/srivatss/server.cert" pwd="password"
dn="sys/cert-mgmt/external-cert-upload"/>
  </inConfig>
</configConfMo>
```

Uploading External Certificate from Remote Server

Request:

```
curl -k -d@uploadExternalCertificate.xml https://10.10.10.10/nuova | xmllint --schema
../conf/common/RACK-OUT.xsd -
```

Response:

```
% Total    % Received % Xferd  Average Speed   Time    Time
Time  Current Dload  Upload   Total   Spent    Left  Speed
100  2381    0   451  100  1930     80    344  0:00:05  0:00:05 --:--:--     0
<?xml version="1.0"?>
<configConfMo dn="sys/cert-mgmt/external-cert-upload"
cookie="86f83c3d04/37903252-df40-8f3c-ea28-038cb3764e8f" response="yes">
<outConfig>
<uploadExternalCertificate dn="sys/cert-mgmt/external-cert-upload"
adminAction="no-op" protocol="none" remoteServer="" remoteFile=""
user="" pwd="" uploadStatus="COMPLETED" uploadProgress="100%"
certificateContent="Certificate Content" status="modified"/></outConfig>
</configConfMo>
- validates
```

Sample uploadExternalPrivateKey.xml File used for Uploading External Private Key by Pasting

```
<configConfMo
cookie="0154b835ee/21becfc5-f7de-e50d-3d8f-a8368bf4817c"
dn="sys/cert-mgmt/external-pvt-key-upload" inHierarchical="false">
  <inConfig>
    <uploadExternalPrivateKey adminAction="content-cert-upload"
certificateContent="
-----BEGIN RSA PRIVATE KEY-----
MIIEoQIBAAKCAQEAun3BvUCEoOrdX4ulN/nM5npNi734QMUhna9oO7jLLIHU6wYe
fUxIGZeWs2pec1mmZv9YjuvQ+v4mm8qJYvPjIkALQDZysaljN0k3ooft1Nozn9/Z
SJWawDKXeAIPzrSuTnFLcFBzOdosZv1FOtYHlT2eZiaT5M6t0yTXL+k0fdCvL9Jx
CC5tZYKAPesuuCPWDd7n0hOIJvVTkv7BboIZgMmBK7IL4KCaZ0kGVGMcHbngZuF1
ePEGOzHO53lFWAjaO03HwV+wwvzdAR794ZSoRggkPuYn+t7joY2vGoXQaCDyaiNI
e9GvdsgSuZb+HcUh3sXHMNg+NJGq+As31UqsfQIDAQABAoH/MSv3aW8ZiVRkCk1H
wvqajCqzR6VPT8SqmGknkpem+pVBDrcOUvtKB3Vwxt3FCaUZuw6YyxZig8t/YpSE
pRKpUN6SGNxCYZXIE0u635/3lafy9LSRFhJcO1EbnwjsIhSB4Sz+Nx7/QsHD82PU
XS8R0MfufACv/iSAsKuGEZvru0BWexD1ycojGTDRhGqWZGzsN6ncsbhQ0kItC0Pv
Ycx+9NeKfGwO+P9NwyWwaKW9M4nOyx3/MviMx9QRbNjgxjrdTj+A0aBUEzgdeZOf
WCJ/LlSbHmJ46HYZOILL4KDBbow/c7a1c2JcFWn01m33qNCRWdkb5H+1UZA+el7g
XnxDAoGBALzBdW26GGIZjj42Ayr9PAXFsO8n0MonqVHRlRTvxeuLOvHYdD9HzgkH
CFXA0IGmNk/1RuwEArx6U6ezSP6z7za9B63MskE7t3Vs28/OJg14KptRftGKUIbZ
NRf1o3J7VUf9mYk9u3pc/PJ8oVweFoml/SwRTDvZyUn5WRLq7zJ3AoGBAPztx24M
qj0Gcbqa7U5pUM+9bD9eGPxrGranFlDp79eobG+9kva286clp0Yr5XrNsQpx42Q6
RJLBVEwrB03D7X9UIOaAgyiaDbDMbIeAcRqOC9qpLDUXrpMVrdvVhtcPrKS8VAp4
hOle6zYKMShMXDExhH3EHaQ7aVOQRpt5GoGrAoGBAKBX1uE3TK9I9kRyrY4/QFXG
8d62++4+ct9GIlZ+uKq2w4PeVCHNZYDVsIboHDeGcmzJ901WutxRLe8vpbp4L6VY
PsWtNV+k0tu1daS5gim/ArKeMBTgYjerHCcWS5pcmr1k+KBVCIWRqG504L3X8V1M
3BwrNY9CGnP0lW40lK1RAoGASikuIIZ2JA6Pqjdi/WrD1yWjZ7EfgmOlIYk8cd0m
BgXMRbdAMDbUml3f/iNA1hEZqAZctjafhKhLH0o+if641GzGeM+VpYIGIaDO8awn
fbHIqASSgb6/4UCqCZtCPizKYkMWITvVPNgn/2BdqYM6RPJP9tBaIJ2K9IWJLm0D
6KECgYB9rmj/8YW7Rz1Isfg7JhK32p7LC+5xSSbpxQc8s/3PftZ5uQnsXXHoZJ0H
cfA4mbj4nttyFwX+kuUpQdG/ZhoJ/SDqE5lvzVM4stMRKFEJq8ksld+KGGzLFEkj
OotvpQor5dHHU46IIu9tv5ctrJImMjSM7wro26kW2EE3UzZMYw==
-----END RSA PRIVATE KEY----- "
```

```
dn="sys/cert-mgmt/external-pvt-key-upload"/>
  </inConfig>
</configConfMo>
```

Uploading Private Key by Pasting

Request:

```
curl -k -H "Content-Type: multipart/form-data;
" --data-binary @uploadExternalPrivateKey.xml
https://10.10.10.10/nuova | xmllint --schema ../conf/common/RACK-OUT.xsd -
```

Response:

```
% Total    % Received % Xferd  Average Speed   Time    Time
 Time  Current Dload  Upload   Total   Spent    Left  Speed
100  2715    0   455  100  2260    109    542  0:00:04  0:00:04 --:--:--   542
<?xml version="1.0"?>
<configConfMo dn="sys/cert-mgmt/external-pvt-key-upload"
cookie="86f83c3d04/37903252-df40-8f3c-ea28-038cb3764e8f" response="yes">
<outConfig>
<uploadExternalPrivateKey dn="sys/cert-mgmt/external-pvt-key-upload"
adminAction="no-op" protocol="none" remoteServer="" remoteFile=""
user="" pwd="" uploadStatus="COMPLETED" uploadProgress="100%"
certificateContent="Certificate Content" status="modified"/></outConfig>
</configConfMo>
- validates
```

Sample uploadExternalPrivateKey.xml File used for Uploading External Private Key from Remote Server

```
<configConfMo
cookie="0154b835ee/21becfc5-f7de-e50d-3d8f-a8368bf4817c"
dn="sys/cert-mgmt/external-pvt-key-upload" inHierarchical="false">
  <inConfig>
<uploadExternalPrivateKey adminAction="remote-cert-upload"
protocol="scp" user="srivatss" remoteServer="10.10.10.10"
remoteFile="/home/srivatss/wildcard.pem" pwd="password"
dn="sys/cert-mgmt/external-pvt-key-upload"/>
  </inConfig>
</configConfMo>
```

Uploading Private Key from Remote Server

Request:

```
curl -k -d@uploadExternalPrivateKey.xml https://10.10.10.10/nuova | xmllint --schema
../conf/common/RACK-OUT.xsd -
```

Response:

```
% Total    % Received % Xferd  Average Speed   Time    Time
Time  Current  Dload  Upload   Total   Spent    Left  Speed
100  2621    0   455  100  2166     63    302  0:00:07  0:00:07 --:--:--     0
<?xml version="1.0"?>
<configConfMo dn="sys/cert-mgmt/external-pvt-key-upload"
cookie="86f83c3d04/37903252-df40-8f3c-ea28-038cb3764e8f" response="yes">
<outConfig>
<uploadExternalPrivateKey dn="sys/cert-mgmt/external-pvt-key-upload"
adminAction="no-op" protocol="none" remoteServer="" remoteFile=""
user="" pwd="" uploadStatus="COMPLETED" uploadProgress="100%"
certificateContent="Certificate Content" status="modified"/></outConfig>
</configConfMo>
- validates
```

Sample activateExternalCert.xml File

```
<configConfMo
cookie="0154b835ee/21becfc5-f7de-e50d-3d8f-a8368bf4817c"
inHierarchical="false">
  <inConfig>
    <certificateManagement adminAction="activate-external-cert"
dn="sys/cert-mgmt"/>
  </inConfig>
</configConfMo>
```

Activating the External Certificate

Request:

```
curl -k -d@activateExternalCert.xml https://10.10.10.10/nuova |
xmllint --schema ../conf/common/RACK-OUT.xsd -
```

Response:

```
  % Total    % Received % Xferd  Average Speed   Time    Time
Time  Current  Dload  Upload   Total   Spent    Left  Speed
100   580    0   347  100   233     85     57  0:00:04  0:00:04 --:--:--    85
<?xml version="1.0"?>
<configConfMo dn="" cookie="86f83c3d04/37903252-df40-8f3c-ea28-038cb3764e8f"
 response="yes">
<outConfig>
<certificateManagement dn="sys/cert-mgmt" description="Certificate Management"
externalCertificate="Not Available" externalPrivateKey="Not Available"
adminAction="no-op" status="modified"/></outConfig>
</configConfMo>
- validates
```

Uploading External Certificate using configConfMosusing remote-cert-upload

Request:

```
<configConfMos
 cookie="d6cfaceed6/9fe756e9-50c5-c0c4-b29a-130160933259"
inHierarchical="false">
  <inConfigs>
    <pair key="sys/cert-mgmt/external-cert-upload">
      <uploadExternalCertificate adminAction="remote-cert-upload"
protocol="scp" user="amkalyan" remoteServer="10.10.10.10"
remoteFile="/home/amkalyan/Cert_Mgmt/wildcard.crt" pwd="password"
dn="sys/cert-mgmt/external-cert-upload"/>
    </pair>
  </inConfigs>
</configConfMos>
```

Response:

```
<configConfMos
cookie="d6cfaceed6/9fe756e9-50c5-c0c4-b29a-130160933259" response="yes">
  <outConfigs>
    <pair key="sys/cert-mgmt/external-cert-upload">
      <uploadExternalCertificate dn="sys/cert-mgmt/external-cert-upload"
adminAction="no-op" protocol="none" remoteServer="" remoteFile="" user=""
pwd="" uploadStatus="UPLOADING" uploadProgress="25%"
certificateContent="Certificate Content" status="modified"/>
    </pair>
    <operationStatus>success</operationStatus>
  </outConfigs>
</configConfMos>
```

Uploading Private Key Using configConfMos using remote-cert-upload

Request:

```
<configConfMos cookie="d6cfaceed6/9fe756e9-50c5-c0c4-b29a-130160933259"
inHierarchical="false">
  <inConfigs>
    <pair key="sys/cert-mgmt/external-pvt-key-upload">
      <uploadExternalPrivateKey adminAction="remote-cert-upload" protocol="scp"
user="amkalyan" remoteServer="10.225.121.139"
remoteFile="/home/amkalyan/Cert_Mgmt/wildcard.pem" pwd="password"
dn="sys/cert-mgmt/external-pvt-key-upload"/>
    </pair>
  </inConfigs>
</configConfMos>
```

Response:

```
<configConfMos
cookie="d6cfaceed6/9fe756e9-50c5-c0c4-b29a-130160933259"
response="yes">
  <outConfigs>
    <pair key="sys/cert-mgmt/external-pvt-key-upload">
<uploadExternalPrivateKey dn="sys/cert-mgmt/external-pvt-key-upload"
adminAction="no-op" protocol="none" remoteServer="" remoteFile=""
user="" pwd="" uploadStatus="UPLOADING" uploadProgress="25%"
certificateContent="Certificate Content" status="modified"/>
    </pair>
    <operationStatus>success</operationStatus>
  </outConfigs>
</configConfMos>
```

Activating External Certificate using configConfMos

Request:

```
<configConfMos
cookie="d6cfaceed6/9fe756e9-50c5-c0c4-b29a-130160933259"
inHierarchical="false">
  <inConfigs>
    <pair key="sys/cert-mgmt">
      <certificateManagement adminAction="activate-external-cert"
dn="sys/cert-mgmt"/>
    </pair>
  </inConfigs>
</configConfMos>
```

Response:

```
<configConfMos
cookie="d6cfaceed6/9fe756e9-50c5-c0c4-b29a-130160933259"
response="yes">
  <outConfigs>
    <pair key="sys/cert-mgmt">
      <certificateManagement dn="sys/cert-mgmt"
description="Certificate Management"
externalCertificate="Not Available" externalPrivateKey="Not Available"
adminAction="no-op" status="modified"/>
    </pair>
    <operationStatus>success</operationStatus>
  </outConfigs>
</configConfMos>
```

Configuring Non-IPMI User Mode and Virtual Media XML API Examples

The examples in this section show how to use the Cisco IMC 4.1 XML API to perform Non-IPMI User Mode tasks. The examples also show how to configure and view virtual media (vMedia). Each example shows the XML API request followed by the response from Cisco IMC.

This section includes the following examples:

- Adding a New User, on page 85
- Setting User Mode as IPMI, on page 85
- Setting User Mode as Non-IPMI, on page 86
- Creating a Share With Read Write Permission Through CIFS Protocol, on page 86
- Viewing the vMedia Mapping in the Server, on page 86

Adding a New User

Request:

```
<configResolveClass cookie="300e98a8dd/cfd410f3-1ba2-8e0a-0a11-fc4e8180369b"
inHierarchical="false" classId="aaaUserPolicy"/>
```

Response:

```
<configResolveClass cookie="300e98a8dd/cfd410f3-1ba2-8e0a-0a11-fc4e8180369b" response="yes"
 classId="aaaUserPolicy"> <outConfigs> <aaaUserPolicy dn="sys/user-ext/policy"
userPasswordPolicy="enabled" passwordPolicyRules="Rules to set the password when
userPasswordPolicy is enabled. 1) The password must have a minimum of 8 and a maximum of
20 characters for for IPMI user mode and 127 characters for Non-IPMI user mode. 2) The
password must not contain the User's Name. 3) The password must contain characters from
three of the following four categories. a) English uppercase characters (A through Z). b)
English lowercase characters (a through z). c) Base 10 digits (0 through 9). d) Non-alphabetic
 characters (!, @, #, $, %, ^, ampersand, *, -, _, +, =)." allowedAttempts="0"
lockoutPeriod="0" userDisableOnLockout="disabled" userMode="non-ipmi"
></aaaUserPolicy></outConfigs> </configResolveClass>
```

Setting User Mode as IPMI

Request:

```
<configConfMo cookie="05c78ba1d9/42fdaf5d-43c7-8227-f561-82f4bb76abc2" inHierarchical="false"
 dn="sys/user-ext/policy">
  <inConfig>
    <aaaUserPolicy userMode="ipmi" dn="sys/user-ext/policy"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="e6628585b7/39e83851-4e81-2997-0b8c-dd15e1586e6f" inHierarchical="false"
 dn="sys/user-ext/policy"> <inConfig> <aaaUserPolicy userMode="ipmi"/> </inConfig>
</configConfMo>
```

Setting User Mode as Non-IPMI

Request:

```
<configConfMo cookie="584855d11e/7fa1ca2b-d2bb-073b-d2d0-eab99e70a5ed" inHierarchical="false"
 dn="sys/user-ext/policy">
  <inConfig>
    <aaaUserPolicy userMode="non-ipmi" dn="sys/user-ext/policy"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="e6628585b7/39e83851-4e81-2997-0b8c-dd15e1586e6f" inHierarchical="false"
 dn="sys/user-ext/policy"> <inConfig> <aaaUserPolicy userMode="non-ipmi"/> </inConfig>
</configConfMo>
```

Creating a Share With Read Write Permission Through CIFS Protocol

Request:

```
configConfMos cookie="4ce36e964d/ca1f9583-9c80-ab81-80c9-2697698614af"
inHierarchical="false"><inConfigs><pair key="sys/svc-ext/vmedia-svc/volume_name
"><commVMediaMap dn="sys/svc-ext/vmedia-svc/volume_name " map="cifs"
mountOptions="sec=ntlm,vers=3.0,rw" password="*******" remoteFile="test.img"
remoteShare="//{Share_IP_Address}/Folder" username="user" volumeName="volume_name"
/></pair></inConfigs></configConfMos>' https://{CIMC_IP_Address}/nuova
```

Response:

```
<configConfMos cookie="4ce36e964d/ca1f9583-9c80-ab81-80c9-2697698614af"
response="yes"><outConfigs><pair key="sys/svc-ext/vmedia-svc/volume_name"><commVMediaMap
volumeName="volume_name" map="cifs" remoteShare="//{Share_IP_Address}/Folder"
remoteFile="test.img"
mountOptions="username=user,password=**********,sec=ntlm,vers=3.0,rw,soft,nounix,noserverino,rsize=3072,wsize=3072"
 mappingStatus="In Progress" password="" adminAction="no-op"
dn="sys/svc-ext/vmedia-svc/volume_name" status="created"
></commVMediaMap></pair><operationStatus>success</operationStatus></outConfigs></configConfMos>
```

Viewing the vMedia Mapping in the Server

Request:

```
<configResolveClass cookie="4ce36e964d/ca1f9583-9c80-ab81-80c9-2697698614af"
inHierarchical="true" classId="commVMedia"/>' https://{CIMC_IP_Address}/nuova
```

Response:

```
<configResolveClass cookie="4ce36e964d/ca1f9583-9c80-ab81-80c9-2697698614af" response="yes"
 classId="commVMedia">
<outConfigs>
<commVMedia dn="sys/svc-ext/vmedia-svc" adminState="enabled" activeSessions="0"
encryptionState="disabled" lowPowerUsbState="enabled" adminAction="no-op" ><commVMediaMap
volumeName="volume_name" map="cifs" remoteShare="//{Share_IP_Address}/Folder"
remoteFile="test.img"
mountOptions="username=Sai,password=**********,sec=ntlm,vers=3.0,rw,soft,nounix,noserverino,rsize=3072,wsize=3072"
 mappingStatus="OK" password="" adminAction="no-op" rn="volume_name"
></commVMediaMap></commVMedia></outConfigs>
</configResolveClass>
```

Examples of Common Server Management Tasks

The examples in this chapter show how to use the Cisco IMC XML API to perform common server management tasks. Each example shows the XML API request followed by the response from Cisco IMC.

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Using Cisco IMC LDAP User Credentials to Establish XML API Session Cookie

Request:

```
<aaaLogin inName='admin' inPassword='cisco@123'/>
```

Response:

```
<aaaLogin cookie="" response="yes" outCookie="1461753405/e60c76e8-3175-1175-8002-4cc92474a254"

 outRefreshPeriod="600" outPriv="admin"
  outSessionId="17" outVersion="3.0(0.149)">
</aaaLogin>
```

Retrieving Cisco IMC User Sessions

Request:

```
<configResolveClass cookie='1385080136/1a887a90-ebb9-1bb9-8007-130bcc74a254'
classId='aaaSession' inHierarchical='true'>
</configResolveClass>"
```

Response:

```
<configResolveClass cookie="1385080136/1a887a90-ebb9-1bb9-8007-130bcc74a254"
response="yes" classId="aaaSession">
 <outConfigs>
  <aaaSession host="10.10.10.10" id="18" ui="shell" user="admin"
  dn="sys/user-ext/term-18" ></aaaSession>
  <aaaSession host="10.10.10.10" id="17" ui="web" user="admin"
  dn="sys/user-ext/term-17" ></aaaSession>
  <aaaSession host="N/A" id="15" ui="serial" user="admin"
  dn="sys/user-ext/term-15" ></aaaSession>
  <aaaSession host="10.10.10.10" id="9" ui="web" user="admin"
  dn="sys/user-ext/term-9" >
  </aaaSession>
 </outConfigs>
</configResolveClass>
```

Note UI type indicates **serial** when you connect directly to the server through the serial port using either a KVM dongle (DB9), or the serial port (RJ-45) at the rear of the chassis.

Retrieving Server Summary Information and Host Power State

Request:

```
<configResolveClass cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388"
inHierarchical="false" classId="computeRackUnit"/>
```

Response:

```
<configResolveClass cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388" response="yes"

   classId="computeRackUnit"/>
  <outConfig>
    <computeRackUnit dn="sys/rack-unit-1" adminPower="policy" availableMemory="49152"
     model="R250-2480805W" memorySpeed="1067" name="UCS C250 M2" numOfAdaptors="1"
     numOfCores="8" numOfCoresEnabled="8" numOfCpus="2" numOfEthHostIfs="8"
     numOfFcHostIfs="2" numOfThreads="16" operPower="on"
     originalUuid="100DC440-0EBC-11DF-3B97-8843E1C2615E" presence="equipped" serverId="1"
     serial="PGS140601CS" totalMemory="49152" usrLbl="Cisco C250 Server"
     uuid="100DC440-0EBC-11DF-3B97-8843E1C2615E" vendor="Cisco Systems Inc"
     cimcResetReason="graceful-reboot />
```

```
  </outConfig>
</configResolveClass>
```

Retrieving Current Running Firmware Versions of Server Components

Request:

```
<configResolveClass cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388"
inHierarchical="false" classId="firmwareRunning"/>
```

Response:

```
<configResolveClass cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388" response="yes"

classId="firmwareRunning">
   <outConfigs>
   <firmwareRunning dn="sys/rack-unit-1/bios/fw-boot-loader" deployment="boot-loader"
       type="blade-bios" version="CxxMx.1.5.1c.0 (Build Date: 01/31/2013)" >
   <firmwareRunning dn="sys/rack-unit-1/mgmt/fw-boot-loader" deployment="boot-loader"
       type="blade-controller" version="1.5(0.59).24"
   <firmwareRunning dn="sys/rack-unit-1/mgmt/fw-system"
       deployment="system" type="blade-controller" version="1.5(1b)" >
   <firmwareRunning dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/fw-boot-loader"
       deployment="boot-loader" type="storage-controller"
       version="4.31.00_4.12.05.00_0x05180000" >
   <firmwareRunning dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/fw-system"
       deployment="system" type="storage-controller" version="2.130.364-2185" >
   </firmwareRunning>
 </outConfigs>
</configResolveClass>
```

Retrieving Backup Firmware Version Installed on Cisco IMC

Request:

```
<configResolveDn cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388"
inHierarchical="false" dn="sys/rack-unit-1/mgmt/fw-updatable"/>
```

Response:

```
<configResolveDn cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388" response="yes"
dn="sys/rack-unit-1/mgmt/fw-updatable">
  <outConfig>
    <firmwareUpdatable dn="sys/rack-unit-1/mgmt/fw-updatable" adminState="triggered"
    deployment="backup" operState="ready" version="1.5(0.73)" protocol="none"
    remoteServer="" remotePath="" user="" pwd="" progress="Success"
    type="blade-controller">
  </outConfig>
</configResolveDn>
```

Activating Firmware Backup Image on Cisco IMC

Request:

```
<configConfMo cookie='1369391866/63bd7c70-dd74-1d74-8002-233362a70344'
dn='sys/rack-unit-1/mgmt/fw-boot-def/bootunit-combined'>
<inConfig>
  <firmwareBootUnit dn='sys/rack-unit-1/mgmt/fw-boot-def/bootunit-combined'
    adminState='trigger' image='backup' resetOnActivate='yes' />
```

```
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMocookie="1369391866/63bd7c70-dd74-1d74-8002-233362a70344" response="yes"
dn="sys/rack-unit-1/mgmt/fw-boot-def/bootunit-combined">
<outConfig>
  <firmwareBootUnit dn="sys/rack-unit-1/mgmt/fw-boot-def/bootunit-combined"
adminState="triggered"
   image="running" resetOnActivate="no" type="combined" version="1.5(1f)"
   status="modified">
  </firmwareBootUnit>
 </outConfig>
</configConfMo>
```

Using the inHierarchical Option to Retrieve Configured Boot Order Table

Request:

```
<configResolveClass cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388"
inHierarchical="true"  classId="lsbootDef">
```

Response:

```
<configResolveClass cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388"
response="yes"
      classId="lsbootDef">
  <outConfig>
    <lsbootDef dn="sys/rack-unit-1/boot-policy" name="boot-policy"
          purpose="operational" rebootOnUpdate="no" >
      <lsbootVirtualMedia access="read-only" order="3"
          type="virtual-media" rn="vm-read-only" />
      <lsbootVirtualMedia access="read-write" order="5"
          type="virtual-media" rn="vm-read-write"/>
      <lsbootLan rn="lan-read-only" access="read-only" order="2"
          prot="pxe" type="lan" />
      <lsbootStorage rn="storage-read-write" access="read-write" order="1"
          type="storage" >
         <lsbootLocalStorage rn="local-storage" />
      </lsbootStorage>
      <lsbootEfi rn="efi-read-only" access="read-only" order="4"
          type="efi" />
    </lsbootDef>
  </outConfig>
</configResolveClass>
```

Retrieving Power Supply Unit Details on Server

Request:

```
<configResolveClass cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388"
inHierarchical="false" classId="equipmentPsu">
```

Response:

```
<configResolveClass cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388"
response="yes"
      classId="equipmentPsu">
  <outConfig>
    <equipmentPsu id="1" model="UCSC-PSU-450W" operability="operable" power="on"
```

```
     presence="equipped" serial="DCB1621010X" thermal="ok"
     vendor="Cisco Systems Inc" voltage="unknown" dn="sys/rack-unit-1/psu-1" >
    <equipmentPsu id="2" model="" operability="unknown" power="off"
     presence="missing" serial="" thermal="unknown" vendor=""
     voltage="unknown" dn="sys/rack-unit-1/psu-2" >
  </outConfig>
</configResolveClass>
```

Retrieving Details of Fan Object Identified by DN

Request:

```
<configResolveDn cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388"
inHierarchical="false" dn="sys/rack-unit-1/fan-module-1-2/fan-2"/>
```

Response:

```
<configResolveDn cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388"
response="yes"
dn="sys/rack-unit-1/fan-module-1-2/fan-2"/>
  <outConfig>
    <equipmentFan id="2" model="" module="2" operability="operable" power="on"
    presence="equipped" serial="" thermal="not-supported" tray="1" vendor=""
    voltage="not-supported" dn="sys/rack-unit-1/fan-module-1-2/fan-2"/>
  </outConfig>
</configResolveDn>
```

Retrieving SNMP Configuration Details

Request:

```
<configResolveClass cookie="1313086522/c7c08988-aa3e-1a3e-8005-5e61c2e14388"
inHierarchical="false" classId="commSnmp"/>
```

Response:

```
<configResolveClass cookie="1362107065/43d02d50-d6d4-16d4-8009-c979e5e53d50"
response="yes"
classId="commSnmp">
  <outConfigs>
    <commSnmp dn="sys/svc-ext/snmp-svc" descr="SNMP Service" name="snmp" adminState="enabled"

     port="161" proto="udp" community="" trapCommunity="public" com2Sec="disabled"
     sysContact="who@where" sysLocation="unknown"/>
  </outConfigs>
</configResolveClass>
```

Retrieving Status of Local Hard Disk on Server

Request:

```
<configResolveDn cookie="1313146313/b38e04a0-aa4c-1a4c-8008-cdac38e14388"
inHierarchical="false" dn="sys/rack-unit-1/board/disk-4"/>
```

Response:

```
<configResolveDn cookie="1313146313/b38e04a0-aa4c-1a4c-8008-cdac38e14388"
response="yes"
dn="sys/rack-unit-1/board/disk-4">
```

```
  <outConfig>
    <storageLocalDiskSlotEp id="4" operability="operable" presence="equipped"
    dn="sys/rack-unit-1/board/disk-4"/>
  </outConfig>
</configResolveDn>
```

Power Cycling the Server

Request:

```
<configConfMo cookie="1313084260/40ea8058-aa3e-1a3e-8004-5e61c2e14388"
inHierarchical="false"  dn="sys/rack-unit-1" >
  <inConfig>
    <computeRackUnit adminPower="cycle-immediate" dn="sys/rack-unit-1">
    </computeRackUnit>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo  cookie="1313084260/40ea8058-aa3e-1a3e-8004-5e61c2e14388"
response="yes" dn="sys/rack-unit-1" >
  <outConfig>
    <computeRackUnit dn="sys/rack-unit-1" adminPower="policy" availableMemory="49152"
     model="R250-2480805W" memorySpeed="1067" name="UCS C250 M2" numOfAdaptors="1"
     numOfCores="8" numOfCoresEnabled="8" numOfCpus="2" numOfEthHostIfs="0"
     numOfFcHostIfs="0" numOfThreads="16" operPower="off"
     originalUuid="100DC440-0EBC-11DF-3B97-8843E1C2615E" presence="equipped" serverId="1"
     serial="PGS140601CS" totalMemory="49152" usrLbl="Cisco C210 Server"
     uuid="100DC440-0EBC-11DF-3B97-8843E1C2615E" vendor="Cisco Systems Inc"
     status="modified"/>
  </outConfig>
</configConfMo>
```

Configuring EFI as the Second Boot Device in Boot Order Table

Request:

```
<configConfMo cookie="1313090863/ca79ef88-aa3f-1a3f-8006-5e61c2e14388"
inHierarchical="false" dn="sys/rack-unit-1/boot-policy/efi-read-only">
  <inConfig>
    <lsbootEfi order="2" status="modified"
      dn="sys/rack-unit-1/boot-policy/efi-read-only"
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1313090863/ca79ef88-aa3f-1a3f-8006-5e61c2e14388"
response="yes" dn="sys/rack-unit-1/boot-policy/efi-read-only" >
  <outConfig>
    <lsbootEfi dn="sys/rack-unit-1/boot-policy/efi-read-only" access="read-only"
    order="2"  type="efi" status="modified"/>
  </outConfig>
</configConfMo>
```

Removing Floppy Disk Drive as a Boot Device From the Boot Order List

Request:

```
<configConfMo cookie="1313092854/412183f8-aa40-1a40-8007-5e61c2e14388"
inHierarchical="true" dn="sys/rack-unit-1/boot-policy/vm-read-write" >
  <inConfig>
    <lsbootVirtualMedia order="5" access="read-write" status="deleted"
    dn="sys/rack-unit-1/boot-policy/vm-read-write"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1313092854/412183f8-aa40-1a40-8007-5e61c2e14388" response="yes"
dn="sys/rack-unit-1/boot-policy/vm-read-write" >
   <outConfig>
   </outConfig>
</configConfMo>
```

Configuring Boot Order to HDD, CDROM, FDD, PXE, and EFI Without Rebooting the Host

Request:

```
<configConfMo cookie="1360205300/79c672f0-d519-1519-8004-30339ee53d50"
inHierarchical="true" dn="sys/rack-unit-1/boot-policy">
  <inConfig>
      <lsbootDef dn="sys/rack-unit-1/boot-policy" rebootOnUpdate="no">
      <lsbootVirtualMedia access="read-only" order="2" type="virtual-media"
      rn="vm-read-only"/>
      <lsbootVirtualMedia access="read-write" order="3" type="virtual-media"
       rn="vm-read-write"/>
      <lsbootLan rn="lan-read-only" access="read-only" order="4" prot="pxe" type="lan"/>
      <lsbootStorage rn="storage-read-write" access="read-write" order="1" type="storage"
      <lsbootLocalStorage rn="local-storage"/> </lsbootStorage>
      <lsbootEfi rn="efi-read-only" access="read-only" order="5" type="efi"/>
    </lsbootDef>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1360205300/79c672f0-d519-1519-8004-30339ee53d50" response="yes"
dn="sys/rack-unit-1/boot-policy">
  <outConfig>
    <lsbootDef dn="sys/rack-unit-1/boot-policy" name="boot-policy" purpose="operational"
      rebootOnUpdate="no" status="modified">
     <lsbootVirtualMedia access="read-only" order="2" type="virtual-media" rn="vm-read-only"

         status="modified"/>
      <lsbootVirtualMedia access="read-write" order="3" type="virtual-media"
rn="vm-read-write"
        status="modified"/>
      <lsbootLan rn="lan-read-only" access="read-only" order="4" prot="pxe" type="lan"
        status="modified"/>
      <lsbootStorage rn="storage-read-write" access="read-write" order="1" type="storage"
         status="modified">
      <lsbootLocalStorage rn="local-storage" status="modified"/>
      </lsbootStorage>
      <lsbootEfi rn="efi-read-only" access="read-only" order="5" type="efi"
         status="modified"/>
    </lsbootDef>
```

```
  </outConfig>
</configConfMo>
```

Using inHierarchical Option to Change and Retrieve SNMP Configuration of Trap Receivers

Request:

```
<configConfMo cookie="1362115258/2c1b1380-d6d6-16d6-800b-c979e5e53d50"
 inHierarchical="true" dn="sys/svc-ext/snmp-svc">
<inConfig>
    <commSnmp dn="sys/svc-ext/snmp-svc" adminState="enabled" community="Top$ecrt"
      trapCommunity="Dar$Good" com2Sec="full" sysContact="snmpadmin@cisco"
       port='600' sysLocation="San Jose"/>
  </inConfig>
```

Response:

```
<configConfMo cookie="1398652603/2f9bf4c8-f811-1811-8005-79bdaa4c93a4" response="yes"
dn="sys/svc-ext/snmp-svc">
<outConfig>
 <commSnmp dn="sys/svc-ext/snmp-svc" descr="SNMP Service" name="snmp"
 adminState="enabled" port="600" proto="udp" community="public"
 trapCommunity="public" com2Sec="full" sysContact="testContact"
 sysLocation="testLocation" status="modified" >
 <commSnmpTrap id="1" adminState="disabled" version="v3"
 notificationType="traps" port="162" hostname="0.0.0.0" user="unknown"
 rn="snmp-trap-1" status="modified">
 </commSnmpTrap>
 <commSnmpTrap id="2" adminState="disabled" version="v3">
 notificationType="traps" port="162" hostname="0.0.0.0" user="unknown">
 rn="snmp-trap-2" status="modified">
 </commSnmpTrap>
 .
 .
 .
 <commSnmpUser id="15" name=""
 securityLevel="" auth="" authPwd="" privacy="" privacyPwd=""
 rn="snmpv3-user-15" status="modified"
</commSnmpUser>
</commSnmp>
</outConfig>
```

Retrieving Select Memory RAS BIOS Token

Request:

```
<configResolveClass cookie="1313092854/412183f8-aa40-1a40-8007-5e61c2e14388"
inHierarchical="false" classId="biosVfSelectMemoryRASConfiguration"/>
```

Response:

```
<configResolveClass cookie="1313092854/412183f8-aa40-1a40-8007-5e61c2e14388" response="yes"

classId="biosVfSelectMemoryRASConfiguration">
  <outConfig>
    <biosVfSelectMemoryRASConfiguration
       dn="sys/rack-unit-1/bios/bios-settings/SelectMemory-RAS-configuration"
       vpSelectMemoryRASConfiguration="maximum-performance" >
    </biosVfSelectMemoryRASConfiguration>
  </outConfig>
</configResolveClass>
```

Configuring Select Memory RAS BIOS Token for Mirroring Mode

Request:

```
<configConfMo cookie="1313092854/412183f8-aa40-1a40-8007-5e61c2e14388"
 inHierarchical="false"
dn="sys/rack-unit-1/bios/bios-settings/SelectMemory-RAS-configuration">
  <inConfig>
    <biosVfSelectMemoryRASConfiguration
       dn="sys/rack-unit-1/bios/bios-settings/SelectMemory-RAS-configuration"
       vpSelectMemoryRASConfiguration="mirroring">
    </biosVfSelectMemoryRASConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1313092854/412183f8-aa40-1a40-8007-5e61c2e14388" response="yes"
     dn="sys/rack-unit-1/bios/bios-settings/SelectMemory-RAS-configuration">
  <outConfig>
    <biosVfSelectMemoryRASConfiguration
       dn="sys/rack-unit-1/bios/bios-settings/SelectMemory-RAS-configuration"
       vpSelectMemoryRASConfiguration="mirroring" status="modified"/>
  </outConfig>
</configConfMo>
```

Note After configuring the BIOS tokens, reboot the host for the configured tokens to reflect on the host side.

Retrieving C240 Server BIOS Token Values

Request:

```
<configResolveClass cookie="1360207841/1133b530-d51a-151a-8005-30339ee53d50"
inHierarchical="true" classId="biosSettings"/>
```

Response:

```
<configResolveClass cookie="1362115258/2c1b1380-d6d6-16d6-800b-c979e5e53d50" response="yes"

classId="biosSettings">
  <outConfigs>
    <biosSettings dn="sys/rack-unit-1/bios/bios-settings">
      <biosVfIntelVTForDirectedIO rn="Intel-VT-for-directed-IO"
        vpIntelVTDATSSupport="enabled" vpIntelVTDCoherencySupport="disabled"
        vpIntelVTForDirectedIO="enabled"/>
      <biosVfSelectMemoryRASConfiguration rn="SelectMemory-RAS-configuration"
        vpSelectMemoryRASConfiguration="maximum-performance"/>
      <biosVfProcessorC6Report rn="Processor-C6-Report" vpProcessorC6Report="enabled"/>
      <biosVfIntelHyperThreadingTech rn="Intel-HyperThreading-Tech"
        vpIntelHyperThreadingTech="enabled"/>
      <biosVfEnhancedIntelSpeedStepTech rn="Enhanced-Intel-SpeedStep-Tech"
        vpEnhancedIntelSpeedStepTech="enabled"/>
      <biosVfIntelVirtualizationTechnolog rn="Intel-Virtualization-Technology"
        vpIntelVirtualizationTechnology="enabled"/>
      <biosVfMemoryMappedIOAbove4GB rn="Memory-mapped-IO-above-4GB"
        vpMemoryMappedIOAbove4GB="disabled"/>
      <biosVfCPUPerformance rn="CPU-Performance" vpCPUPerformance="enterprise"/>
```

```
    <biosVfLvDIMMSupport rn="LvDIMM-Support" vpLvDDRMode="performance-mode"/>
    <biosVfNUMAOptimized rn="NUMA-optimized" vpNUMAOptimized="enabled"/>
    <biosVfConsoleRedirection rn="Console-redirection" vpBaudRate="115200"
      vpConsoleRedirection="disabled" vpFlowControl="none" vpTerminalType="vt100"
      vpPuttyKeyPad="ESCN" vpRedirectionAfterPOST="Always Enable"/>
    <biosVfCoreMultiProcessing rn="Core-MultiProcessing" vpCoreMultiProcessing="all"/>
    <biosVfIntelTurboBoostTech rn="Intel-Turbo-Boost-Tech"
      vpIntelTurboBoostTech="enabled"/>
    <biosVfDirectCacheAccess rn="Direct-Cache-Access" vpDirectCacheAccess="enabled"/>
    <biosVfExecuteDisableBit rn="Execute-Disable-Bit" vpExecuteDisableBit="enabled"/>
    <biosVfOSBootWatchdogTimer rn="OS-Boot-Watchdog-Timer-Param"
      vpOSBootWatchdogTimer="disabled"/>
    <biosVfOSBootWatchdogTimerPolicy rn="OS-Boot-Watchdog-Timer-Policy"
      vpOSBootWatchdogTimerPolicy="power-off"/>
    <biosVfOSBootWatchdogTimerTimeOut rn="OS-Boot-Watchdog-Timer-Time-Out"
      vpOSBootWatchdogTimerPolicy="10-minutes"/>
    <biosVfHardwarePrefetch rn="Hardware-Prefetch" vpHardwarePrefetch="enabled"/>
    <biosVfAdjacentCacheLinePrefetch rn="Adjacent-Cache-Line-Prefetch"
      vpAdjacentCacheLinePrefetch="enabled"/>
    <biosVfFRB2Enable rn="FRB2-Enable" vpFRB2Enable="enabled"/>
    <biosVfProcessorC1E rn="Processor-C1E" vpProcessorC1E="enabled"/>
    <biosVfPatrolScrub rn="Patrol-Scrub-Param" vpPatrolScrub="enabled"/>
    <biosVfTPMSupport rn="TPM-Support" vpTPMSupport="disabled"/>
    <biosVfDCUPrefetch rn="DCU-Prefetch" vpStreamerPrefetch="enabled"
      vpIPPrefetch="enabled"/>
    <biosVfCPUPowerManagement rn="CPU-PowerManagement"
      vpCPUPowerManagement="energy-efficient"/>
    <biosVfCPUFrequencyFloor rn="CPU-FreqFloor" vpCPUFrequencyFloor="disabled"/>
    <biosVfCPUEnergyPerformance rn="CPU-EngPerfBias"
      vpCPUEnergyPerformance="balanced-performance"/>
    <biosVfMemoryInterleave rn="Memory-Interleave" vpChannelInterLeave="auto"
      vpRankInterLeave="auto"/>
    <biosVfDemandScrub rn="Demand-Scrub-Param" vpDemandScrub="enabled"/>
    <biosVfAltitude rn="Altitude-Param" vpAltitude="300-m"/>
    <biosVfDRAMClockThrottling rn="DRAM-Clock-Throttling"
      vpDRAMClockThrottling="Balanced"/>
    <biosVfASPMSupport rn="ASPM-Support" vpASPMSupport="Disabled"/>
    <biosVfVgaPriority rn="VgaPriority" vpVgaPriority="Onboard"/>
    <biosVfUSBPortsConfig rn="USB-Ports-Config" vpAllUsbDevices="enabled"
      vpUsbPortRear="enabled" vpUsbPortFront="enabled" vpUsbPortInternal="enabled"
      vpUsbPortKVM="enabled" vpUsbPortVMedia="enabled" vpUsbPortSDCard="enabled"/>
    <biosVfQPIConfig rn="QPI-Config" vpQPILinkFrequency="auto"/>
    <biosVfLegacyUSBSupport rn="LegacyUSB-Support" vpLegacyUSBSupport="enabled"/>
    <biosVfUCSMBootOrderRuleControl rn="Boot-Order-Rules"
      vpUCSMBootOrderRule="Loose"/>
    <biosVfPCIOptionROMs rn="PCI-OptionROMs" vpPCIOptionROMs="Enabled"/>
    <biosVfLOMPortOptionROM rn="LOMPort-OptionROM" vpLOMPortsAllState="Enabled"
      vpLOMPort0State="Enabled"  vpLOMPort1State="Enabled" vpLOMPort2State="Enabled"
      vpLOMPort3State="Enabled"/>
    <biosVfPCISlotOptionROMEnable rn="PCI-Slot-OptionROM-Enable"
      vpSlot1State="Enabled" vpSlot2State="Enabled" vpSlot3State="Enabled"
      vpSlot4State="Enabled" vpSlot5State="Enabled" vpSlot6State="Enabled"
      vpSlot7State="Enabled" vpSlot1LinkSpeed="GEN3" vpSlot2LinkSpeed="GEN3"
      vpSlot3LinkSpeed="GEN3" vpSlot4LinkSpeed="GEN3" vpSlot5LinkSpeed="GEN3"
      vpSlot6LinkSpeed="GEN3" vpSlot7LinkSpeed="GEN3"/>
    <biosVfPStateCoordType rn="p-state-coord" vpPStateCoordType="HW ALL"/>
    <biosVfDramRefreshRate rn="dram-refresh-rate" vpDramRefreshRate="2x"/>
    <biosVfOutOfBandMgmtPort rn="OoB-MgmtPort"
      vpOutOfBandMgmtPort="Disabled" >
   </biosVfOutOfBandMgmtPort>
  </biosSettings>
</outConfigs>
```

Retrieving Default Values of BIOS Tokens

Request:

```
<configResolveClass cookie='1307953743/b63ff130-a593-1593-8004-2e4ac2e14388'
classId='biosPlatformDefaults' inHierarchical='true'>
```

Response:

```
<configResolveClass cookie="1370842491/23c0a810-dec6-1ec6-8002-1ec9e1a85750"
 response="yes" classId="biosPlatformDefaults">
  <outConfigs>
   <biosPlatformDefaults dn="sys/rack-unit-1/bios/bios-defaults" >
   <biosVfIntelVTForDirectedIO rn="Intel-VT-for-directed-IO"
    vpIntelVTDATSSupport="enabled"
    vpIntelVTDCoherencySupport="disabled"
    vpIntelVTForDirectedIO="enabled" >
    </biosVfIntelVTForDirectedIO>
   <biosVfSelectMemoryRASConfiguration rn="SelectMemory-RAS-configuration"
    vpSelectMemoryRASConfiguration="maximum-performance" >
   </biosVfSelectMemoryRASConfiguration>
   <biosVfProcessorC6Report rn="Processor-C6-Report"
    vpProcessorC6Report="enabled" >
   </biosVfProcessorC6Report><biosVfIntelHyperThreadingTech rn="Intel-HyperThreading-Tech"

    vpIntelHyperThreadingTech="enabled" >
   </biosVfIntelHyperThreadingTech>
   <biosVfEnhancedIntelSpeedStepTech rn="Enhanced-Intel-SpeedStep-Tech"
    vpEnhancedIntelSpeedStepTech="enabled" >
   </biosVfEnhancedIntelSpeedStepTech>
   <biosVfIntelVirtualizationTechnology rn="Intel-Virtualization-Technology"
    vpIntelVirtualizationTechnology="enabled" >
   </biosVfIntelVirtualizationTechnology>
     .
     .
     .
   </biosVfLOMPortOptionROM><biosVfPCISlotOptionROMEnable rn="PCI-Slot-OptionROM-Enable"
     vpSlot1State="Enabled"
     vpSlot2State="Enabled"
     vpSlotMezzState="Enabled"
     vpSlot2LinkSpeed="GEN3" >
   </biosVfPCISlotOptionROMEnable><biosVfPStateCoordType rn="p-state-coord"
     vpPStateCoordType="HW ALL" >
   </biosVfPStateCoordType>
   <biosVfDramRefreshRate rn="dram-refresh-rate"
    vpDramRefreshRate="2x" >
   </biosVfDramRefreshRate>
 </biosPlatformDefaults>
</outConfigs>
</configResolveClass>
```

Using Platform-Default to Configure BIOS Parameters to Default Values

Request:

```
<configConfMo cookie="0000020175/b2909140-0004-1004-8002-cdac38e14388"
inHierarchical="true" dn="sys/rack-unit-1/bios/bios-settings">
  <inConfig>
    <biosSettings>
      <biosVfIntelVTForDirectedIO
dn="sys/rack-unit-1/bios/bios-settings/Intel-VT-for-directed-IO"
     vpIntelVTDATSSupport="platform-default" vpIntelVTDCoherencySupport="platform-default"

      vpIntelVTForDirectedIO="platform-default"/>
```

```
      <biosVfSelectMemoryRASConfiguration
dn="sys/rack-unit-1/bios/bios-settings/SelectMemory-RAS-configuration"
      vpSelectMemoryRASConfiguration="platform-default"/>
      …..
      …..
      …..
      <biosVfProcessorC6Report dn="sys/rack-unit-1/bios/bios-settings/Processor-C6-Report"

      vpSlot2State="platform-default" vpSlotMezzState="platform-default"
vpSlot1LinkSpeed="platform-default"
      vpSlot2LinkSpeed="platform-default"/>
      <biosVfPStateCoordType dn="sys/rack-unit-1/bios/bios-settings/p-state-coord"
      vpPStateCoordType="platform-default"/>
    </biosSettings>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1347919470/f5335af8-c9ec-19ec-8007-1ec9e1a85750" response="yes"
  dn="sys/rack-unit-1/mgmt/fw-updatable" >
   <outConfig>
      <biosSettings dn="sys/rack-unit-1/bios/bios-settings" status="modified" >
      <biosVfIntelVTForDirectedIO rn="Intel-VT-for-directed-IO"
       vpIntelVTDATSSupport="enabled" vpIntelVTDCoherencySupport="disabled"
       vpIntelVTForDirectedIO="enabled" status="modified" >
      </biosVfIntelVTForDirectedIO>
      <biosVfSelectMemoryRASConfiguration rn="SelectMemory-RAS-configuration"
       vpSelectMemoryRASConfiguration="maximum-performance" status="modified" >
         .
         .
         .
       vpSlot1State="enabled" vpSlot2State="enabled" vpSlotMezzState="enabled"
       vpSlot1LinkSpeed="GEN3" vpSlot2LinkSpeed="GEN3" status="modified"
      </biosVfPCISlotOptionROMEnable>
      <biosVfPStateCoordType rn="p-state-coord" vpPStateCoordType="HW_ALL"
       status="modified" >
      </biosVfPStateCoordType>
    </biosSettings>
  </outConfig>
</configConfMo>
```

Note The request and response in the preceding example is not the complete output, only a part of it has been included.

This will set the BIOS parameters such as the Processor, Memory, QPI, PCI, Serial, LOM and PCIe slots configuration settings to platform-default values. Similarly, you can configure the BIOS parameters by changing the **platform-default** input parameter in the example to what you want to configure.

Setting the Out-Of-Band-Mgmt-Port BIOS Token Value

Request:

```
<configConfMo cookie="1462352296/f3b4e630-3200-1200-8002-f0fa5ff6083c"
inHierarchical="false" dn="sys/rack-unit-1/bios/bios-settings/OoB-MgmtPort">
  <inConfig>
    <biosVfOutOfBandMgmtPort dn="sys/rack-unit-1/bios/bios-settings/OoB-MgmtPort"
vpOutOfBandMgmtPort="Disabled">
```

```
    </biosVfOutOfBandMgmtPort>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/bios/bios-settings/OoB-MgmtPort"
cookie="1462352296/f3b4e630-3200-1200-8002-f0fa5ff6083c" response="yes">
 <outConfig>
  <biosVfOutOfBandMgmtPort dn="sys/rack-unit-1/bios/bios-settings/OoB-MgmtPort"
 vpOutOfBandMgmtPort="Disabled" status="modified"/>
 </outConfig>
</configConfMo>
```

Using TFTP to Export Cisco IMC Configuration Data

Request:

```
<configConfMo cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388"
   inHierarchical="false">  dn="sys/export-config"
  <inConfig>
    <mgmtBackup dn="sys/export-config" adminState="enabled" hostname="198.xx.210.xx"
       remoteFile="/tftpserver/c250_config_export.cfg"/>
     user='<username>' pwd='<password>' passphrase='passphrase'>
    </mgmtBackup>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388"
response="yes" dn="sys/export-config">
  <outConfig>
    <mgmtBackup dn="sys/export-config" adminState="disabled" fsmStageDescr="Completed
successfully"
    fsmRmtInvErrCode="" fsmRmtInvErrDescr="NONE" fsmDescr="export-config" proto="tftp"
hostname=""
    remoteFile="" user="" pwd="" passphrase="" status="modified"/>
  </outConfig>
</configConfMo>
```

The preceding request launches the export operation, which executes as a background task.

The exported configuration file resembles the following example:

```
[root]# cat /tftpserver/c250_config_export.cfg
<root><CIMC>
<version>1.4(0.22)</version>
<network>
<hostname>ucs-c250-M2</hostname>
<mode>dedicated</mode>
<redundancy>active-standby</redundancy>
<dns-use-dhcp>no</dns-use-dhcp>
<preferred-dns-server>0.0.0.0</preferred-dns-server>
<alternate-dns-server>0.0.0.0</alternate-dns-server>
<vlan-enabled>no</vlan-enabled>
.
.
.
```

TFTP used in the preceding example is the default protocol. You can also export the Cisco IMC configuration using the other available protocols such as the ftp, sftp, scp and http. Exporting using the ftp, sftp and scp requires user credentials, as shown in the following example:

Request:

```
configConfMo cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388"
 inHierarchical="false" dn="sys/export-config"
<inConfig>
    <mgmtBackup dn="sys/export-config" adminState="enabled"
      hostname="bxxxa-xxx-fileserver.cisco.com" proto="ftp"
      user="username" pwd="password" passphrase='passphrase'
     remoteFile="/home/xxxxx/ppapi.xml">
  /inConfig>
```

Response:

```
<configConfMo cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388" response="yes">
     dn="sys/export-config"
  <outConfig>
    <mgmtBackup dn="sys/export-config" adminState="disabled"
       fsmStageDescr="Completed successfully" fsmRmtInvErrCode=""
       fsmRmtInvErrDescr="NONE"
       fsmDescr="export-config" proto="ftp" hostname="" remoteFile=""
       User="" pwd="" passphrase="" status="modified"/>
  </outConfig>
</configConfMo>
```

Using TFTP to Import Cisco IMC Configuration Data

Request:

```
<configConfMo cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388"
inHierarchical="false" dn="sys/import-config">
  <inConfig>
    <mgmtImporter dn="sys/import-config" adminState="enabled" hostname="10.10.10.10"
remoteFile="/tftpserver/c250_config_export.cfg" user="user" pwd="password"
passphrase="passphrase"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388"
response="yes" dn="sys/import-config">
  <outConfig>
    <mgmtImporter dn="sys/import-config" adminState="disabled" fsmStageDescr="Error"
fsmRmtInvErrCode="" fsmRmtInvErrDescr="NONE" fsmDescr="import-config" proto="tftp" hostname=""

remoteFile="" user="" pwd="" passphrase="" status="modified"/>
  </outConfig>
</configConfMo>
```

The preceding request launches the import operation, which executes as a background task. You can periodically query for the completion status by sending the following requests:

Status request:

```
<configResolveClass cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388"
inHierarchical="false" classId="mgmtImporter"/>
```

Status response before completion:

```
<configResolveClass cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388" response="yes"

     classId="mgmtImporter">
  <outConfig>
    <mgmtImporter dn="sys/import-config" adminState="enabled"
       fsmStageDescr="Applying configuration" fsmRmtInvErrCode=""
       fsmRmtInvErrDescr="NONE" fsmDescr="import-config" proto="none" hostname=""
       remoteFile="" user="" pwd=""/>
  </outConfig>
</configResolveClass>
```

Repeated status request:

```
<configResolveClass cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388"
inHierarchical="false" classId="mgmtImporter"/>
```

Status response after completion:

```
<configResolveClass cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388" response="yes"

      classId="mgmtImporter">
  <outConfig>
     <mgmtImporter dn="sys/import-config" adminState="disabled"
        fsmStageDescr="Completed successfully" fsmRmtInvErrCode=""
        fsmRmtInvErrDescr="NONE" fsmDescr="import-config" proto="none" hostname=""
        remoteFile="" user="" pwd=""/>
  </outConfig>
</configResolveClass>
```

Using TFTP to Export Cisco IMC Technical Support Data

Request:

```
<configConfMo cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388"
inHierarchical="false"  dn="sys/rack-unit-1/tech-support">
  <inConfig>
     <sysdebugTechSupportExport dn="sys/rack-unit-1/tech-support" adminState="enabled"
        remoteFile="/tftpserver/c250_techsupport_archive.tgz" proto="tftp"
        hostname="198.xx.xxx.14"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388" response="yes"
      dn="sys/rack-unit-1/tech-support" >
  <outConfig>
     <sysdebugTechSupportExport dn="sys/rack-unit-1/tech-support" adminState="disabled"
         hostname="198.xx.xxx.14" proto="tftp"
         remoteFile="/tftpserver/c250_techsupport_archive.tgz" fsmStageDescr="none"
         fsmProgr="0" fsmStatus="nop" status="modified"/>
  </outConfig>
</configConfMo>
```

The preceding request launches the technical support generation, after technical support data is generated, it is uploaded to the remote location. You can periodically query for the completion status by sending the following requests:

Status request:

```
<configResolveClass cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388"
inHierarchical="false" classId="sysdebugTechSupportExport"/>
```

Status response before completion:

```
<configResolveClass cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388"  response="yes"

    classId="sysdebugTechSupportExport">
  <outConfig>
     <sysdebugTechSupportExport dn="sys/rack-unit-1/tech-support" adminState="enabled"
        hostname="10.10.10.10" proto="tftp"
        remoteFile="/tftpserver/c250_techsupport_archive.tgz"
        fsmStageDescr="collecting" fsmProgr="0" fsmStatus="exporting"/>
  </outConfig>
</configResolveClass>
```

Repeated status request:

```
<configResolveClass cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388"
inHierarchical="false" classId="sysdebugTechSupportExport"/>
```

Status response after completion:

```
<configResolveClass cookie="1313118253/2b07f100-aa46-1a46-8008-5e61c2e14388" response="yes"

  classId="sysdebugTechSupportExport">
  <outConfig>
     <sysdebugTechSupportExport dn="sys/rack-unit-1/tech-support" adminState="disabled"
         hostname="10.10.10.10" proto="tftp"
         remoteFile="/tftpserver/c250_techsupport_archive.tgz"
         fsmStageDescr="completed" fsmProgr="100" fsmStatus="success"/>
  </outConfig>
</configResolveClass>
```

The exported technical support file resembles the following example:

```
[root]# tar tvfz /tftpserver/c250_techsupport_archive.tgz | more
drwxr-xr-x root/root         0 2011-08-11 13:01:10 obfl/
-rw-r--r-- root/root     76910 2011-08-11 13:00:56 obfl/obfl-log.1
-rw-r--r-- root/root     76835 1970-01-01 09:38:26 obfl/obfl-log.2
-rw-r--r-- root/root     76881 2011-08-08 21:20:55 obfl/obfl-log.3
-rw-r--r-- root/root     76916 1969-12-31 16:07:28 obfl/obfl-log.4
-rw-r--r-- root/root     76846 2011-08-03 21:38:49 obfl/obfl-log.5
-rw-r--r-- root/root     14598 2011-08-11 20:49:57 obfl/obfl-log
.
.
.
```

Retrieving CPU Product ID Details

Request:

```
<configResolveClass cookie="1462354358/4b33a4f4-3201-1201-8004-f0fa5ff6083c"
inHierarchical="false" classId="pidCatalogCpu"/>
```

Response:

```
<configResolveClass cookie="1462354358/4b33a4f4-3201-1201-8004-f0fa5ff6083c"
response="yes" classId="pidCatalogCpu"> <outConfigs> <pidCatalogCpu id="1"
socketdesignation="CPU1"
description="Intel(R) Xeon(R) E5-2650 2.00GHz 8-core 95W 20MB Cache DDR3 1600MHz"
pid="UCS-CPU-E5-2650"
model="Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz" signature="Type 0, Family 6, Model 45,
Stepping 7" currentspeed="2000"
operState="Enabled" dn="sys/rack-unit-1/board/pid/pid-cpu-1" ></pidCatalogCpu><pidCatalogCpu
 id="2" socketdesignation="CPU2"
description="Intel(R) Xeon(R) E5-2650 2.00GHz 8-core 95W 20MB Cache DDR3 1600MHz"
pid="UCS-CPU-E5-2650" model="Intel(R) Xeon(R)
CPU E5-2650 0 @ 2.00GHz" signature="Type 0, Family 6, Model 45, Stepping 7"
currentspeed="2000" operState="Enabled"
dn="sys/rack-unit-1/board/pid/pid-cpu-2" ></pidCatalogCpu></outConfigs> </configResolveClass>
```

Retrieving IMM/ Memory Unit Product ID Details

Request:

```
<configResolveClass cookie="1462354358/4b33a4f4-3201-1201-8004-f0fa5ff6083c"
inHierarchical="false" classId="pidCatalogDimm"
```

Response:

```
<configResolveClass cookie="1462354358/4b33a4f4-3201-1201-8004-f0fa5ff6083c"
response="yes" classId="pidCatalogDimm"> <outConfigs> <pidCatalogDimm name="DIMM_A1"
description="8GB DDR3-1600-MHz RDIMM/PC3-12800/dual rank/1.35v" pid="UCS-MR-1X082RY-A"
mfgid="0xCE00"
manufacturer="Samsung Electronics, Inc." serialnumber="14765DC9 " model="Mx93B1K70DH0-YK0"
 capacity="8192 MB"
speed="1600" datawidth="64 bits" operability="Operable"
dn="sys/rack-unit-1/board/pid/pid-dimm-DIMM_A1" >
</pidCatalogDimm><pidCatalogDimm name="DIMM_B1" description="8GB DDR3-1600-MHz
RDIMM/PC3-12800/dual rank/1.35v"
pid="UCS-MR-1X082RY-A" mfgid="0xCE00" manufacturer="Samsung Electronics, Inc."
serialnumber="1494DE1A "
model="Mx93B1K70DH0-YK0" capacity="8192 MB" speed="1600" datawidth="64 bits"
operability="Operable"
dn="sys/rack-unit-1/board/pid/pid-dimm-DIMM_B1" ></pidCatalogDimm><pidCatalogDimm
name="DIMM_E1"
description="8GB DDR3-1600-MHz RDIMM/PC3-12800/dual rank/1.35v" pid="UCS-MR-1X082RY-A"
mfgid="0xCE00"
manufacturer="Samsung Electronics, Inc." serialnumber="1474F06F " model="Mx93B1K70DH0-YK0"
 capacity="8192 MB"
speed="1600" datawidth="64 bits" operability="Operable"
dn="sys/rack-unit-1/board/pid/pid-dimm-DIMM_E1" >
</pidCatalogDimm><pidCatalogDimm name="DIMM_F1" description="8GB DDR3-1600-MHz
RDIMM/PC3-12800/dual rank/1.35v"
pid="UCS-MR-1X082RY-A" mfgid="0xCE00" manufacturer="Samsung Electronics, Inc."
serialnumber="1494D625 "
model="Mx93B1K70DH0-YK0" capacity="8192 MB" speed="1600" datawidth="64 bits"
operability="Operable"
dn="sys/rack-unit-1/board/pid/pid-dimm-DIMM_F1" ></pidCatalogDimm></outConfigs>
</configResolveClass>
```

Retrieving HDD Product ID Details

Request:

```
<configResolveClass cookie="1462354358/4b33a4f4-3201-1201-8004-f0fa5ff6083c"
inHierarchical="false" classId="pidCatalogHdd"/>
```

Response:

```
<configResolveClass cookie="1462354358/4b33a4f4-3201-1201-8004-f0fa5ff6083c"
response="yes" classId="pidCatalogHdd">
 <outConfigs>
  <pidCatalogHdd disk="1" controller="SLOT-4" description="300GB 6Gb SAS 10K RPM 2.5"
   pid="A03-D300GA2" vendor="SEAGATE" model="ST300MM0006" serialnumber="Z0K01B3K0000C4171HJU"

   dn="sys/rack-unit-1/board/pid/pid-hdd-1" >
  </pidCatalogHdd>
  <pidCatalogHdd disk="2" controller="SLOT-4" description="300GB 6Gb SAS 10K RPM 2.5"
 pid="A03-D300GA2" vendor="SEAGATE" model="ST300MM0006" serialnumber="Z0K01GP10000C419ARHL"

  dn="sys/rack-unit-1/board/pid/pid-hdd-2" >
  </pidCatalogHdd>
 </outConfigs>
</configResolveClass>
```

Retrieving PCI Adapter Product ID Details

Request:

```
<configResolveClass cookie="1462354358/4b33a4f4-3201-1201-8004-f0fa5ff6083c"
inHierarchical="false" classId="pidCatalogPCIAdapter"/>
```

Response:

```
<configResolveClass cookie="1462354358/4b33a4f4-3201-1201-8004-f0fa5ff6083c" response="yes"

classId="pidCatalogPCIAdapter"> <outConfigs> <pidCatalogPCIAdapter slot="L"
description="Onboard LOM" pid="N/A" vendor="0x8086" device="0x1521" subvendor="0x1137"
subdevice="0x008b" dn="sys/rack-unit-1/board/pid/pid-pciadapter-L" ></pidCatalogPCIAdapter>
<pidCatalogPCIAdapter slot="2" description="Cisco UCS Dual Port 10Gb Ethernet and 4G Fibre
 Channel CNA SFP+"
pid="UCSC-PCIE-CSC-02" vendor="0x1137" device="0x0042" subvendor="0x1137" subdevice="0x0085"

dn="sys/rack-unit-1/board/pid/pid-pciadapter-2" ></pidCatalogPCIAdapter><pidCatalogPCIAdapter
 slot="4"
description="LSI 6G MegaRAID SAS 9271-8i card with Supercap (RAID 0,1,5,6; RAID spans
10,50,60) - External mini-SAS connectors"
pid="UCS-RAID9271-8i" vendor="0x1000" device="0x005b" subvendor="0x1000" subdevice="0x9271"

dn="sys/rack-unit-1/board/pid/pid-pciadapter-4" ></pidCatalogPCIAdapter></outConfigs>
</configResolveClass>
```

Retrieving Firmware Update Details

Request:

```
<configResolveClass cookie="1462354358/4b33a4f4-3201-1201-8004-f0fa5ff6083c"
inHierarchical="false" classId="firmwareUpdatable"/>
```

Response:

```
<configResolveClass cookie="1462354358/4b33a4f4-3201-1201-8004-f0fa5ff6083c"
response="yes" classId="firmwareUpdatable">
 <outConfigs>
   <firmwareUpdatable dn="sys/rack-unit-1/bios/fw-updatable" description="BIOS firmware
version"
    adminState="triggered" deployment="primary" operState="ready" version="CxxxMx.3.0.0.3
    (Build Date: 03/23/2016)" protocol="none" remoteServer="" remotePath="" user=""
    pwd="" progress="None, OK" type="blade-bios" >
   </firmwareUpdatable>
   <firmwareUpdatable dn="sys/rack-unit-1/mgmt/fw-updatable"
    description="Cisco IMC backup firmware version"
    adminState="triggered" deployment="backup" operState="ready"
   version="66.77(67.1462359966)" protocol="none"
   remoteServer="" remotePath="" user="" pwd="" progress="Success"
   type="blade-controller" secureBoot="enabled" >
  </firmwareUpdatable>
  <firmwareUpdatable dn="sys/rack-unit-1/adaptor-2/mgmt/fw-updatable"
   description="Cisco VIC adapter backup firmware version" adminState="triggered"
deployment="backup"
   version="2.1(3a)" protocol="none" remoteServer="" remotePath="" user="" pwd=""
   progress="Stage: No operation (0%), Status: Idle, Error: No error" type="adaptor" >
  </firmwareUpdatable>
 </outConfigs>
</configResolveClass>
```

Updating Cisco IMC Firmware

Request:

```
<configConfMo cookie="0000286104/a1778199-0042-1042-8003-7e573e8f835c"
inHierarchical="true" dn="sys/rack-unit-1/mgmt/fw-updatable">
  <inConfig>
    <firmwareUpdatable adminState="trigger" dn="sys/rack-unit-1/mgmt/fw-updatable"
       protocol="tftp" remoteServer="10.10.10.10" remotePath="update_pkg-rack-colusa1.bin"

      type="blade-controller"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/mgmt/fw-updatable"
cookie="0000286104/a1778199-0042-1042-8003-7e573e8f835c" response="yes">
  <outConfig>
    <firmwareUpdatable dn="sys/rack-unit-1/mgmt/fw-updatable"
     description="Cisco IMC backup firmware version" adminState="triggered"
     deployment="backup" operState="updating" version="3.0(0.167)" protocol="none"
     remoteServer="" remotePath="" user="" pwd="" progress="5" type="blade-controller"
     secureBoot="enabled" status="modified"/>
  </outConfig>
</configConfMo>
```

Updating BIOS Firmware

Request:

```
<configConfMo cookie="0000286104/a1778199-0042-1042-8003-7e573e8f835c"
inHierarchical="true" dn="sys/rack-unit-1/bios/fw-updatable">
```

```
  <inConfig>
    <firmwareUpdatable adminState="trigger" dn="sys/rack-unit-1/bios/fw-updatable"
    protocol="tftp" remoteServer="10.10.10.10" remotePath="BIOS-2-0-12-9.cap"
    type="blade-bios"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/bios/fw-updatable"
cookie="0000286104/a1778199-0042-1042-8003-7e573e8f835c" response="yes">
  <outConfig>
    <firmwareUpdatable dn="sys/rack-unit-1/bios/fw-updatable"
      description="BIOS firmware version" adminState="triggered" deployment="primary"
     operState="updating" version="server-name.2.0.12.3.031720160046 " protocol="none"
     remoteServer="" remotePath="" user="" pwd="" progress="Image Download (5 %), OK"
     type="blade-bios" status="modified"/>
  </outConfig>
</configConfMo>
```

The preceding Cisco IMC and BIOS firmware upgrade examples use tftp as the protocol, similarly you can use other available protocols, such as ftp, sftp, scp and http. When you use the sftp, ftp or scp protocol while updating, username and password has to be specified in the input parameters.

Using Non-Interactive HUU to Update Firmware on all C-Series Server Components

Request:

```
<configConfMo cookie="0000020175/b2909140-0004-1004-8002-cdac38e14388"
inHierarchical="true" dn='sys/huu/firmwareUpdater'>
 <inConfig>
   <huuFirmwareUpdater dn='sys/huu/firmwareUpdater'  adminState='trigger'
    remoteIp='10.xxx.xxx.99' remoteShare='/home/xxxxxx/ucs-Cxxx-huu-1.5.0.67.iso'
    mapType='cifs' username='user' password='pwd' stopOnError='yes'
    timeOut='25' verifyUpdate='yes' updateComponent='all' />
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/bios/fw-updatable"
cookie="0000286104/a1778199-0042-1042-8003-7e573e8f835c" response="yes">
  <outConfig>
    <firmwareUpdatable dn="sys/rack-unit-1/bios/fw-updatable" description="BIOS firmware
version"
     adminState="triggered" deployment="primary" operState="updating"
      version="server-name.2.0.12.3.031720160046 " protocol="none" remoteServer=""
remotePath=""
     user="" pwd="" progress="Image Download (5 %), OK" type="blade-bios" status="modified"/>

  </outConfig>
</configConfMo>
```

The preceding example initiates and updates the firmware on all components of the server, you can periodically run the following request to check the status of the update:

Status request:

```
<configResolveClass cookie="1360030993/e4404760-d4f0-14f0-8004-1ec9e1a85750"
inHierarchical="true" classId="huuFirmwareUpdater">
```

Response:

```
<configResolveClass cookie="1360030993/e4404760-d4f0-14f0-8004-1ec9e1a85750" response="yes"

 classId="huuFirmwareUpdater">
  <outConfigs>
    <huuFirmwareUpdater dn="sys/huu/firmwareUpdater" adminState="triggered"
     remoteIp="http://10.xxx.xxx.99" remoteSharePath="/home/xxxx/ucs-Cxxx-huu-1.5.0.67.iso"

      remoteShareFile="ucs-Cxxx-huu-1.5.0.67.iso" mapType="cifs"username="user"
     password="pwd" stopOnError="yes" timeOut="25" verifyUpdate="no" updateComponent="all"
 >
    <huuFirmwareUpdateStatus rn="updateStatus"
      overallStatus="CIMC,LOM,PCI,STORAGE update successful. BIOS update in progress."
       currentTime="Tue Feb  5 02:48:42 2013" updateStartTime="Tue Feb 5 02:28:06 2013"
       updateEndTime="NA" >
    <huuUpdateComponentStatus component="CIMC" description="CIMC" slot="NA"
       runningVersion="1.5(0.69)" newVersion="1.5(0.67)" macAddr="NA"
       vendorId="NA" deviceId="NA" subVendorId="NA" subDeviceId="NA" cntrlId="0"
       updateStatus="Completed" errorDescription="NA" verifyStatus="NA"
       rn="component-CIMC" >
    <huuUpdateComponentStatus component="LOM" description="I350" slot="NA"
      runningVersion="1.61-02.12-2.7.111-1.3.98-5.1.01-2.7.111"
      newVersion="1.61-02.12-2.7.111-1.3.98-5.1.01-2.7.111" macAddr="5057A8E1C922"
      vendorId="8086"  deviceId="1521" subVendorId="1137" subDeviceId="008A"
      cntrlId="0" updateStatus="Completed" errorDescription="NA"
      verifyStatus="NA" rn="component-LOM" >
    <huuUpdateComponentStatus component="STORAGE" description="2008M-8i" slot="M"
      runningVersion="2.130.364-2185" newVersion="2.130.364-2185" macAddr="NA"
      vendorId="NA" deviceId="NA" subVendorId="NA" subDeviceId="NA" cntrlId="0"
      updateStatus="Completed"  errorDescription="NA" verifyStatus="NA"
      rn="component-STORAGE" >
    <huuUpdateComponentStatus component="PCI" description="UCS VIC 1225" slot="1"
     runningVersion="2.1(1.110)-uboot-2.1(1.110)" newVersion="2.1(1.108)-uboot-2.1(1.108)"

      macAddr="0200544D474D" vendorId="1137" deviceId="0042" subVendorId="1137"
      subDeviceId="0085" cntrlId="0" updateStatus="Completed" errorDescription="NA"
      verifyStatus="NA" rn="component-PCI" >
    <huuUpdateComponentStatus component="BIOS" description="BIOS" slot="NA"
      runningVersion="CxxxMx.1.5.1c.0.013120130456"
      newVersion="CxxxMx.1.5.1b.0.012720130527" macAddr="NA" vendorId="NA" deviceId="NA"
      subVendorId="NA" subDeviceId="NA" cntrlId="0" updateStatus="InProgress"
      errorDescription="NA" verifyStatus="NA" rn="component-BIOS" >
   </huuFirmwareUpdateStatus>
  </huuFirmwareUpdater>
 </outConfigs>
</configResolveClass>
```

Note You can choose a specific components in the updateComponent '' parameter to update the firmware only for that component.

Using TFTP to Import VIC Adapter Configuration Data

Request:

```
<configConfMo cookie="cookiecutter" inHierarchical="true"
dn="sys/rack-unit-1/adaptor-MLOM/import-config">
  <inConfig>
```

```
    <adaptorCfgImporter dn="sys/rack-unit-1/adaptor-MLOM/import-config"
    adminState="trigger" proto="tftp" hostname="10.10.10.10" remoteFile="tftpapi.xml"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/adaptor-MLOM/import-config"
cookie="0000008008/5c0d9f7e-0002-1002-8003-ac7c7d74a254" response="yes">
  <outConfig>
    <adaptorCfgImporter dn="sys/rack-unit-1/adaptor-MLOM/import-config"
   adminState="triggered" descr="import-config" proto="none" hostname="" remoteFile=""
   user="" pwd="" progress="Done" status="modified"/>
  </outConfig>
</configConfMo>
```

Using TFTP to Update VIC Firmware

Request:

```
<configConfMo cookie="0000286104/a1778199-0042-1042-8003-7e573e8f835c"
inHierarchical="true" dn="sys/rack-unit-1/adaptor-1/mgmt/fw-updatable">
  <inConfig>
    <firmwareUpdatable adminState="trigger" dn="sys/rack-unit-1/adaptor-1/mgmt/fw-updatable"

   protocol="tftp" remoteServer="10.10.10.10" remotePath="cruzfw1.bin" type="adaptor"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/adaptor-1/mgmt/fw-updatable"
cookie="0000286104/a1778199-0042-1042-8003-7e573e8f835c" response="yes">
  <outConfig>
    <firmwareUpdatable dn="sys/rack-unit-1/adaptor-1/mgmt/fw-updatable"
    description="Cisco VIC adapter backup firmware version" adminState="triggered"
    deployment="backup" operState="Idle" version="4.1(1d)" protocol="none" remoteServer=""

    remotePath="" user="" pwd="" progress="Stage: No operation (0%), Status: Idle, Error:
No error"
    type="adaptor" status="modified"/>
  </outConfig>
</configConfMo>
```

The preceding example initiates and updates the firmware on VIC, you can periodically run the following request to check the status of the update:

Status request:

```
<configResolveDn cookie="1350860496/b80c15e8-cc99-1c99-8011-1fc9e1a85750"
 inHierarchical="true" dn="sys/rack-unit-1/adaptor-1/mgmt/fw-updatable"/>
```

Status response after completion:

```
<configResolveDn cookie="1350860496/b80c15e8-cc99-1c99-8011-1fc9e1a85750" response="yes"
dn="sys/rack-unit-1/adaptor-1/mgmt/fw-updatable">
 <outConfig>
   <firmwareUpdatable dn="sys/rack-unit-1/adaptor-1/mgmt/fw-updatable" adminState="triggered"
```

```
    deployment="backup" version="2.x(0.xxx)" protocol="tftp" remoteServer="" remotePath=""

    user="" pwd="" progress="Successful" type="adaptor" >
   </firmwareUpdatable>
 </outConfig>
</configResolveDn>
```

Configuring VIC Adapter Parameters

Request:

```
<configConfMo cookie="0000356151/3380bf82-0053-1053-8004-7e573e8f835c" inHierarchical="true"
 dn="sys/rack-unit-1/adaptor-1">
  <inConfig>
    <adaptorUnit id="1" description="SL1-PP-System" adminState="adaptor-reset-default"
dn="sys/rack-unit-1/adaptor-1">
      <adaptorGenProfile dn="sys/rack-unit-1/adaptor-1/general" fipMode="enabled"
vntagMode="enabled" numOfVMFexIfs="10"/>
    </adaptorUnit>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/adaptor-1"
cookie="0000356151/3380bf82-0053-1053-8004-7e573e8f835c"
response="yes">
  <outConfig>
   <adaptorUnit id="1" model="UCSC-MLOM-C10T-02" pciAddr="1" pciSlot="1" presence="equipped"

serial="FCH19267ENR" description="SL1-PP-System" adminState="policy"
cimcManagementEnabled="no"
vendor="Cisco Systems Inc" dn="sys/rack-unit-1/adaptor-1" status="modified">
      <adaptorGenProfile rn="general" pciSlot="1" productName="UCS VIC 1227T"
model="UCSC-MLOM-C10T-02"
serial="FCH19267ENR" revision="2" fipMode="Enabled" vntagMode="Enabled" lldp="Enabled"
iscsiBootSupported="True" usnicSupported="True" configurationPending="yes" numOfVMFexIfs="10"

vendorId="V01" vendor="Cisco Systems Inc" status="modified"/>
      <mgmtController rn="mgmt" model="UCSC-MLOM-C10T-02" serial="FCH19267ENR"
subject="adaptor"
vendor="Cisco Systems Inc" status="modified">
       <firmwareRunning rn="fw-boot-loader" description="Cisco VIC adapter currently running
 boot loader firmware version"
deployment="boot-loader" type="adaptor" version="4.0(5b)" status="modified"/>
        <firmwareRunning rn="fw-system" description="Cisco VIC adapter currently running
firmware version"
deployment="system" type="adaptor" version="4.1(1.47)" status="modified"/>
       <firmwareUpdatable rn="fw-updatable" description="Cisco VIC adapter backup firmware
 version"
adminState="triggered" deployment="backup" operState="Idle" version="4.1(1d)" protocol="none"

remoteServer="" remotePath="" user="" pwd="" progress="Stage: No operation (0%), Status:
Idle,
Error: No error" type="adaptor" status="modified"/>
        <firmwareBootDefinition rn="fw-boot-def" type="adaptor" status="modified">
          <firmwareBootUnit rn="bootunit-combined" description="Cisco VIC adapter startup
firmware version"
adminState="triggered" image="running" resetOnActivate="no" type="combined"
version="4.1(1.47)" status="modified"/>
        </firmwareBootDefinition>
      </mgmtController>
```

```
     <adaptorExtEthIf portId="0" ifType="physical" linkState="down" mac="18:8B:9D:72:93:46"

transport="CE" adminSpeed="10Gbps" operSpeed="-" rn="ext-eth-0" status="modified">
        <adaptorConnectorInfo rn="connector-info" present="N/A" supported="N/A" type="N/A"

vendor="N/A" partNumber="N/A" partRevision="N/A" status="modified"/>
        <adaptorLinkTraining rn="link-training" linkTraining="n/a" status="modified"/>
        <adaptorPortProfiles rn="port-profiles" portProfilesCount="0" portProfilesName=""
status="modified"/>
      </adaptorExtEthIf>
     <adaptorExtEthIf portId="1" ifType="physical" linkState="down" mac="18:8B:9D:72:93:47"

transport="CE" adminSpeed="10Gbps" operSpeed="-" rn="ext-eth-1" status="modified">
        <adaptorConnectorInfo rn="connector-info" present="N/A" supported="N/A" type="N/A"

vendor="N/A" partNumber="N/A" partRevision="N/A" status="modified"/>
        <adaptorLinkTraining rn="link-training" linkTraining="n/a" status="modified"/>
        <adaptorPortProfiles rn="port-profiles" portProfilesCount="0" portProfilesName=""
status="modified"/>
      </adaptorExtEthIf>
     <adaptorHostEthIf name="eth0" cdn="VIC-1-eth0" ifType="virtual" mac="18:8B:9D:72:93:52"
 mtu="1500"
pxeBoot="disabled" iscsiBoot="disabled" usnicCount="0" uplinkPort="0" classOfService="N/A"

channelNumber="1" portProfile="" rn="host-eth-eth0" status="modified">
        <adaptorEthGenProfile rn="general" vmq="disabled" arfs="disabled"
uplinkFailover="Disabled"
uplinkFailbackTimeout="5" order="ANY" trustedClassOfService="disabled" rateLimit="N/A"
vlan="N/A"
vlanMode="N/A" status="modified"/>
       <adaptorEthCompQueueProfile rn="eth-comp-q" count="5" ringSize="1" status="modified"/>

        <adaptorEthOffloadProfile rn="eth-offload" largeReceive="enabled"
tcpRxChecksum="enabled"
tcpSegment="enabled" tcpTxChecksum="enabled" status="modified"/>
        <adaptorEthRecvQueueProfile rn="eth-rcv-q" count="4" ringSize="512"
status="modified"/>
        <adaptorIpV4RssHashProfile rn="ipv4-rss-hash" ipHash="enabled" tcpHash="enabled"
status="modified"/>
        <adaptorExtIpV6RssHashProfile rn="ext-ipv6-rss-hash" ipHash="disabled"
tcpHash="disabled" status="modified"/>
        <adaptorEthWorkQueueProfile rn="eth-work-q" count="1" ringSize="256"
status="modified"/>
        <adaptorIpV6RssHashProfile rn="ipv6-rss-hash" ipHash="enabled" tcpHash="enabled"
status="modified"/>
        <adaptorRssProfile rn="rss" receiveSideScaling="enabled" status="modified"/>
        <adaptorEthInterruptProfile rn="eth-int" coalescingType="MIN" coalescingTime="125"

count="8" mode="MSIx" status="modified"/>
      </adaptorHostEthIf>
     <adaptorHostEthIf name="eth1" cdn="VIC-1-eth1" ifType="virtual" mac="18:8B:9D:72:93:53"

mtu="1500" pxeBoot="disabled" iscsiBoot="disabled" usnicCount="0" uplinkPort="1"
classOfService="N/A"
channelNumber="2" portProfile="" rn="host-eth-eth1" status="modified">
        <adaptorEthGenProfile rn="general" vmq="disabled" arfs="disabled"
uplinkFailover="Disabled"
uplinkFailbackTimeout="5" order="ANY" trustedClassOfService="disabled" rateLimit="N/A"
vlan="N/A"
vlanMode="N/A" status="modified"/>
       <adaptorEthCompQueueProfile rn="eth-comp-q" count="5" ringSize="1" status="modified"/>

        <adaptorEthOffloadProfile rn="eth-offload" largeReceive="enabled"
tcpRxChecksum="enabled"
```

```
tcpSegment="enabled" tcpTxChecksum="enabled" status="modified"/>
        <adaptorEthRecvQueueProfile rn="eth-rcv-q" count="4" ringSize="512"
status="modified"/>
        <adaptorIpV4RssHashProfile rn="ipv4-rss-hash" ipHash="enabled" tcpHash="enabled"
status="modified"/>
        <adaptorExtIpV6RssHashProfile rn="ext-ipv6-rss-hash" ipHash="disabled"
tcpHash="disabled" status="modified"/>
        <adaptorEthWorkQueueProfile rn="eth-work-q" count="1" ringSize="256"
status="modified"/>
        <adaptorIpV6RssHashProfile rn="ipv6-rss-hash" ipHash="enabled" tcpHash="enabled"
status="modified"/>
        <adaptorRssProfile rn="rss" receiveSideScaling="enabled" status="modified"/>
        <adaptorEthInterruptProfile rn="eth-int" coalescingType="MIN" coalescingTime="125"

count="8" mode="MSIx" status="modified"/>
      </adaptorHostEthIf>
      <adaptorHostFcIf name="fc0" ifType="virtual" wwnn="10:00:18:8B:9D:72:93:54"
wwpn="20:00:18:8B:9D:72:93:54" uplinkPort="0" sanBoot="disabled" channelNumber="3"
portProfile=""
adminPersistentBindings="policy" rn="host-fc-fc0" status="modified">
        <adaptorFcGenProfile rn="general" mac="18:8B:9D:72:93:54" order="ANY"
classOfService="N/A"
rateLimit="N/A" vlan="NONE" persistentLunBind="disabled" maxDataFieldSize="2112"
status="modified"/>
        <adaptorFcErrorRecoveryProfile rn="fc-err-rec" errorDetectTimeout="2000"
fcpErrorRecovery="disabled"
linkDownTimeout="30000" portDownIoRetryCount="8" portDownTimeout="10000"
resourceAllocationTimeout="10000"
ioTimeoutRetry="5" status="modified"/>
        <adaptorFcInterruptProfile rn="fc-int" mode="MSIx" status="modified"/>
        <adaptorFcPortFLogiProfile rn="fc-port-flogi" retries="INFINITE" timeout="2000"
status="modified"/>
        <adaptorFcPortPLogiProfile rn="fc-port-plogi" retries="8" timeout="2000"
status="modified"/>
        <adaptorFcPortProfile rn="fc-port" ioThrottleCount="512" lunsPerTarget="256"
lunQueueDepth="20" status="modified"/>
        <adaptorFcRecvQueueProfile rn="fc-rcv-q" ringSize="64" status="modified"/>
        <adaptorFcWorkQueueProfile rn="fc-work-q" ringSize="64" status="modified"/>
        <adaptorFcCdbWorkQueueProfile rn="fc-cdb-work-q" count="1" ringSize="512"
status="modified"/>
      </adaptorHostFcIf>
      <adaptorHostFcIf name="fc1" ifType="virtual" wwnn="10:00:18:8B:9D:72:93:55"
wwpn="20:00:18:8B:9D:72:93:55"
uplinkPort="1" sanBoot="disabled" channelNumber="4" portProfile=""
adminPersistentBindings="policy"
rn="host-fc-fc1" status="modified">
        <adaptorFcGenProfile rn="general" mac="18:8B:9D:72:93:55" order="ANY"
classOfService="N/A"
rateLimit="N/A" vlan="NONE" persistentLunBind="disabled" maxDataFieldSize="2112"
status="modified"/>
        <adaptorFcErrorRecoveryProfile rn="fc-err-rec" errorDetectTimeout="2000"
fcpErrorRecovery="disabled"
linkDownTimeout="30000" portDownIoRetryCount="8" portDownTimeout="10000"
resourceAllocationTimeout="10000"
ioTimeoutRetry="5" status="modified"/>
        <adaptorFcInterruptProfile rn="fc-int" mode="MSIx" status="modified"/>
        <adaptorFcPortFLogiProfile rn="fc-port-flogi" retries="INFINITE" timeout="2000"
status="modified"/>
        <adaptorFcPortPLogiProfile rn="fc-port-plogi" retries="8" timeout="2000"
status="modified"/>
        <adaptorFcPortProfile rn="fc-port" ioThrottleCount="512" lunsPerTarget="256"
lunQueueDepth="20" status="modified"/>
        <adaptorFcRecvQueueProfile rn="fc-rcv-q" ringSize="64" status="modified"/>
        <adaptorFcWorkQueueProfile rn="fc-work-q" ringSize="64" status="modified"/>
```

```
        <adaptorFcCdbWorkQueueProfile rn="fc-cdb-work-q" count="1" ringSize="512"
status="modified"/>
      </adaptorHostFcIf>
      <adaptorVMFexEthIf name="pts0" ifType="virtual" mtu="1500" uplinkPort="0"
classOfService="N/A"
pxeBoot="disabled" vlan="N/A" vlanMode="N/A" uplinkFailover="Enabled"
uplinkFailbackTimeout="5"
rn="vmfex-eth-pts0" status="modified">
       <adaptorVMFexEthProfile rn="vmfexprofile" name="pts0" trustedClassOfService="disabled"
 pciOrder="19"
completionQueueCount="5" completionQueueRingSize="1" coalescingType="MIN" coalescingTime="125"

interruptCount="6" interruptMode="MSI" largeReceive="enabled" tcpRxChecksum="enabled"
tcpSegment="enabled"
tcpTxChecksum="enabled" receiveQueueCount="4" receiveQueueRingSize="512"
receiveSideScaling="enabled"
receiveSideScalingIpV4Hash="enabled" receiveSideScalingTCPIpV4Hash="enabled"
receiveSideScalingIpV6Hash="enabled" receiveSideScalingTCPIpV6Hash="enabled"
receiveSideScalingExtIpV6Hash="disabled" receiveSideScalingExtTCPIpV6Hash="disabled"
transmitQueueCount="1"
transmitQueueRingSize="256" status="modified"/>
      </adaptorVMFexEthIf>
      <adaptorVMFexEthIf name="pts1" ifType="virtual" mtu="1500" uplinkPort="1"
classOfService="N/A"
pxeBoot="disabled" vlan="N/A" vlanMode="N/A" uplinkFailover="Enabled"
uplinkFailbackTimeout="5"
rn="vmfex-eth-pts1" status="modified">
       <adaptorVMFexEthProfile rn="vmfexprofile" name="pts1" trustedClassOfService="disabled"

pciOrder="19" completionQueueCount="5" completionQueueRingSize="1" coalescingType="MIN"
coalescingTime="125" interruptCount="6" interruptMode="MSI" largeReceive="enabled"
tcpRxChecksum="enabled" tcpSegment="enabled" tcpTxChecksum="enabled" receiveQueueCount="4"

receiveQueueRingSize="512" receiveSideScaling="enabled" receiveSideScalingIpV4Hash="enabled"

receiveSideScalingTCPIpV4Hash="enabled" receiveSideScalingIpV6Hash="enabled"
receiveSideScalingTCPIpV6Hash="enabled" receiveSideScalingExtIpV6Hash="disabled"
receiveSideScalingExtTCPIpV6Hash="disabled" transmitQueueCount="1" transmitQueueRingSize="256"
 status="modified"/>
      </adaptorVMFexEthIf>
      <adaptorVMFexEthIf name="pts2" ifType="virtual" mtu="1500" uplinkPort="0"
classOfService="N/A"
pxeBoot="disabled" vlan="N/A" vlanMode="N/A" uplinkFailover="Enabled"
uplinkFailbackTimeout="5"
rn="vmfex-eth-pts2" status="modified">
       <adaptorVMFexEthProfile rn="vmfexprofile" name="pts2" trustedClassOfService="disabled"

pciOrder="19" completionQueueCount="5" completionQueueRingSize="1" coalescingType="MIN"
coalescingTime="125" interruptCount="6" interruptMode="MSI" largeReceive="enabled"
tcpRxChecksum="enabled"
tcpSegment="enabled" tcpTxChecksum="enabled" receiveQueueCount="4" receiveQueueRingSize="512"

receiveSideScaling="enabled" receiveSideScalingIpV4Hash="enabled"
receiveSideScalingTCPIpV4Hash="enabled"
receiveSideScalingIpV6Hash="enabled" receiveSideScalingTCPIpV6Hash="enabled"
receiveSideScalingExtIpV6Hash="disabled"
receiveSideScalingExtTCPIpV6Hash="disabled" transmitQueueCount="1" transmitQueueRingSize="256"
 status="modified"/>
      </adaptorVMFexEthIf>
      <adaptorVMFexEthIf name="pts3" ifType="virtual" mtu="1500" uplinkPort="1"
classOfService="N/A"
pxeBoot="disabled" vlan="N/A" vlanMode="N/A" uplinkFailover="Enabled"
uplinkFailbackTimeout="5"
rn="vmfex-eth-pts3" status="modified">
```

Examples of Common Tasks

```
       <adaptorVMFexEthProfile rn="vmfexprofile" name="pts3" trustedClassOfService="disabled"

pciOrder="19" completionQueueCount="5" completionQueueRingSize="1" coalescingType="MIN"
coalescingTime="125" interruptCount="6" interruptMode="MSI" largeReceive="enabled"
tcpRxChecksum="enabled" tcpSegment="enabled" tcpTxChecksum="enabled" receiveQueueCount="4"

receiveQueueRingSize="512" receiveSideScaling="enabled" receiveSideScalingIpV4Hash="enabled"

receiveSideScalingTCPIpV4Hash="enabled" receiveSideScalingIpV6Hash="enabled"
receiveSideScalingTCPIpV6Hash="enabled" receiveSideScalingExtIpV6Hash="disabled"
receiveSideScalingExtTCPIpV6Hash="disabled" transmitQueueCount="1" transmitQueueRingSize="256"
 status="modified"/>
      </adaptorVMFexEthIf>
      <adaptorVMFexEthIf name="pts4" ifType="virtual" mtu="1500" uplinkPort="0"
classOfService="N/A" pxeBoot="disabled" vlan="N/A" vlanMode="N/A" uplinkFailover="Enabled"

uplinkFailbackTimeout="5" rn="vmfex-eth-pts4" status="modified">
       <adaptorVMFexEthProfile rn="vmfexprofile" name="pts4" trustedClassOfService="disabled"

pciOrder="19" completionQueueCount="5" completionQueueRingSize="1" coalescingType="MIN"
coalescingTime="125" interruptCount="6" interruptMode="MSI" largeReceive="enabled"
tcpRxChecksum="enabled"
tcpSegment="enabled" tcpTxChecksum="enabled" receiveQueueCount="4" receiveQueueRingSize="512"

receiveSideScaling="enabled" receiveSideScalingIpV4Hash="enabled"
receiveSideScalingTCPIpV4Hash="enabled"
receiveSideScalingIpV6Hash="enabled" receiveSideScalingTCPIpV6Hash="enabled"
receiveSideScalingExtIpV6Hash="disabled" receiveSideScalingExtTCPIpV6Hash="disabled"
transmitQueueCount="1" transmitQueueRingSize="256" status="modified"/>
      </adaptorVMFexEthIf>
      <adaptorVMFexEthIf name="pts5" ifType="virtual" mtu="1500" uplinkPort="1"
classOfService="N/A" pxeBoot="disabled" vlan="N/A" vlanMode="N/A" uplinkFailover="Enabled"

uplinkFailbackTimeout="5" rn="vmfex-eth-pts5" status="modified">
       <adaptorVMFexEthProfile rn="vmfexprofile" name="pts5" trustedClassOfService="disabled"

pciOrder="19" completionQueueCount="5" completionQueueRingSize="1" coalescingType="MIN"
coalescingTime="125" interruptCount="6" interruptMode="MSI" largeReceive="enabled"
tcpRxChecksum="enabled" tcpSegment="enabled" tcpTxChecksum="enabled" receiveQueueCount="4"

receiveQueueRingSize="512" receiveSideScaling="enabled" receiveSideScalingIpV4Hash="enabled"

receiveSideScalingTCPIpV4Hash="enabled" receiveSideScalingIpV6Hash="enabled"
receiveSideScalingTCPIpV6Hash="enabled" receiveSideScalingExtIpV6Hash="disabled"
receiveSideScalingExtTCPIpV6Hash="disabled" transmitQueueCount="1" transmitQueueRingSize="256"
 status="modified"/>
      </adaptorVMFexEthIf>
      <adaptorVMFexEthIf name="pts6" ifType="virtual" mtu="1500" uplinkPort="0"
classOfService="N/A" pxeBoot="disabled" vlan="N/A" vlanMode="N/A" uplinkFailover="Enabled"

uplinkFailbackTimeout="5" rn="vmfex-eth-pts6" status="modified">
       <adaptorVMFexEthProfile rn="vmfexprofile" name="pts6" trustedClassOfService="disabled"

pciOrder="19" completionQueueCount="5" completionQueueRingSize="1" coalescingType="MIN"
coalescingTime="125" interruptCount="6" interruptMode="MSI" largeReceive="enabled"
tcpRxChecksum="enabled" tcpSegment="enabled" tcpTxChecksum="enabled" receiveQueueCount="4"

receiveQueueRingSize="512" receiveSideScaling="enabled" receiveSideScalingIpV4Hash="enabled"

receiveSideScalingTCPIpV4Hash="enabled" receiveSideScalingIpV6Hash="enabled"
receiveSideScalingTCPIpV6Hash="enabled" receiveSideScalingExtIpV6Hash="disabled"
receiveSideScalingExtTCPIpV6Hash="disabled" transmitQueueCount="1" transmitQueueRingSize="256"
 status="modified"/>
      </adaptorVMFexEthIf>
```

```
      <adaptorVMFexEthIf name="pts7" ifType="virtual" mtu="1500" uplinkPort="1"
classOfService="N/A"
pxeBoot="disabled" vlan="N/A" vlanMode="N/A" uplinkFailover="Enabled"
uplinkFailbackTimeout="5"
rn="vmfex-eth-pts7" status="modified">
       <adaptorVMFexEthProfile rn="vmfexprofile" name="pts7" trustedClassOfService="disabled"

pciOrder="19" completionQueueCount="5" completionQueueRingSize="1" coalescingType="MIN"
coalescingTime="125" interruptCount="6" interruptMode="MSI" largeReceive="enabled"
tcpRxChecksum="enabled" tcpSegment="enabled" tcpTxChecksum="enabled" receiveQueueCount="4"

receiveQueueRingSize="512" receiveSideScaling="enabled" receiveSideScalingIpV4Hash="enabled"

receiveSideScalingTCPIpV4Hash="enabled" receiveSideScalingIpV6Hash="enabled"
receiveSideScalingTCPIpV6Hash="enabled" receiveSideScalingExtIpV6Hash="disabled"
receiveSideScalingExtTCPIpV6Hash="disabled" transmitQueueCount="1" transmitQueueRingSize="256"
 status="modified"/>
      </adaptorVMFexEthIf>
      <adaptorVMFexEthIf name="pts8" ifType="virtual" mtu="1500" uplinkPort="0"
classOfService="N/A" pxeBoot="disabled" vlan="N/A" vlanMode="N/A" uplinkFailover="Enabled"

uplinkFailbackTimeout="5" rn="vmfex-eth-pts8" status="modified">
       <adaptorVMFexEthProfile rn="vmfexprofile" name="pts8" trustedClassOfService="disabled"

pciOrder="20" completionQueueCount="5" completionQueueRingSize="1" coalescingType="MIN"
coalescingTime="125" interruptCount="6" interruptMode="MSI" largeReceive="enabled"
tcpRxChecksum="enabled" tcpSegment="enabled" tcpTxChecksum="enabled" receiveQueueCount="4"

receiveQueueRingSize="512" receiveSideScaling="enabled" receiveSideScalingIpV4Hash="enabled"

receiveSideScalingTCPIpV4Hash="enabled" receiveSideScalingIpV6Hash="enabled"
receiveSideScalingTCPIpV6Hash="enabled" receiveSideScalingExtIpV6Hash="disabled"
receiveSideScalingExtTCPIpV6Hash="disabled" transmitQueueCount="1" transmitQueueRingSize="256"
 status="modified"/>
      </adaptorVMFexEthIf>
      <adaptorVMFexEthIf name="pts9" ifType="virtual" mtu="1500" uplinkPort="1"
classOfService="N/A" pxeBoot="disabled" vlan="N/A" vlanMode="N/A" uplinkFailover="Enabled"

uplinkFailbackTimeout="5" rn="vmfex-eth-pts9" status="modified">
       <adaptorVMFexEthProfile rn="vmfexprofile" name="pts9" trustedClassOfService="disabled"

pciOrder="20" completionQueueCount="5" completionQueueRingSize="1" coalescingType="MIN"
coalescingTime="125" interruptCount="6" interruptMode="MSI" largeReceive="enabled"
tcpRxChecksum="enabled" tcpSegment="enabled" tcpTxChecksum="enabled" receiveQueueCount="4"

receiveQueueRingSize="512" receiveSideScaling="enabled" receiveSideScalingIpV4Hash="enabled"

receiveSideScalingTCPIpV4Hash="enabled" receiveSideScalingIpV6Hash="enabled"
receiveSideScalingTCPIpV6Hash="enabled" receiveSideScalingExtIpV6Hash="disabled"
receiveSideScalingExtTCPIpV6Hash="disabled" transmitQueueCount="1" transmitQueueRingSize="256"
 status="modified"/>
      </adaptorVMFexEthIf>
      <adaptorCfgImporter rn="import-config" adminState="triggered" descr="import-config"
proto="none" hostname="" remoteFile="" user="" pwd="" progress="Done" status="modified"/>
      <adaptorCfgBackup rn="export-config" adminState="triggered" descr="export-config"
proto="none" hostname="" remoteFile="" user="" pwd="" progress="Done" status="modified"/>
    </adaptorUnit>
  </outConfig>
</configConfMo>
```

Retrieving VIC Adapter General Profile Details

Request:

```
<configResolveClass cookie="0000357041/1800a4e5-0054-1054-8005-7e573e8f835c"
inHierarchical="true" classId="adaptorGenProfile"/>
```

Response:

```
<configResolveClass cookie="0000357041/1800a4e5-0054-1054-8005-7e573e8f835c"
response="yes" classId="adaptorGenProfile">
  <outConfigs>
    <adaptorGenProfile dn="sys/rack-unit-1/adaptor-1/general" pciSlot="1"
    productName="UCS VIC 1227T" model="UCSC-MLOM-C10T-02" serial="FCH19267ENR"
    revision="2" fipMode="Enabled" vntagMode="Enabled" lldp="Enabled"
    iscsiBootSupported="True" usnicSupported="True" configurationPending="yes"
    numOfVMFexIfs="10" vendorId="V01" vendor="Cisco Systems Inc"/>
  </outConfigs>
</configResolveClass>
```

Retrieving VIC Adapter Uplink Port Details

Request:

```
<configResolveClass cookie="0000357041/1800a4e5-0054-1054-8005-7e573e8f835c"
inHierarchical="true" classId="adaptorExtEthIf"/>
```

Response:

```
<configResolveClass cookie="0000357041/1800a4e5-0054-1054-8005-7e573e8f835c"
response="yes" classId="adaptorExtEthIf">
  <outConfigs>
    <adaptorExtEthIf portId="0" ifType="physical" linkState="down"
    mac="18:8B:9D:72:93:46" transport="CE" adminSpeed="10Gbps"
    operSpeed="-" dn="sys/rack-unit-1/adaptor-1/ext-eth-0">
    <adaptorConnectorInfo rn="connector-info" present="N/A" supported="N/A" type="N/A"
    vendor="N/A" partNumber="N/A" partRevision="N/A"/>
    <adaptorLinkTraining rn="link-training" linkTraining="n/a"/>
    <adaptorPortProfiles rn="port-profiles" portProfilesCount="0" portProfilesName=""/>
   </adaptorExtEthIf>
    <adaptorExtEthIf portId="1" ifType="physical" linkState="down" mac="18:8B:9D:72:93:47"

   transport="CE" adminSpeed="10Gbps" operSpeed="-" dn="sys/rack-unit-1/adaptor-1/ext-eth-1">

    <adaptorConnectorInfo rn="connector-info" present="N/A" supported="N/A" type="N/A"
     vendor="N/A" partNumber="N/A" partRevision="N/A"/>
    <adaptorLinkTraining rn="link-training" linkTraining="n/a"/>
    <adaptorPortProfiles rn="port-profiles" portProfilesCount="0" portProfilesName=""/>
   </adaptorExtEthIf>
  </outConfigs>
</configResolveClass>
```

Setting Uplink Port Speed of a VIC Adapter

Request:

```
<configConfMo cookie="0000357041/1800a4e5-0054-1054-8005-7e573e8f835c"
inHierarchical="true" dn="sys/rack-unit-1/adaptor-1/ext-eth-0">
  <inConfig>
   <adaptorExtEthIf portId="0" adminSpeed="10Gbps" dn="sys/rack-unit-1/adaptor-1/ext-eth-0"/>

  </inConfig>
```

```
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/adaptor-1/ext-eth-0"
cookie="0000357041/1800a4e5-0054-1054-8005-7e573e8f835c" response="yes">
  <outConfig>
    <adaptorExtEthIf portId="0" ifType="physical" linkState="down" mac="18:8B:9D:72:93:46"

     transport="CE" adminSpeed="10Gbps" operSpeed="-"
     dn="sys/rack-unit-1/adaptor-1/ext-eth-0" status="modified">
     <adaptorConnectorInfo rn="connector-info" present="N/A" supported="N/A" type="N/A"
     vendor="N/A" partNumber="N/A" partRevision="N/A" status="modified"/>
     <adaptorLinkTraining rn="link-training" linkTraining="n/a" status="modified"/>
     <adaptorPortProfiles rn="port-profiles" portProfilesCount="0" portProfilesName=""
status="modified"/>
    </adaptorExtEthIf>
  </outConfig>
</configConfMo>
```

Note Configuring the speed of an uplink port is supported only for the Cisco UCS VIC1225T Virtual Interface Cards.

Retrieving Adapter Ethernet Interface Details

Request:

```
<configResolveClass cookie="0000357041/1800a4e5-0054-1054-8005-7e573e8f835c"
inHierarchical="true" classId="adaptorHostEthIf"/>
```

Response:

```
<configResolveClass cookie="0000357041/1800a4e5-0054-1054-8005-7e573e8f835c"
response="yes" classId="adaptorHostEthIf">
  <outConfigs>
    <adaptorHostEthIf name="eth0" cdn="VIC-1-eth0" ifType="virtual"
     mac="18:8B:9D:72:93:52" mtu="1500" pxeBoot="disabled" iscsiBoot="disabled"
     usnicCount="0" uplinkPort="0" classOfService="N/A" channelNumber="1" portProfile=""
     dn="sys/rack-unit-1/adaptor-1/host-eth-eth0">
      <adaptorEthGenProfile rn="general" vmq="disabled" arfs="disabled"
      uplinkFailover="Disabled" uplinkFailbackTimeout="5" order="ANY"
trustedClassOfService="disabled"
      rateLimit="N/A" vlan="N/A" vlanMode="N/A"/>
      <adaptorEthCompQueueProfile rn="eth-comp-q" count="5" ringSize="1"/>
      <adaptorEthOffloadProfile rn="eth-offload" largeReceive="enabled"
tcpRxChecksum="enabled"
      tcpSegment="enabled" tcpTxChecksum="enabled"/>
      <adaptorEthRecvQueueProfile rn="eth-rcv-q" count="4" ringSize="512"/>
      <adaptorIpV4RssHashProfile rn="ipv4-rss-hash" ipHash="enabled" tcpHash="enabled"/>
      <adaptorExtIpV6RssHashProfile rn="ext-ipv6-rss-hash" ipHash="disabled"
tcpHash="disabled"/>
      <adaptorEthWorkQueueProfile rn="eth-work-q" count="1" ringSize="256"/>
      <adaptorIpV6RssHashProfile rn="ipv6-rss-hash" ipHash="enabled" tcpHash="enabled"/>
      <adaptorRssProfile rn="rss" receiveSideScaling="enabled"/>
      <adaptorEthInterruptProfile rn="eth-int" coalescingType="MIN" coalescingTime="125"
count="8" mode="MSIx"/>
```

```
    </adaptorHostEthIf>
   <adaptorHostEthIf name="eth1" cdn="VIC-1-eth1" ifType="virtual" mac="18:8B:9D:72:93:53"
 mtu="1500"
      pxeBoot="disabled" iscsiBoot="disabled" usnicCount="0" uplinkPort="1"
classOfService="N/A" channelNumber="2"
      portProfile="" dn="sys/rack-unit-1/adaptor-1/host-eth-eth1">
      <adaptorEthGenProfile rn="general" vmq="disabled" arfs="disabled"
uplinkFailover="Disabled"
     uplinkFailbackTimeout="5" order="ANY" trustedClassOfService="disabled" rateLimit="N/A"
 vlan="N/A" vlanMode="N/A"/>
      <adaptorEthCompQueueProfile rn="eth-comp-q" count="5" ringSize="1"/>
      <adaptorEthOffloadProfile rn="eth-offload" largeReceive="enabled"
tcpRxChecksum="enabled"
      tcpSegment="enabled" tcpTxChecksum="enabled"/>
      <adaptorEthRecvQueueProfile rn="eth-rcv-q" count="4" ringSize="512"/>
      <adaptorIpV4RssHashProfile rn="ipv4-rss-hash" ipHash="enabled" tcpHash="enabled"/>
      <adaptorExtIpV6RssHashProfile rn="ext-ipv6-rss-hash" ipHash="disabled"
tcpHash="disabled"/>
      <adaptorEthWorkQueueProfile rn="eth-work-q" count="1" ringSize="256"/>
      <adaptorIpV6RssHashProfile rn="ipv6-rss-hash" ipHash="enabled" tcpHash="enabled"/>
      <adaptorRssProfile rn="rss" receiveSideScaling="enabled"/>
      <adaptorEthInterruptProfile rn="eth-int" coalescingType="MIN" coalescingTime="125"
count="8" mode="MSIx"/>
    </adaptorHostEthIf>
  </outConfigs>
</configResolveClass>
```

Creating Adapter Ethernet Interface

Request:

```
<configConfMo cookie="0000357041/1800a4e5-0054-1054-8005-7e573e8f835c"
inHierarchical="true" dn="sys/rack-unit-1/adaptor-1/host-eth-eth2">
  <inConfig>
    <adaptorHostEthIf name="eth2" mac="AUTO" mtu="1500" pxeBoot="disabled" uplinkPort="0"
      classOfService="0" dn="sys/rack-unit-1/adaptor-1/host-eth-eth2" status="created">
      <adaptorEthGenProfile rn="general" order="ANY" trustedClassOfService="disabled"
       rateLimit="OFF" vlan="NONE" vlanMode="TRUNK"/>
      <adaptorEthCompQueueProfile rn="eth-comp-q" count="5"/>
      <adaptorEthOffloadProfile rn="eth-offload" largeReceive="enabled"
       tcpRxChecksum="enabled" tcpSegment="enabled" tcpTxChecksum="enabled"/>
      <adaptorEthRecvQueueProfile rn="eth-rcv-q" count="4" ringSize="512"/>
      <adaptorIpV4RssHashProfile rn="ipv4-rss-hash" ipHash="enabled" tcpHash="enabled"/>
      <adaptorExtIpV6RssHashProfile rn="ext-ipv6-rss-hash" ipHash="disabled"
tcpHash="disabled"/>
      <adaptorEthWorkQueueProfile rn="eth-work-q" count="1" ringSize="256"/>
      <adaptorIpV6RssHashProfile rn="ipv6-rss-hash" ipHash="enabled" tcpHash="enabled"/>
      <adaptorRssProfile rn="rss" receiveSideScaling="enabled"/>
      <adaptorEthInterruptProfile rn="eth-int" coalescingType="MIN" coalescingTime="125"
count="8" mode="MSIx"/>
    </adaptorHostEthIf>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/adaptor-1/host-eth-eth2"
cookie="0000357041/1800a4e5-0054-1054-8005-7e573e8f835c" response="yes">
  <outConfig>
    <adaptorHostEthIf name="eth2" cdn="VIC-1-eth2" ifType="virtual"
      mac="18:8B:9D:72:93:56" mtu="1500" pxeBoot="disabled" iscsiBoot="disabled"
```

```
      usnicCount="0" uplinkPort="0" classOfService="0" channelNumber="N/A" portProfile="N/A"

       dn="sys/rack-unit-1/adaptor-1/host-eth-eth2" status="created">
      <adaptorEthGenProfile rn="general" vmq="disabled" arfs="disabled" uplinkFailover="N/A"

      uplinkFailbackTimeout="N/A" order="ANY" trustedClassOfService="disabled" rateLimit="OFF"

        vlan="NONE" vlanMode="TRUNK" status="created"/>
       <adaptorEthCompQueueProfile rn="eth-comp-q" count="5" ringSize="1" status="created"/>

       <adaptorEthOffloadProfile rn="eth-offload" largeReceive="enabled"
tcpRxChecksum="enabled"
        tcpSegment="enabled" tcpTxChecksum="enabled" status="created"/>
      <adaptorEthRecvQueueProfile rn="eth-rcv-q" count="4" ringSize="512" status="created"/>

       <adaptorIpV4RssHashProfile rn="ipv4-rss-hash" ipHash="enabled" tcpHash="enabled"
        status="created"/>
       <adaptorExtIpV6RssHashProfile rn="ext-ipv6-rss-hash" ipHash="disabled"
          tcpHash="disabled" status="created"/>
      <adaptorEthWorkQueueProfile rn="eth-work-q" count="1" ringSize="256" status="created"/>

       <adaptorIpV6RssHashProfile rn="ipv6-rss-hash" ipHash="enabled" tcpHash="enabled"
        status="created"/>
       <adaptorRssProfile rn="rss" receiveSideScaling="enabled" status="created"/>
       <adaptorEthInterruptProfile rn="eth-int" coalescingType="MIN" coalescingTime="125"
       count="8" mode="MSIx" status="created"/>
     </adaptorHostEthIf>
  </out Config>
</configConfMo>
```

Modifying Properties of Ethernet Interface

Request:

```
<configConfMo cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="true" dn="sys/rack-unit-1/adaptor-1/host-eth-eth2">
  <inConfig>
    <adaptorHostEthIf name="eth2" mac="AUTO" mtu="2222" pxeBoot="enabled"
      uplinkPort="0" classOfService="2" dn="sys/rack-unit-1/adaptor-1/host-eth-eth2">
      <adaptorEthGenProfile rn="general" order="ANY" trustedClassOfService="disabled"
      rateLimit="OFF" vlan="NONE" vlanMode="TRUNK"/>
      <adaptorEthCompQueueProfile rn="eth-comp-q" count="5"/>
      <adaptorEthOffloadProfile rn="eth-offload" largeReceive="disabled"
tcpRxChecksum="enabled"
      tcpSegment="enabled" tcpTxChecksum="enabled"/>
      <adaptorEthRecvQueueProfile rn="eth-rcv-q" count="4" ringSize="256"/>
      <adaptorIpV4RssHashProfile rn="ipv4-rss-hash" ipHash="enabled" tcpHash="enabled"/>
      <adaptorExtIpV6RssHashProfile rn="ext-ipv6-rss-hash" ipHash="disabled"
tcpHash="disabled"/>
      <adaptorEthWorkQueueProfile rn="eth-work-q" count="1" ringSize="256"/>
      <adaptorIpV6RssHashProfile rn="ipv6-rss-hash" ipHash="enabled" tcpHash="disabled"/>
      <adaptorRssProfile rn="rss" receiveSideScaling="enabled"/>
      <adaptorEthInterruptProfile rn="eth-int" coalescingType="MIN" coalescingTime="125"
count="8" mode="MSIx"/>
    </adaptorHostEthIf>
  </inConfig>
</configConfMo>
```

Response: The highlighted changes should be done, verify the changes in the Cisco IMC or Web user interface.

Response:

```
<configConfMo dn="sys/rack-unit-1/adaptor-1/host-eth-eth2"
cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c" response="yes">
  <outConfig>
    <adaptorHostEthIf name="eth2" cdn="VIC-1-eth2" ifType="virtual" mac="18:8B:9D:72:93:56"

     mtu="2222" pxeBoot="enabled" iscsiBoot="disabled" usnicCount="0" uplinkPort="0"
     classOfService="2" channelNumber="N/A" portProfile="N/A"
dn="sys/rack-unit-1/adaptor-1/host-eth-eth2"
     status="modified">
     <adaptorEthGenProfile rn="general" vmq="disabled" arfs="disabled" uplinkFailover="N/A"

     uplinkFailbackTimeout="N/A" order="ANY" trustedClassOfService="disabled" rateLimit="OFF"

     vlan="NONE" vlanMode="TRUNK" status="modified"/>
     <adaptorEthCompQueueProfile rn="eth-comp-q" count="5" ringSize="1" status="modified"/>

     <adaptorEthOffloadProfile rn="eth-offload" largeReceive="disabled"
tcpRxChecksum="enabled"
     tcpSegment="enabled" tcpTxChecksum="enabled" status="modified"/>
     <adaptorEthRecvQueueProfile rn="eth-rcv-q" count="4" ringSize="256" status="modified"/>

     <adaptorIpV4RssHashProfile rn="ipv4-rss-hash" ipHash="enabled" tcpHash="enabled"
status="modified"/>
     <adaptorExtIpV6RssHashProfile rn="ext-ipv6-rss-hash" ipHash="disabled" tcpHash="disabled"
 status="modified"/>
     <adaptorEthWorkQueueProfile rn="eth-work-q" count="1" ringSize="256" status="modified"/>

     <adaptorIpV6RssHashProfile rn="ipv6-rss-hash" ipHash="enabled" tcpHash="disabled"
status="modified"/>
     <adaptorRssProfile rn="rss" receiveSideScaling="enabled" status="modified"/>
     <adaptorEthInterruptProfile rn="eth-int" coalescingType="MIN" coalescingTime="125"
count="8"
     mode="MSIx" status="modified"/>
    </adaptorHostEthIf>
  </outConfig>
</configConfMo>
```

Deleting Ethernet Interface

Request:

```
<configConfMo cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="true" dn="sys/rack-unit-1/adaptor-1/host-eth-eth2">
  <inConfig>
    <adaptorHostEthIf name="eth2" mac="AUTO" mtu="2222" pxeBoot="enabled"
    uplinkPort="0" classOfService="2" dn="sys/rack-unit-1/adaptor-1/host-eth-eth2"
status="deleted"/>
  </inConfig>
</configConfMo>
```

This deletes the chosen ethernet interface.

Response:

```
<configConfMo dn="sys/rack-unit-1/adaptor-1/host-eth-eth2"
cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c" response="yes">
  <outConfig>
  </outConfig>
</configConfMo>
```

Retrieving Adapter Fibre Channel Interface Details

Request:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="true" classId="adaptorHostFcIf"/>
```

Response:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
response="yes" classId="adaptorHostFcIf">
  <outConfigs>
    <adaptorHostFcIf name="fc0" ifType="virtual" wwnn="10:00:18:8B:9D:72:93:54"
      wwpn="20:00:18:8B:9D:72:93:54" uplinkPort="0" sanBoot="disabled" channelNumber="N/A"

      portProfile="N/A" adminPersistentBindings="policy"
dn="sys/rack-unit-1/adaptor-1/host-fc-fc0">
     <adaptorFcGenProfile rn="general" mac="18:8B:9D:72:93:54" order="ANY" classOfService="3"

      rateLimit="OFF" vlan="NONE" persistentLunBind="disabled" maxDataFieldSize="2112"/>
      <adaptorFcErrorRecoveryProfile rn="fc-err-rec" errorDetectTimeout="2000"
      fcpErrorRecovery="disabled" linkDownTimeout="30000" portDownIoRetryCount="8"
      portDownTimeout="10000" resourceAllocationTimeout="10000" ioTimeoutRetry="5"/>
      <adaptorFcInterruptProfile rn="fc-int" mode="MSIx"/>
      <adaptorFcPortFLogiProfile rn="fc-port-flogi" retries="INFINITE" timeout="2000"/>
      <adaptorFcPortPLogiProfile rn="fc-port-plogi" retries="8" timeout="2000"/>
      <adaptorFcPortProfile rn="fc-port" ioThrottleCount="512" lunsPerTarget="256"
lunQueueDepth="20"/>
      <adaptorFcRecvQueueProfile rn="fc-rcv-q" ringSize="64"/>
      <adaptorFcWorkQueueProfile rn="fc-work-q" ringSize="64"/>
      <adaptorFcCdbWorkQueueProfile rn="fc-cdb-work-q" count="1" ringSize="512"/>
    </adaptorHostFcIf>
    <adaptorHostFcIf name="fc1" ifType="virtual" wwnn="10:00:18:8B:9D:72:93:55"
     wwpn="20:00:18:8B:9D:72:93:55" uplinkPort="1" sanBoot="disabled" channelNumber="N/A"
     portProfile="N/A" adminPersistentBindings="policy"
     dn="sys/rack-unit-1/adaptor-1/host-fc-fc1">
     <adaptorFcGenProfile rn="general" mac="18:8B:9D:72:93:55" order="ANY" classOfService="3"
 rateLimit="OFF"
     vlan="NONE" persistentLunBind="disabled" maxDataFieldSize="2112"/>
      <adaptorFcErrorRecoveryProfile rn="fc-err-rec" errorDetectTimeout="2000"
fcpErrorRecovery="disabled"
     linkDownTimeout="30000" portDownIoRetryCount="8" portDownTimeout="10000"
resourceAllocationTimeout="10000" ioTimeoutRetry="5"/>
      <adaptorFcInterruptProfile rn="fc-int" mode="MSIx"/>
      <adaptorFcPortFLogiProfile rn="fc-port-flogi" retries="INFINITE" timeout="2000"/>
      <adaptorFcPortPLogiProfile rn="fc-port-plogi" retries="8" timeout="2000"/>
      <adaptorFcPortProfile rn="fc-port" ioThrottleCount="512" lunsPerTarget="256"
lunQueueDepth="20"/>
      <adaptorFcRecvQueueProfile rn="fc-rcv-q" ringSize="64"/>
      <adaptorFcWorkQueueProfile rn="fc-work-q" ringSize="64"/>
      <adaptorFcCdbWorkQueueProfile rn="fc-cdb-work-q" count="1" ringSize="512"/>
    </adaptorHostFcIf>
  </outConfigs>
</configResolveClass>
```

Creating Boot Entry for a Fibre Channel Interface

Request:

```
<configConfMo cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="true" dn="sys/rack-unit-1/adaptor-1/host-fc-fc0/fcboot-0">
  <inConfig>
```

```
    <adaptorFcBootTable dn="sys/rack-unit-1/adaptor-1/host-fc-fc0/fcboot-0"
targetWwpn="20:11:22:33:44:55:66:78" bootLun="1" status="created"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/adaptor-1/host-fc-fc0/fcboot-0"
cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c" response="yes">
  <outConfig>
    <adaptorFcBootTable index="0" targetWwpn="20:11:22:33:44:55:66:78" bootLun="1"
dn="sys/rack-unit-1/adaptor-1/host-fc-fc0/fcboot-0" status="created"/>
  </outConfig>
</configConfMo>
```

Configuring HUU for One-Time Boot

Request:

```
<configConfMo cookie='1342064443/ba6bccf0-c499-1499-8002-134c9ee53d50'
inHierarchical='false' dn='sys/rack-unit-1/boot-one-time' >
 <inConfig>
    <oneTimeBootDevice device='huu' dn='sys/rack-unit-1/boot-one-time'>
    </oneTimeBootDevice>
 </inConfig>
</configConfMo>
```

You can verify this in the user interface. Similar to this example, you can also set SCU and HV as one-time boot devices.

Mounting Share to the VMedia with Username

Request:

```
<configConfMo cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="false" dn="sys/svc-ext/vmedia-svc/vmmap-WIN7">
  <inConfig>
    <commVMediaMap map="nfs" dn="sys/svc-ext/vmedia-svc/vmmap-WIN7"
    volumeName="WIN7" remoteShare="10.10.10.10:/nfs" remoteFile="sl1huu.iso"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/svc-ext/vmedia-svc/vmmap-WIN7"
cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c" response="yes">
  <outConfig>
    <commVMediaMap volumeName="WIN7" map="nfs" remoteShare="10.10.10.10:/nfs"
     remoteFile="sl1huu.iso"
mountOptions="nolock,noexec,soft,timeo=100,retry=2,rsize=3072,wsize=3072"
     mappingStatus="ERROR: mounting 10.10.10.10:/nfs failed: Permission denied " password=""

     dn="sys/svc-ext/vmedia-svc/vmmap-WIN7" status="created"/>
  </outConfig>
</configConfMo>
```

Mounting Share to the VMedia Without the Username

Request:

```
<configConfMo cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
dn="sys/svc-ext/vmedia-svc/vmmap-Win12" inHierarchical="false">
  <inConfig>
    <commVMediaMap dn="sys/svc-ext/vmedia-svc/vmmap-Win12" map="www"
   mountOptions="username=,password=" remoteFile="en_windows_server_2012_x64_dvd_915478.iso"

   remoteShare="http://10.10.10.10/" status="created" volumeName="Win12"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/svc-ext/vmedia-svc/vmmap-Win12"
cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c" response="yes">
  <outConfig>
    <commVMediaMap volumeName="Win12" map="www" remoteShare="http://10.10.10.10/"
    remoteFile="en_windows_server_2012_x64_dvd_915478.iso" mountOptions="noauto,
    username=,password=" mappingStatus="ERROR: mount.httpfs2: HEAD: reply didn't contain
Content-Length! "
    password="" dn="sys/svc-ext/vmedia-svc/vmmap-Win12" status="created"/>
  </outConfig>
</configConfMo>
```

Setting Remotesyslog Primary Server

Request:

```
<configConfMo cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="false" dn="sys/svc-ext/syslog/client-primary">
  <inConfig>
    <commSyslogClient name="primary" adminState="enabled"
   hostname="10.xxx.196.xxx" port="900" dn="sys/svc-ext/syslog/client-primary"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/svc-ext/syslog/client-primary"
cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c" response="yes">
  <outConfig>
    <commSyslogClient adminState="enabled" hostname="10.xxx.196.xxx"
   name="primary" port="900" adminAction="no-op"
   dn="sys/svc-ext/syslog/client-primary" status="modified"/>
  </outConfig>
</configConfMo>
```

Setting Remotesyslog Secondary Server

Request:

```
<configConfMo cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="false" dn="sys/svc-ext/syslog/client-secondary">
  <inConfig>
    <commSyslogClient name="secondary" adminState="enabled"
```

```
   hostname="10.xxx.195.xxx"
   port="900" dn="sys/svc-ext/syslog/client-secondary"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/svc-ext/syslog/client-secondary"
cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c" response="yes">
  <outConfig>
    <commSyslogClient adminState="enabled" hostname="10.xxx.195.xxx"
     name="secondary" port="900" adminAction="no-op"
      dn="sys/svc-ext/syslog/client-secondary" status="modified"/>
  </outConfig>
</configConfMo>
```

Retrieving Syslog Client-Server Details

Request:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="false" classId="commSyslogClient"/>
```

Response:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
response="yes" classId="commSyslogClient">
  <outConfigs>
    <commSyslogClient adminState="enabled" hostname="10.xxx.196.xxx" name="primary"
    port="900" adminAction="no-op" dn="sys/svc-ext/syslog/client-primary"/>
    <commSyslogClient adminState="enabled" hostname="10.xxx.195.xxx" name="secondary"
    port="900" adminAction="no-op" dn="sys/svc-ext/syslog/client-secondary"/>
  </outConfigs>
</configResolveClass>
```

Retrieving LOM MAC Address Support Details

Request:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
classId="networkAdapterUnit" inHierarchical="false"/>
```

Response:

```
<configResolveClass cookie="1270945253/00566da0-83eb-13eb-8002-98219ee53d50" response="yes"
classId="networkAdaptorUnit">
  <outConfigs>
    <networkAdaptorUnit slot="1" model="Broadcom 57712-S" numIntf="2"
    dn="sys/rack-unit-1/network-adaptor-1" > </networkAdaptorUnit>
    <networkAdaptorUnit slot="2" model="Broadcom 57711 1" numIntf="2"
    dn="sys/rack-unit-1/network-adaptor-2" > </networkAdaptorUnit>
    <networkAdaptorUnit slot="L" model="Intel Onboard 1Gbps Ethernet Adapter" numIntf="2"
    dn="sys/rack-unit-1/network-adaptor-L" >
  </networkAdaptorUnit>
</outConfigs></configResolveClass>
```

Retrieving MAC Address of Individual Ports of Network Controllers

Request:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="true" classId="networkAdapterEthIf"/>
```

Response:

```
<configResolveClass cookie='1347541314/e95cea30-c994-1994-80ac-0877e1a85750'response="yes"
dn="sys/rack-unit-1/network-adaptor-1">
  <outConfigs>
   <networkAdaptorEthIf id="1" mac="00:10:18:bf:62:0c" linkStateAtPOST="Down"
   dn="sys/rack-unit-1/network-adaptor-1/eth-1" > </networkAdaptorEthIf>
   <networkAdaptorEthIf id="2" mac="00:10:18:bf:62:0e" linkStateAtPOST="Down"
   dn="sys/rack-unit-1/network-adaptor-1/eth-2" >
 </networkAdaptorEthIf>
</outConfigs></configResolveClass>
```

Retrieving LOM MAC Address of Individual Ports

Request:

```
<configResolveDn cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="true" dn="sys/rack-unit-1/network-adapter-L"/>
```

Response:

```
<configResolveDn cookie="1270945253/00566da0-83eb-13eb-8002-98219ee53d50" response="yes"
dn="sys/rack-unit-1/network-adaptor-L/eth-1">
  <outConfig>
   <networkAdaptorEthIf id="1" mac="50:3D:E5:9E:21:9C" linkStateAtPOST="Up"
    dn="sys/rack-unit-1/network-adaptor-L/eth-1" >
   </networkAdaptorEthIf>
 </outConfig>
</configResolveDn>
```

Retrieving LSI Storage Adapter Summary Properties Installed on C-Series Server

Request:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="true" classId="storageController"/>
```

Response:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
response="yes" classId="storageController">
  <outConfigs>
    <storageController id="SLOT-MEZZ" pciSlot="SLOT-MEZZ"
    presence="equipped" raidSupport="yes" serial="FCH1901JBUX" type="SAS"
    vendor="LSI Logic" selfEncryptEnabled="yes" adminAction="no-op"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ">
     <storageControllerProps rn="controller-props" pciSlot="SLOT-MEZZ" health="Good"
     controllerStatus="Optimal" batteryStatus="Optimal" bbuPresent="true"
raidChipTempCentigrade="49"
    backendPortCount="8" memorySize="1024 MB" cacheMemorySize="820 MB" virtualDriveCount="1"

     degradedVirtualDriveCount="0" offlineVirtualDriveCount="0" physicalDriveCount="15"
    criticalPhysicalDriveCount="0" failedPhysicalDriveCount="0" memoryCorrectableErrors="0"

     memoryUncorrectableErrors="0" bootDrive="none" bootDriveIsPhysicalDrive="false"
supportsRaid0="true"
```

```
     supportsRaid1="true" supportsRaid5="true" supportsRaid6="true" supportsRaid00="true"
    supportsRaid10="true" supportsRaid50="true" supportsRaid60="true" supportsRaid1e="false"

     supportsRaid1erlq0="true" supportsRaid1e0rlq0="true" supportsRaidsrl03="true"
     dateOfManufacture="2015-01-26" revision="03" prebootCliVersion="01.07-05:#%0000"
webBiosVersion="N/A"
     nvdataVersion="3.1511.00-0011" bootBlockVersion="3.07.00.00-0003" bootVersion="N/A"
nvramPresent="true"
     serialDebuggerPresent="true" flashPresent="true" sasAddress0="5188b9d724504b7f"
sasAddress1="5188b9d724503a7f"
      sasAddress2="0000000000000000" sasAddress3="0000000000000000"
sasAddress4="0000000000000000"
      sasAddress5="0000000000000000" sasAddress6="0000000000000000"
sasAddress7="0000000000000000"
       serial="FCH1901JBUX" firmwarePackageBuild="24.12.1-0018" ttyLogStatus="Complete
(total size 426675 bytes)"/>
      <storageControllerHealth rn="controller-health" id="SLOT-MEZZ" health="Good"/>
      <generatedStorageControllerKeyId rn="gen-key-id"
generatedKeyId="UCSC-RAID_FCH1901JBUX_c7984572"/>
      <suggestedStorageControllerSecurityKey rn="suggested-sec-key"
suggestedSecurityKey="itXTMdShfbG6nyXddEoWZjMGd4BV2Ruh"/>
      <selfEncryptStorageController rn="ctr-self-encrypt" keyId="test1234"
securityKey="Security key"
existingSecurityKey="Existing security key" adminAction="no-op"/>
      <storageRaidBattery rn="raid-battery" batteryType="TMM-C SuperCap" health="Good"
batteryStatus="Optimal"
batteryPresent="true" chargingState="N/A" temperature="30 degrees C" temperatureHigh="false"
 designVoltage="9.500 V"
voltage="9.547 V" current="0.000 A" learnMode="Auto" learnCycleStatus="Successful"
learnCycleRequested="false"
nextLearnCycle="1970-01-28 22:50" designCapacity="288 Joules" manufacturer="LSI"
dateOfManufacture="2014-09-28"
serialNumber="14609" firmwareVersion="6536-03A" adminAction="no-op"/>
      <storageVirtualDriveCreatorUsingUnusedPhysicalDrive rn="virtual-drive-create"
description="Create a new virtual drive from unused physical drive(s) available in the rack
 server.
Children objects of this object, lists all currently available unused physical drives."
minRequiredPhysicalDrives="RAID 0 at least 1 physical drive, RAID 1 at least 2 physical
drives,
RAID 5 at least 3 physical drives, RAID 6 at least 3 physical drives, RAID 10 at least 4
physical drives,
RAID 50 or RAID 60 at least 6 physical drives" virtualDriveName="" raidLevel="" size=""
driveGroup="[span1_pd_id1,span1_pd_id2,span1_pd_id3...,span1_pd_idN]
[span2_pd_id1,span2_pd_id2,span2_pd_id3...,span2_pd_idN]..." writePolicy="" stripSize=""
readPolicy="" cachePolicy="" accessPolicy="" diskCachePolicy="" createdVirtualDriveDn=""
operStatus="" adminAction="no-op" adminState="triggered">
       <storageUnusedLocalDisk id="3" pdStatus="Unconfigured Good" coercedSize="3814697
MB"
health="Good" mediaType="HDD" vendor="SEAGATE" rn="pd-3"/>
       <storageUnusedLocalDisk id="4" pdStatus="Unconfigured Good" coercedSize="3814697
MB"
health="Good" mediaType="HDD" vendor="SEAGATE" rn="pd-4"/>
       <storageUnusedLocalDisk id="5" pdStatus="Unconfigured Good" coercedSize="3814697
MB"
health="Good" mediaType="HDD" vendor="SEAGATE" rn="pd-5"/>
       <storageUnusedLocalDisk id="6" pdStatus="Unconfigured Good" coercedSize="3814697
MB"
health="Good" mediaType="HDD" vendor="SEAGATE" rn="pd-6"/>
       <storageUnusedLocalDisk id="8" pdStatus="Unconfigured Good" coercedSize="3814697
MB"
health="Good" mediaType="HDD" vendor="SEAGATE" rn="pd-8"/>
       <storageUnusedLocalDisk id="9" pdStatus="Unconfigured Good" coercedSize="3814697
MB"
health="Good" mediaType="HDD" vendor="SEAGATE" rn="pd-9"/>
```

```
        <storageUnusedLocalDisk id="10" pdStatus="Unconfigured Good" coercedSize="3814697
MB"
health="Good" mediaType="HDD" vendor="SEAGATE" rn="pd-10"/>
        <storageUnusedLocalDisk id="11" pdStatus="Unconfigured Good" coercedSize="3814697
MB"
health="Good" mediaType="HDD" vendor="SEAGATE" rn="pd-11"/>
        <storageUnusedLocalDisk id="12" pdStatus="Unconfigured Good" coercedSize="3814697
MB"
health="Good" mediaType="HDD" vendor="SEAGATE" rn="pd-12"/>
        <storageUnusedLocalDisk id="13" pdStatus="Unconfigured Good" coercedSize="3814697
MB"
health="Good" mediaType="HDD" vendor="SEAGATE" rn="pd-13"/>
      </storageVirtualDriveCreatorUsingUnusedPhysicalDrive>
      <storageVirtualDriveCreatorUsingVirtualDriveGroup rn="virtual-drive-carve"
description="Create a new virtual drive from an existing virtual drive, with available
physical drive group space.
Children objects of this object, lists all virtual drives with available drive group space."

sharedVirtualDriveId="" virtualDriveName="" size="" writePolicy="" stripSize="" readPolicy=""

cachePolicy="" accessPolicy="" diskCachePolicy="" createdVirtualDriveDn="" operStatus=""
adminState="triggered"/>
      <storageLocalDisk id="1" pdStatus="Online" health="Good" predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004" driveSerialNumber="S1Z1C0VN0000K5486L16"
driveState="Online"
online="true" dedicatedHotSpareForVDId="" enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="no"
fdeEnabled="no" secured="no" locked="no" foreignLocked="no" adminAction="no-op" rn="pd-1">
        <storageLocalDiskProps rn="general-props" physicalDrive="1" pdStatus="Online"
health="Good"
enclosureDeviceId="24" deviceId="15" sequenceNumber="2" mediaErrorCount="0"
otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD"
blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"

coercedSize="3814697 MB" powerState="active" sasAddress0="5000c50089b407b5"
sasAddress1="5000c50089b407b6"
physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false" currentLrop="No
operation in progress"
progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="2" pdStatus="Online" health="Good" predictiveFailureCount="0"
linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023"
driveFirmware="0004" driveSerialNumber="S1Z1C0Y90000K5486G13" driveState="Online"
online="true"
dedicatedHotSpareForVDId="" enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="no"
fdeEnabled="no" secured="no" locked="no" foreignLocked="no" adminAction="no-op" rn="pd-2">
        <storageLocalDiskProps rn="general-props" physicalDrive="2" pdStatus="Online"
health="Good"
enclosureDeviceId="24" deviceId="16" sequenceNumber="2" mediaErrorCount="0"
otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD"
blockSize="512"
```

```
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"
 coercedSize="3814697 MB"
powerState="active" sasAddress0="5000c50089b4002d" sasAddress1="5000c50089b4002e"
physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false" currentLrop="No
operation in progress"
progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="3" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004" driveSerialNumber="S1Z1C0ST0000K5486KJF"
driveState="Unconfigured Good"
online="true" dedicatedHotSpareForVDId="" enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="no"
fdeEnabled="no" secured="no" locked="no" foreignLocked="no" adminAction="no-op" rn="pd-3">
        <storageLocalDiskProps rn="general-props" physicalDrive="3" pdStatus="Unconfigured
 Good"
health="Good" enclosureDeviceId="24" deviceId="17" sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447
 MB"
nonCoercedSize="3814935 MB" coercedSize="3814697 MB" powerState="active"
sasAddress0="5000c50089b40c5d"
sasAddress1="5000c50089b40c5e" physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false" currentLrop="No
operation in progress"
progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="4" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004" driveSerialNumber="S1Z1C0XW0000K5486FYZ"
driveState="Unconfigured Good" online="true" dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000" enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0"
locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no" locked="no"
foreignLocked="no" adminAction="no-op" rn="pd-4">
        <storageLocalDiskProps rn="general-props" physicalDrive="4" pdStatus="Unconfigured
 Good" health="Good"
enclosureDeviceId="24" deviceId="10" sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD"
blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"

coercedSize="3814697 MB" powerState="active" sasAddress0="5000c50089b4015d"
sasAddress1="5000c50089b4015e" physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="5" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD"
coercedSize="3814697 MB" vendor="SEAGATE" productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z1C0LG0000K5486KZG" driveState="Unconfigured Good" online="true"
dedicatedHotSpareForVDId="" enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="no"
```

```
fdeEnabled="no" secured="no" locked="no" foreignLocked="no" adminAction="no-op" rn="pd-5">
        <storageLocalDiskProps rn="general-props" physicalDrive="5" pdStatus="Unconfigured
 Good"
health="Good" enclosureDeviceId="24" deviceId="13" sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD"
blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"

coercedSize="3814697 MB" powerState="active" sasAddress0="5000c50089b42465"
sasAddress1="5000c50089b42466" physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="6" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD"
coercedSize="3814697 MB"
vendor="SEAGATE" productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z1C0RB0000K5486KXG"
driveState="Unconfigured Good" online="true" dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000" enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0"
locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no" locked="no"
foreignLocked="no" adminAction="no-op" rn="pd-6">
        <storageLocalDiskProps rn="general-props" physicalDrive="6" pdStatus="Unconfigured
 Good"
health="Good" enclosureDeviceId="24" deviceId="20" sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447
 MB"
nonCoercedSize="3814935 MB" coercedSize="3814697 MB" powerState="active"
sasAddress0="5000c50089b41215"
sasAddress1="5000c50089b41216" physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false" currentLrop="No
operation in progress"
progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="7" pdStatus="JBOD" health="Good" predictiveFailureCount="0"
linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0063"
driveFirmware="0004" driveSerialNumber="Z1Z8MRC70000R540WM1C" driveState="JBOD" online="true"

dedicatedHotSpareForVDId="" enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="yes"
fdeEnabled="yes" secured="yes" locked="no" foreignLocked="no" adminAction="no-op" rn="pd-7">

        <storageLocalDiskProps rn="general-props" physicalDrive="7" pdStatus="JBOD"
health="Good"
enclosureDeviceId="24" deviceId="26" sequenceNumber="4" mediaErrorCount="0"
otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD"
blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"

coercedSize="3814697 MB" powerState="active" sasAddress0="5000c5008390f455"
sasAddress1="5000c5008390f456" physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false" currentLrop="No
operation in progress"
progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
```

```
      <storageLocalDisk id="8" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004" driveSerialNumber="S1Z19MEK0000K5474R7B"
driveState="Unconfigured Good"
online="true" dedicatedHotSpareForVDId="" enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000" enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0"
locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no" locked="no"
foreignLocked="no"
adminAction="no-op" rn="pd-8">
        <storageLocalDiskProps rn="general-props" physicalDrive="8" pdStatus="Unconfigured
 Good"
health="Good" enclosureDeviceId="24" deviceId="18" sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447
 MB"
nonCoercedSize="3814935 MB" coercedSize="3814697 MB" powerState="active"
sasAddress0="5000c50089a49f75"
sasAddress1="5000c50089a49f76" physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="9" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004" driveSerialNumber="S1Z1AXG20000K5486GFD"
driveState="Unconfigured Good" online="true" dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000" enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0"
locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no" locked="no"
foreignLocked="no" adminAction="no-op" rn="pd-9">
        <storageLocalDiskProps rn="general-props" physicalDrive="9" pdStatus="Unconfigured
 Good"
health="Good" enclosureDeviceId="24" deviceId="19" sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447
 MB"
nonCoercedSize="3814935 MB" coercedSize="3814697 MB" powerState="active"
sasAddress0="5000c50089a54ed5"
sasAddress1="5000c50089a54ed6" physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="10" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004" driveSerialNumber="S1Z1AE7C0000K5488N1T"
driveState="Unconfigured Good" online="true" dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="no" fdeEnabled="no" secured="no" locked="no" foreignLocked="no"
adminAction="no-op" rn="pd-10">
       <storageLocalDiskProps rn="general-props" physicalDrive="10" pdStatus="Unconfigured
 Good"
health="Good" enclosureDeviceId="24" deviceId="23" sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447
 MB"
nonCoercedSize="3814935 MB" coercedSize="3814697 MB" powerState="active"
```

```
sasAddress0="5000c5008996c641"
sasAddress1="5000c5008996c642" physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="11" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004" driveSerialNumber="S1Z19LR20000K5474R6W"
driveState="Unconfigured Good" online="true" dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="no" fdeEnabled="no" secured="no" locked="no" foreignLocked="no"
adminAction="no-op" rn="pd-11">
       <storageLocalDiskProps rn="general-props" physicalDrive="11" pdStatus="Unconfigured
 Good"
health="Good" enclosureDeviceId="24" deviceId="22" sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD"
blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447 MB"
nonCoercedSize="3814935 MB"
coercedSize="3814697 MB" powerState="active" sasAddress0="5000c50089a4f409"
sasAddress1="5000c50089a4f40a" physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false" currentLrop="No
operation in progress"
progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="12" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004" driveSerialNumber="S1Z192230000K5486HLT"
driveState="Unconfigured Good" online="true" dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="no" fdeEnabled="no" secured="no" locked="no" foreignLocked="no"
adminAction="no-op" rn="pd-12">
       <storageLocalDiskProps rn="general-props" physicalDrive="12" pdStatus="Unconfigured
 Good"
health="Good" enclosureDeviceId="24" deviceId="21" sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447
 MB"
nonCoercedSize="3814935 MB" coercedSize="3814697 MB" powerState="active"
sasAddress0="5000c5008996eb51"
sasAddress1="5000c5008996eb52" physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="13" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD"
coercedSize="3814697 MB" vendor="SEAGATE" productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z1B0ME0000K548AJYA" driveState="Unconfigured Good" online="true"
dedicatedHotSpareForVDId="" enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="no"
fdeEnabled="no" secured="no" locked="no" foreignLocked="no" adminAction="no-op" rn="pd-13">

       <storageLocalDiskProps rn="general-props" physicalDrive="13" pdStatus="Unconfigured
 Good"
health="Good" enclosureDeviceId="24" deviceId="12" sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
```

```
mediaType="HDD" blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447
 MB"
nonCoercedSize="3814935 MB" coercedSize="3814697 MB" powerState="active"
sasAddress0="5000c500899670a1"
sasAddress1="5000c500899670a2" physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="14" pdStatus="JBOD" health="Good" predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
vendor="SEAGATE" productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z19MLC0000K5473FAP"
driveState="JBOD" online="true" dedicatedHotSpareForVDId="" enclosureAssociation="Expander
 Attached"
enclosureLogicalId="500e004aaaee0000" enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0"
locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no" locked="no"
foreignLocked="no"
adminAction="no-op" rn="pd-14">
        <storageLocalDiskProps rn="general-props" physicalDrive="14" pdStatus="JBOD"
health="Good"
enclosureDeviceId="24" deviceId="14" sequenceNumber="2" mediaErrorCount="0"
otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD"
blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"
 coercedSize="3814697 MB"
powerState="active" sasAddress0="5000c50089a4916d" sasAddress1="5000c50089a4916e"
physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false" currentLrop="No
operation in progress"
progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageLocalDisk id="21" pdStatus="JBOD" health="Good" predictiveFailureCount="0"
linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023"
driveFirmware="0004" driveSerialNumber="S1Z19LY80000K5487ZHM" driveState="JBOD" online="true"

dedicatedHotSpareForVDId="" enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="no"
fdeEnabled="no" secured="no" locked="no" foreignLocked="no" adminAction="no-op" rn="pd-21">

        <storageLocalDiskProps rn="general-props" physicalDrive="21" pdStatus="JBOD"
health="Good"
enclosureDeviceId="24" deviceId="11" sequenceNumber="2" mediaErrorCount="0"
otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD"
blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"

coercedSize="3814697 MB" powerState="active" sasAddress0="5000c50089a4d9c9"
sasAddress1="5000c50089a4d9ca" physicalBlockSize="512"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"/>
      </storageLocalDisk>
      <storageVirtualDrive id="0" name="RAID1_12" raidLevel="RAID 1" size="3814697 MB"
vdStatus="Optimal" health="Good" bootDrive="false" stripSize="256k" drivesPerSpan="2"
spanDepth="1" accessPolicy="read-write" cachePolicy="direct-io" readPolicy="no-read-ahead"

requestedWriteCachePolicy="write-through" currentWriteCachePolicy="write-through"
diskCachePolicy="unchanged"
```

```
allowBackgroundInit="true" autoSnapshot="false" autoDeleteOldest="true" driveState="Optimal"

fdeCapable="no" fdeEnabled="no" adminAction="no-op" hotspareAction="no-op" targetId="0"
physicalDrivesList="Physical drives to be used for virtual drive reconstruction.
pd_id1,pd_id2,...pd_idN" rn="vd-0">
       <storageLocalDiskUsage startingBlock="0" numberOfBlocks="7812499456" virtualDrive="0"

physicalDrive="1" state="online" span="0" rn="pd-1"/>
       <storageLocalDiskUsage startingBlock="0" numberOfBlocks="7812499456" virtualDrive="0"

physicalDrive="2" state="online" span="0" rn="pd-2"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"/>
      </storageVirtualDrive>
      <firmwareRunning rn="fw-boot-loader" description="LSI Storage controller currently
running boot
loader firmware version" deployment="boot-loader" type="storage-controller"
version="6.30.03.0_4.17.08.00_0xC6130201"/>
     <firmwareRunning rn="fw-system" description="LSI Storage controller currently running
 firmware version"
deployment="system" type="storage-controller" version="4.620.00-6084"/>
      <firmwareBootDefinition rn="fw-boot-def" type="storage-controller">
       <firmwareBootUnit rn="bootunit-combined" description="LSI Storage controller startup
 BIOS firmware version"
adminState="triggered" image="running" resetOnActivate="no" type="combined"
version="6.30.03.0_4.17.08.00_0xC6130201"/>
      </firmwareBootDefinition>
      <storageControllerSettings rn="controller-settings" pciSlot="SLOT-MEZZ"
predictiveFailPollInterval="300 sec"
rebuildRate="30 %" patrolReadRate="30 %" consistencyCheckRate="30 %" reconstructionRate="30
 %"
cacheFlushInterval="4 sec" spinupDriveCount="4" spinupDelay="6 sec" physDriveCoercionMode="1
 GB" clusterEnable="false"
batteryWarning="true" eccBucketLeakRate="1440 min" exposeEnclosureDevices="true"
maintainPdFailHistory="false"
enableCopybackOnSmart="true" enableCopybackToSsdOnSmartError="true" ncqStatus="enabled"
enableJbod="true"
spinDownUnconfigured="true" enableSsdPatrolRead="false" autoEnhancedImport="true"/>
    </storageController>
  </outConfigs>
</configResolveClass>
```

Retrieving LSI Storage Adapter Detailed Properties Installed on C-Series Server

Request:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="true" classId="storageControllerProps"/>
```

Response:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
response="yes" classId="storageControllerProps">
  <outConfigs>
    <storageControllerProps dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/controller-props"

     pciSlot="SLOT-MEZZ" health="Good" controllerStatus="Optimal" batteryStatus="Optimal"
     bbuPresent="true" raidChipTempCentigrade="49" backendPortCount="8"
     memorySize="1024 MB" cacheMemorySize="820 MB" virtualDriveCount="1"
     degradedVirtualDriveCount="0" offlineVirtualDriveCount="0" physicalDriveCount="15"
    criticalPhysicalDriveCount="0" failedPhysicalDriveCount="0" memoryCorrectableErrors="0"
```

```
    memoryUncorrectableErrors="0" bootDrive="none" bootDriveIsPhysicalDrive="false"
    supportsRaid0="true" supportsRaid1="true" supportsRaid5="true" supportsRaid6="true"
   supportsRaid00="true" supportsRaid10="true" supportsRaid50="true" supportsRaid60="true"

    supportsRaid1e="false" supportsRaid1erlq0="true" supportsRaid1e0rlq0="true"
    supportsRaidsrl03="true" dateOfManufacture="2015-01-26" revision="03"
prebootCliVersion="01.07-05:#%0000"
    webBiosVersion="N/A" nvdataVersion="3.1511.00-0011" bootBlockVersion="3.07.00.00-0003"
 bootVersion="N/A"
    nvramPresent="true" serialDebuggerPresent="true" flashPresent="true"
sasAddress0="5188b9d724504b7f"
    sasAddress1="5188b9d724503a7f" sasAddress2="0000000000000000"
sasAddress3="0000000000000000"
    sasAddress4="0000000000000000" sasAddress5="0000000000000000"
sasAddress6="0000000000000000"
   sasAddress7="0000000000000000" serial="FCH1901JBUX" firmwarePackageBuild="24.12.1-0018"

    ttyLogStatus="Complete (total size 426675 bytes)"/>
  </outConfigs>
</configResolveClass>
```

Retrieving LSI Storage Adapter Details of RAID Battery

Request:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="true" classId="storageRaidBattery"/>
```

Response:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
response="yes" classId="storageRaidBattery">
  <outConfigs>
    <storageRaidBattery dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/raid-battery"
     batteryType="TMM-C SuperCap" health="Good" batteryStatus="Optimal"
     batteryPresent="true" chargingState="N/A" temperature="30 degrees C"
temperatureHigh="false"
     designVoltage="9.500 V" voltage="9.547 V" current="0.000 A" learnMode="Auto"
     learnCycleStatus="Successful" learnCycleRequested="false" nextLearnCycle="1970-01-28
22:50"
     designCapacity="288 Joules" manufacturer="LSI" dateOfManufacture="2014-09-28"
     serialNumber="14609" firmwareVersion="6536-03A" adminAction="no-op"/>
  </outConfigs>
</configResolveClass>
```

Retrieving Summary Information of Local Disks (HDD)

Request:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="false" classId="storageLocalDisk"/>
```

Response:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
response="yes" classId="storageLocalDisk">
  <outConfigs>
    <storageLocalDisk id="1" pdStatus="Online" health="Good" predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
```

```
vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004" driveSerialNumber="S1Z1C0VN0000K5486L16"
driveState="Online"
online="true" dedicatedHotSpareForVDId="" enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="no"
fdeEnabled="no" secured="no" locked="no" foreignLocked="no" adminAction="no-op"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-1"/>
    <storageLocalDisk id="2" pdStatus="Online" health="Good" predictiveFailureCount="0"
linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023"
driveFirmware="0004" driveSerialNumber="S1Z1C0Y90000K5486G13" driveState="Online"
online="true" dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0" locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no"
 locked="no"
foreignLocked="no" adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-2"/>

    <storageLocalDisk id="3" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z1C0ST0000K5486KJF" driveState="Unconfigured Good" online="true"
dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0" locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no"
 locked="no"
foreignLocked="no" adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-3"/>

    <storageLocalDisk id="4" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z1C0XW0000K5486FYZ" driveState="Unconfigured Good" online="true"
dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0" locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no"
 locked="no"
foreignLocked="no" adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-4"/>

    <storageLocalDisk id="5" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z1C0LG0000K5486KZG" driveState="Unconfigured Good" online="true"
dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0" locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no"
 locked="no"
foreignLocked="no" adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-5"/>

    <storageLocalDisk id="6" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z1C0RB0000K5486KXG" driveState="Unconfigured Good" online="true"
dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
```

```
enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0" locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no"
 locked="no" foreignLocked="no"
adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-6"/>
    <storageLocalDisk id="7" pdStatus="JBOD" health="Good" predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE" productId="ST4000NM0063"
driveFirmware="0004"
driveSerialNumber="Z1Z8MRC70000R540WM1C" driveState="JBOD" online="true"
dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0" locatorLEDStatus="off" fdeCapable="yes" fdeEnabled="yes"
secured="yes" locked="no"
foreignLocked="no" adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-7"/>

    <storageLocalDisk id="8" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z19MEK0000K5474R7B" driveState="Unconfigured Good" online="true"
dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0" locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no"
 locked="no" foreignLocked="no"
adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-8"/>
    <storageLocalDisk id="9" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z1AXG20000K5486GFD" driveState="Unconfigured Good" online="true"
dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0" locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no"
 locked="no" foreignLocked="no"
adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-9"/>
    <storageLocalDisk id="10" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z1AE7C0000K5488N1T" driveState="Unconfigured Good" online="true"
dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0" locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no"
 locked="no" foreignLocked="no"
adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-10"/>
    <storageLocalDisk id="11" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z19LR20000K5474R6W" driveState="Unconfigured Good" online="true"
dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0" locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no"
 locked="no"
foreignLocked="no" adminAction="no-op"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-11"/>
    <storageLocalDisk id="12" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
```

```
vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004" driveSerialNumber="S1Z192230000K5486HLT"
driveState="Unconfigured Good"
online="true" dedicatedHotSpareForVDId="" enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="no" fdeEnabled="no"
secured="no" locked="no" foreignLocked="no" adminAction="no-op"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-12"/>
    <storageLocalDisk id="13" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z1B0ME0000K548AJYA" driveState="Unconfigured Good" online="true"
dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0" locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no"
 locked="no" foreignLocked="no"
adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-13"/>
    <storageLocalDisk id="14" pdStatus="JBOD" health="Good" predictiveFailureCount="0"
linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023" driveFirmware="0004"
driveSerialNumber="S1Z19MLC0000K5473FAP" driveState="JBOD" online="true"
dedicatedHotSpareForVDId=""
enclosureAssociation="Expander Attached" enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e"
enclosureSASAddress1="0x0" locatorLEDStatus="off" fdeCapable="no" fdeEnabled="no" secured="no"
 locked="no"
foreignLocked="no" adminAction="no-op"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-14"/>
    <storageLocalDisk id="21" pdStatus="JBOD" health="Good" predictiveFailureCount="0"
linkSpeed="12.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB" vendor="SEAGATE"
productId="ST4000NM0023"
driveFirmware="0004" driveSerialNumber="S1Z19LY80000K5487ZHM" driveState="JBOD" online="true"

dedicatedHotSpareForVDId="" enclosureAssociation="Expander Attached"
enclosureLogicalId="500e004aaaee0000"
enclosureSASAddress0="5188b9d724504b7e" enclosureSASAddress1="0x0" locatorLEDStatus="off"
fdeCapable="no"
fdeEnabled="no" secured="no" locked="no" foreignLocked="no" adminAction="no-op"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-21"/>
  </outConfigs>
</configResolveClass>
```

Retrieving Detailed Information of Local Disks (HDD)

Request:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="false" classId="storageLocalDiskProps"/>
```

Response:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
response="yes" classId="storageLocalDiskProps">
  <outConfigs>
    <storageLocalDiskProps dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-1/general-props"

physicalDrive="1" pdStatus="Online" health="Good" enclosureDeviceId="24" deviceId="15"
```

```
sequenceNumber="2"
mediaErrorCount="0" otherErrorCount="0" predictiveFailureCount="0"
linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447
 MB"
nonCoercedSize="3814935 MB" coercedSize="3814697 MB" powerState="active"
sasAddress0="5000c50089b407b5"
sasAddress1="5000c50089b407b6" physicalBlockSize="512"/>
    <storageLocalDiskProps dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-2/general-props"

physicalDrive="2" pdStatus="Online" health="Good" enclosureDeviceId="24" deviceId="16"
sequenceNumber="2"
mediaErrorCount="0" otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s"
interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447
 MB"
nonCoercedSize="3814935 MB"
coercedSize="3814697 MB" powerState="active" sasAddress0="5000c50089b4002d"
sasAddress1="5000c50089b4002e"
physicalBlockSize="512"/>
    <storageLocalDiskProps dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-3/general-props"
 physicalDrive="3"
pdStatus="Unconfigured Good" health="Good" enclosureDeviceId="24" deviceId="17"
sequenceNumber="1"
mediaErrorCount="0" otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s"
interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447
 MB"
nonCoercedSize="3814935 MB" coercedSize="3814697 MB" powerState="active"
sasAddress0="5000c50089b40c5d"
sasAddress1="5000c50089b40c5e" physicalBlockSize="512"/>
    <storageLocalDiskProps dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-4/general-props"
 physicalDrive="4"
pdStatus="Unconfigured Good" health="Good" enclosureDeviceId="24" deviceId="10"
sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"
 coercedSize="3814697 MB"
powerState="active" sasAddress0="5000c50089b4015d" sasAddress1="5000c50089b4015e"
physicalBlockSize="512"/>
    <storageLocalDiskProps dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-5/general-props"
 physicalDrive="5"
pdStatus="Unconfigured Good" health="Good" enclosureDeviceId="24" deviceId="13"
sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"
 coercedSize="3814697 MB"
powerState="active" sasAddress0="5000c50089b42465" sasAddress1="5000c50089b42466"
physicalBlockSize="512"/>
    <storageLocalDiskProps dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-6/general-props"
 physicalDrive="6"
pdStatus="Unconfigured Good" health="Good" enclosureDeviceId="24" deviceId="20"
sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"
 coercedSize="3814697 MB"
powerState="active" sasAddress0="5000c50089b41215" sasAddress1="5000c50089b41216"
physicalBlockSize="512"/>
    <storageLocalDiskProps dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-7/general-props"
 physicalDrive="7"
pdStatus="JBOD" health="Good" enclosureDeviceId="24" deviceId="26" sequenceNumber="4"
```

```
mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD"
blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447 MB"
nonCoercedSize="3814935 MB"
coercedSize="3814697 MB" powerState="active" sasAddress0="5000c5008390f455"
sasAddress1="5000c5008390f456"
physicalBlockSize="512"/>
    <storageLocalDiskProps dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-8/general-props"
 physicalDrive="8"
pdStatus="Unconfigured Good" health="Good" enclosureDeviceId="24" deviceId="18"
sequenceNumber="1"
mediaErrorCount="0" otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s"
interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447
 MB"
nonCoercedSize="3814935 MB" coercedSize="3814697 MB" powerState="active"
sasAddress0="5000c50089a49f75"
sasAddress1="5000c50089a49f76" physicalBlockSize="512"/>
    <storageLocalDiskProps dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-9/general-props"
 physicalDrive="9"
pdStatus="Unconfigured Good" health="Good" enclosureDeviceId="24" deviceId="19"
sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"
 coercedSize="3814697 MB"
powerState="active" sasAddress0="5000c50089a54ed5" sasAddress1="5000c50089a54ed6"
physicalBlockSize="512"/>
    <storageLocalDiskProps
dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-10/general-props" physicalDrive="10"
pdStatus="Unconfigured Good" health="Good" enclosureDeviceId="24" deviceId="23"
sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"
 coercedSize="3814697 MB"
powerState="active" sasAddress0="5000c5008996c641" sasAddress1="5000c5008996c642"
physicalBlockSize="512"/>
    <storageLocalDiskProps
dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-11/general-props" physicalDrive="11"
pdStatus="Unconfigured Good" health="Good" enclosureDeviceId="24" deviceId="22"
sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"
 coercedSize="3814697 MB"
powerState="active" sasAddress0="5000c50089a4f409" sasAddress1="5000c50089a4f40a"
physicalBlockSize="512"/>
    <storageLocalDiskProps
dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-12/general-props" physicalDrive="12"
pdStatus="Unconfigured Good" health="Good" enclosureDeviceId="24" deviceId="21"
sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"
 coercedSize="3814697 MB"
powerState="active" sasAddress0="5000c5008996eb51" sasAddress1="5000c5008996eb52"
physicalBlockSize="512"/>
    <storageLocalDiskProps
dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-13/general-props" physicalDrive="13"
pdStatus="Unconfigured Good" health="Good" enclosureDeviceId="24" deviceId="12"
sequenceNumber="1" mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
```

```
mediaType="HDD" blockSize="512"
blockCount="7814037168" bootDrive="false" rawSize="3815447 MB" nonCoercedSize="3814935 MB"
 coercedSize="3814697 MB"
powerState="active" sasAddress0="5000c500899670a1" sasAddress1="5000c500899670a2"
physicalBlockSize="512"/>
    <storageLocalDiskProps
dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-14/general-props" physicalDrive="14"
pdStatus="JBOD" health="Good" enclosureDeviceId="24" deviceId="14" sequenceNumber="2"
mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD"
blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447 MB"
nonCoercedSize="3814935 MB"
coercedSize="3814697 MB" powerState="active" sasAddress0="5000c50089a4916d"
sasAddress1="5000c50089a4916e"
physicalBlockSize="512"/>
    <storageLocalDiskProps
dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/pd-21/general-props" physicalDrive="21"
pdStatus="JBOD" health="Good" enclosureDeviceId="24" deviceId="11" sequenceNumber="2"
mediaErrorCount="0"
otherErrorCount="0" predictiveFailureCount="0" linkSpeed="12.0 Gb/s" interfaceType="SAS"
mediaType="HDD"
blockSize="512" blockCount="7814037168" bootDrive="false" rawSize="3815447 MB"
nonCoercedSize="3814935 MB"
coercedSize="3814697 MB" powerState="active" sasAddress0="5000c50089a4d9c9"
sasAddress1="5000c50089a4d9ca"
physicalBlockSize="512"/>
  </outConfigs>
</configResolveClass>
```

Retrieving Details of All Virtual Drives Configured in LSI Adapters

Request:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
inHierarchical="true" classId="storageVirtualDrive"/>
```

Response:

```
<configResolveClass cookie="0000360672/c2450e1c-0054-1054-8006-7e573e8f835c"
response="yes" classId="storageVirtualDrive">
  <outConfigs>
    <storageVirtualDrive id="0" name="RAID1_12" raidLevel="RAID 1" size="3814697 MB"
   vdStatus="Optimal" health="Good" bootDrive="false" stripSize="256k"
   drivesPerSpan="2" spanDepth="1" accessPolicy="read-write" cachePolicy="direct-io"
   readPolicy="no-read-ahead" requestedWriteCachePolicy="write-through"
   currentWriteCachePolicy="write-through" diskCachePolicy="unchanged"
   allowBackgroundInit="true" autoSnapshot="false" autoDeleteOldest="true"
   driveState="Optimal" fdeCapable="no" fdeEnabled="no" adminAction="no-op"
   hotspareAction="no-op" targetId="0" physicalDrivesList="Physical drives to be
   used for virtual drive reconstruction. pd_id1,pd_id2,...pd_idN"
   dn="sys/rack-unit-1/board/storage-SAS-SLOT-MEZZ/vd-0">
   <storageLocalDiskUsage startingBlock="0" numberOfBlocks="7812499456" virtualDrive="0"
   physicalDrive="1" state="online" span="0" rn="pd-1"/>
   <storageLocalDiskUsage startingBlock="0" numberOfBlocks="7812499456" virtualDrive="0"
   physicalDrive="2" state="online" span="0" rn="pd-2"/>
  <storageOperation rn="storage-operation" lropInProgress="false" currentLrop="No operation

   in progress" progressPercent="0" elapsedSeconds="0"/>
   </storageVirtualDrive>
  </outConfigs>
</configResolveClass>
```

Retrieving Details of Physical Disks Usage by Virtual Drives

Request:

```
<configResolveClass cookie="1362107110/46742048-d6d4-16d4-8006-4a45b42d542c"
inHierarchical="false" classId="storageLocalDiskUsage"/>
```

Response:

```
<configResolveClass cookie="1362107110/46742048-d6d4-16d4-8006-4a45b42d542c" response="yes"

classId="storageLocalDiskUsage">
  <outConfigs>
    <storageLocalDiskUsage startingBlock="0" numberOfBlocks="209715200"
     virtualDrive="10" physicalDrive="5" state="online" span="0"
     dn="sys/rack-unit-1/board/storage-SAS-SLOT-3/vd-10/pd-5"/>
    <storageLocalDiskUsage startingBlock="209715200" numberOfBlocks="25165824"
     virtualDrive="11" physicalDrive="5" state="online" span="0"
     dn="sys/rack-unit-1/board/storage-SAS-SLOT-3/vd-11/pd-5"/>
    <storageLocalDiskUsage startingBlock="234881024" numberOfBlocks="25165824"
     virtualDrive="12" physicalDrive="5" state="online" span="0"
       dn="sys/rack-unit-1/board/storage-SAS-SLOT-3/vd-12/pd-5"/>
    <storageLocalDiskUsage startingBlock="260046848" numberOfBlocks="25625088"
     virtualDrive="13" physicalDrive="5" state="online" span="0"
     dn="sys/rack-unit-1/board/storage-SAS-SLOT-3/vd-13/pd-5"/>
    <storageLocalDiskUsage startingBlock="285671936" numberOfBlocks="25165824"
     virtualDrive="14" physicalDrive="5" state="online" span="0"
     dn="sys/rack-unit-1/board/storage-SAS-SLOT-3/vd-14/pd-5"/>
    <storageLocalDiskUsage startingBlock="310837760" numberOfBlocks="25165824"
     virtualDrive="15" physicalDrive="5" state="online" span="0"
     dn="sys/rack-unit-1/board/storage-SAS-SLOT-3/vd-15/pd-5"/>
    <storageLocalDiskUsage startingBlock="336003584" numberOfBlocks="25165824"
     virtualDrive="16" physicalDrive="5" state="online" span="0"
      dn="sys/rack-unit-1/board/storage-SAS-SLOT-3/vd-16/pd-5"/>
    <storageLocalDiskUsage startingBlock="361169408" numberOfBlocks="614530560"
     virtualDrive="17" physicalDrive="5" state="online" span="0"
     dn="sys/rack-unit-1/board/storage-SAS-SLOT-3/vd-17/pd-5"/>
  </outConfigs>
```

Retrieving Storage Controller Security Key

Request:

```
<configResolveClass cookie="1440536380/580cdbeb-1e29-1e29-8002-1ca31e1b0ff4"
inHierarchical="false" classId="generatedStorageControllerKeyId"/>
```

Response:

```
<configResolveClass cookie="1440536380/580cdbeb-1e29-1e29-8002-1ca31e1b0ff4"
  response="yes" classId="generatedStorageControllerKeyId">
 <outConfigs>
  <generatedStorageControllerKeyId
   dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/gen-key-id"
   generatedKeyId="UCSC-MRAID12G_SV44108637_1d6f954e"/>
  </outConfigs>
</configResolveClass>
```

Retrieving Suggested Storage Controller Security Key

Request:

```
<configResolveClass cookie="1440536380/580cdbeb-1e29-1e29-8002-1ca31e1b0ff4"
inHierarchical="false" classId="suggestedStorageControllerSecurityKey"/>
```

Response:

```
<configResolveClass cookie="1440536380/580cdbeb-1e29-1e29-8002-1ca31e1b0ff4" response="yes"

 classId="suggestedStorageControllerSecurityKey">
<outConfigs>
  <suggestedStorageControllerSecurityKey
   dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/suggested-sec-key"
   suggestedSecurityKey="UPMMOqnwhlGfN@gC6Cs5HqXLUPMMOqnw"/>
 </outConfigs>
</configResolveClass>
```

Retrieving Self-encrypted Storage Controller Details

Request:

```
<configResolveClass cookie="1440546768/5d6cc751-1e2c-1e2c-8002-a4f07b6138b8"
inHierarchical="false" classId="selfEncryptStorageController"/>
```

Response:

```
<configResolveClass cookie="1440546768/5d6cc751-1e2c-1e2c-8002-a4f07b6138b8"
 response="yes" classId="selfEncryptStorageController">
 <outConfigs>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
   keyId="UCSC-MRAID12G_FHH18250010_1cad8d50" securityKey="Security key"
   existingSecurityKey="Existing security key" adminAction="no-op" adminSubAction="no-op"/>

  </outConfigs>
</configResolveClass>
```

Enabling Self-encryption on Controllers

Request:

```
<configConfMo cookie="1443656333/506a0432-2100-1100-8004-6ca2cdf9eca0"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt" inHierarchical="false">
 <inConfig>
  <selfEncryptStorageController adminAction="enable-self-encrypt" keyId="TestKeyId"
   securityKey="TestSecurityKey"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt">
  </selfEncryptStorageController>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1444870328/8c41b3e1-221a-121a-811c-deabcdf9eca0" response="yes"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA">
 <outConfigs>
  <storageController id="SLOT-HBA" model="Cisco 12G SAS Modular Raid Controller"
   pciSlot="SLOT-HBA" presence="equipped" raidSupport="yes" serial="SV44104119"
   type="SAS" vendor="LSI Logic" selfEncryptEnabled="yes"
   adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA"/>
```

```
  </outConfigs>
</configConfMo>
```

Disabling Self-encryption on Controllers

Request:

```
<configConfMo cookie="1444871687/cc606a82-221a-121a-811f-deabcdf9eca0"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt" inHierarchical="false">
<inConfig>
  <selfEncryptStorageController adminAction="disable-self-encrypt"
   existingSecurityKey="TestSecurityKey"
   dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt">
  </selfEncryptStorageController>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1444870328/8c41b3e1-221a-121a-811c-deabcdf9eca0"
response="yes" dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA">
 <outConfigs>
  <storageController id="SLOT-HBA" model="Cisco 12G SAS Modular Raid Controller"
   pciSlot="SLOT-HBA" presence="equipped" raidSupport="yes" serial="SV44104119"
   type="SAS" vendor="LSI Logic" selfEncryptEnabled="No"  adminAction="no-op"
   dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA"/>
  </outConfigs>
</configConfMo>
```

Enabling Self-encryption on Physical Drives

Request:

```
<configConfMo cookie="1444963230/52790541-2230-1230-8195-deabcdf9eca0"
 dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/pd-3" inHierarchical="false">
<inConfig>
  <storageLocalDisk adminAction="enable-self-encrypt"
   dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/pd-3">
  </storageLocalDisk>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1444963230/52790541-2230-1230-8195-deabcdf9eca0"
 dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/pd-3" inHierarchical="false">
 <outConfigs>
  <storageLocalDisk id="3" pdStatus="JBOD" health="Good" predictiveFailureCount="0"
   linkSpeed="6.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
   vendor="SEAGATE" productId="ST4000NM0063" driveFirmware="0004"
   driveSerialNumber="Z1Z8MRC70000R540WM1C" driveState="JBOD" online="true"
   dedicatedHotSpareForVDId="" locatorLEDStatus="off" fdeCapable="yes" fdeEnabled="yes"
   secured="yes" locked="no" foreignLocked="no" adminAction="no-op"
   dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/pd-3"/>
  </outConfigs>
</configConfMo>
```

Creating Secured Virtual Drive Group

Request:

```
<configConfMo cookie="1443751990/88100a71-2116-1116-8060-deabcdf9eca0"
inHierarchical="false" dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/virtual-drive-create">

 <inConfig>
  <storageVirtualDriveCreatorUsingUnusedPhysicalDrive adminAction="enable-self-encrypt"
    virtualDriveName="1" raidLevel="1" size="600MB" driveGroup="[4,3]"
writePolicy="write-through"
    adminState="trigger"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1443751990/88100a71-2116-1116-8060-deabcdf9eca0" inHierarchical="false"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/virtual-drive-create">
<outConfigs>
 <storageVirtualDrive id="0" name="1" raidLevel="RAID 1" size="600 MB" vdStatus="Optimal"
  health="Good" bootDrive="false" stripSize="64k" drivesPerSpan="2" spanDepth="1"
  accessPolicy="read-write" cachePolicy="direct-io" readPolicy="no-read-ahead"
  requestedWriteCachePolicy="write-through" currentWriteCachePolicy="write-through"
  diskCachePolicy="unchanged" allowBackgroundInit="true" autoSnapshot="false"
  autoDeleteOldest="true" driveState="Optimal" fdeCapable="yes" fdeEnabled="yes"
  adminAction="no-op" targetId="0"
  physicalDrivesList="Physical drives to be used for virtual drive reconstruction.
  pd_id1,pd_id2,...pd_idN" dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/vd-0"/>
 </outConfigs>
</configConfMo>
```

Unlocking Secure Drives on Controllers

If you want to import secure drives to a controller from other controllers, you must first unlock these secure drive that you want import. The following XML API request helps you to unlock drives:

Request:

```
<configConfMo cookie="1445440951/5715265f-229f-129f-8004-c6efa42fa074"
inHierarchical="false" dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt" >
<inConfig>
 <selfEncryptStorageController
  dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
  securityKey="t" adminAction="unlock-secured-drives"/>
 </inConfig>
</configConfMo>
```

Response:

Run a **configResolveClass** with class ID **storageLocalDisk** and verify that **Locked** is set to **no** and **fdeCapable, fdeEnabled, Secured** and **ForeignLocked** are **yes**.

Erasing Data on Secure Unconfigured Good Drives

Request:

```
<configConfMo cookie="1440644344/0ffb96f5-1e43-1e43-8002-a4f07b6138b8"
inHierarchical="false" dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/pd-4">
 <inConfig>
```

```
  <storageLocalDisk adminAction="disable-self-encrypt"
   dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/pd-4">
  </storageLocalDisk>
 </inConfig>
</configConfMo>
```

Response:

```
<outConfig>
 <storageLocalDisk id="3" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0"
  linkSpeed="6.0 Gb/s" interfaceType="SAS" mediaType="HDD" coercedSize="3814697 MB"
  vendor="SEAGATE" productId="ST4000NM0063" driveFirmware="0004"
  driveSerialNumber="Z1Z8MRC70000R540WM1C" driveState="Unconfigured Good"
  online="true" dedicatedHotSpareForVDId="" locatorLEDStatus="off"
  fdeCapable="yes" fdeEnabled="yes"secured="yes" locked="no" foreignLocked="no"
  adminAction="no-op" dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/pd-3"
  status="modified" >
</storageLocalDisk>
</outConfig>
```

Erasing Data on Secure Foreign Drives

Request:

```
<configConfMo cookie="1440644344/0ffb96f5-1e43-1e43-8002-a4f07b6138b8"
inHierarchical="false" dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/pd-4">
 <inConfig>
  <storageLocalDisk adminAction="disable-sed-foreign-drives"
   dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/pd-4">
  </storageLocalDisk>
 </inConfig>
</configConfMo>
```

Response:

```
<outConfig>
 <storageLocalDisk id="3" pdStatus="Foreign Configuration" health="Moderate Fault"
  predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS" mediaType="HDD"
  coercedSize="3814697 MB" vendor="SEAGATE" productId="ST4000NM0063" driveFirmware="0004"
  driveSerialNumber="Z1Z8MRC70000R540WM1C" driveState="Foreign Configuration" online="true"

  dedicatedHotSpareForVDId="" locatorLEDStatus="off" fdeCapable="yes" fdeEnabled="yes"
  secured="yes" locked="yes" foreignLocked="yes" adminAction="no-op"
  dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/pd-3" status="modified" >
 </storageLocalDisk>
</outConfig>
```

Modifying the Controller Key ID

Request:

```
<configConfMo cookie ='1450387768/f9532d76-271e-171e-8002-deabcdf9eca0'
inHierarchical='false'
 dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt'>
  <inConfig>
   <selfEncryptStorageController adminAction='modify-self-encrypt' keyId='TestKeyChange'
    dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt'/>
```

```
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1450387768/f9532d76-271e-171e-8002-deabcdf9eca0" response="yes"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt">
  <outConfig>
   <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
   keyId="TestKeyChange" securityKey="Security key" existingSecurityKey="Existing security
 key"
   adminAction="no-op" status="modified" >
   </selfEncryptStorageController>
 </outConfig>
</configConfMo>
```

Modifying the Controller Security Key

Request:

```
<configConfMo cookie ='1450387768/f9532d76-271e-171e-8002-deabcdf9eca0' inHierarchical='false'
dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt'>
 <inConfig>
  <selfEncryptStorageController adminAction='modify-self-encrypt'
   securityKey='TestSecurityChange' existingSecurityKey='TestSecurity'
   dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt'/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1450387768/f9532d76-271e-171e-8002-deabcdf9eca0" response="yes"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt">
 <outConfig>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
  keyId="TestKeyChange" securityKey="Security key" existingSecurityKey="Existing security
key"
  adminAction="no-op" status="modified" >
  </selfEncryptStorageController>
 </outConfig>
</configConfMo>
```

Modifying Controller Security Key and the Key ID

Request:

```
<configConfMo cookie ='1450387768/f9532d76-271e-171e-8002-deabcdf9eca0' inHierarchical='false'
dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt'>
<inConfig>
 <selfEncryptStorageController adminAction='modify-self-encrypt' keyId='TestKeyChange'
  securityKey='TestSecurityChange' existingSecurityKey='TestSecurity'
  dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1450387768/f9532d76-271e-171e-8002-deabcdf9eca0" response="yes"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt">
<outConfig>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
   keyId="TestKeyChange" securityKey="Security key" existingSecurityKey="Existing security
 key"
   adminAction="no-op" status="modified" >
  </selfEncryptStorageController>
 </outConfig>
</configConfMo>
```

Retrieving Network Time Protocol (NTP) Properties

Request:

```
<configResolveClass cookie='1357785728/200df7e0-d2e6-12e6-8004-3e02e2a85750'
classId='commNtpProvider' inHierarchical='false'>
```

Response:

```
<configResolveClass cookie="1357785728/200df7e0-d2e6-12e6-8004-3e02e2a85750"
response="yes"  classId="commNtpProvider">
 <outConfigs>
   <commNtpProvider dn="sys/svc-ext/ntp-svc" description="Network Time Protocol"
    ntpEnable="no" ntpServer1="0. pool.ntp.org" ntpServer2="1.pool.ntp.org"
    ntpServer3="2.pool.ntp.org" ntpServer4="3.pool.ntp.org" >
   </commNtpProvider>
 </outConfigs>
```

Configuring Network Time Protocol (NTP) Properties

Request:

```
<configConfMo cookie="1360482215/f33512f0-d559-1559-8007-30339ee53d50"
dn="sys/svc-ext/ntp-svc">
  <inConfig>
    <commNtpProvider dn="sys/svc-ext/ntp-svc" ntpEnable="yes" ntpServer1="172.29.xxx.187"
     ntpServer2="ntpserver.cisco.com" ntpServer3="ntp.globalcomp.net"
     ntpServer4="170.xx.198.25"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1360482215/f33512f0-d559-1559-8007-30339ee53d50"
response="yes" dn="sys/svc-ext/ntp-svc" >
  <outConfig>
    <commNtpProvider dn="sys/svc-ext/ntp-svc" description="Network Time Protocol"
     ntpEnable="yes" ntpServer1="172.xx.xxx.187" ntpServer2="ntpserver.cisco.com"
     ntpServer3="ntp.globalcomp.net" ntpServer4="170.xx.198.25"
     status="modified"/>
  </outConfig>
</configConfMo>
```

Retrieving all Cisco IMC Users

Request:

```
<configResolveClass cookie="1360213362/5a499e50-d51b-151b-8008-30339ee53d50"
inHierarchical="false" classId="aaaUser"/>
```

Response:

```
<configResolveClass cookie="1360213362/5a499e50-d51b-151b-8008-30339ee53d50"
response="yes" classId="aaaUser">
  <outConfigs>
    <aaaUser id="1" accountStatus="active" name="admin" priv="admin" pwd=""
dn="sys/user-ext/user-1"/>
   <aaaUser id="2" accountStatus="inactive" name="" priv="" pwd="" dn="sys/user-ext/user-2"/>

    <aaaUser id="3" accountStatus="active" name="server.monitor" priv="read-only" pwd=""
      dn="sys/user-ext/user-3"/>
    <aaaUser id="4" accountStatus="active" name="acme" priv="user" pwd=""
dn="sys/user-ext/user-4"/>
   <aaaUser id="5" accountStatus="inactive" name="" priv="" pwd="" dn="sys/user-ext/user-5"/>

    <aaaUser id="6" accountStatus="active" name="msgDept" priv="admin" pwd=""
      dn="sys/user-ext/user-6"/>
   <aaaUser id="7" accountStatus="inactive" name="" priv="" pwd="" dn="sys/user-ext/user-7"/>

    <aaaUser id="8" accountStatus="inactive" name="john_srvadmin" priv="admin" pwd=""
      dn="sys/user-ext/user-8"/>
   <aaaUser id="9" accountStatus="inactive" name="" priv="" pwd="" dn="sys/user-ext/user-9"/>

   <aaaUser id="10" accountStatus="inactive" name="qa.manager-dept" priv="read-only" pwd=""

     dn="sys/user-ext/user-10"/>
    <aaaUser id="11" accountStatus="inactive" name="" priv="" pwd=""
     dn="sys/user-ext/user-11"/>
    <aaaUser id="12" accountStatus="inactive" name="" priv="" pwd=""
dn="sys/user-ext/user-12"/>
    <aaaUser id="13" accountStatus="inactive" name="" priv="" pwd=""
dn="sys/user-ext/user-13"/>
    <aaaUser id="14" accountStatus="inactive" name="" priv="" pwd=""
dn="sys/user-ext/user-14"/>
    <aaaUser id="15" accountStatus="inactive" name="" priv="" pwd=""
dn="sys/user-ext/user-15"/>
  </outConfigs>
```

Setting up ID 11 Cisco IMC User With Username and Password and Enabling Login Access to this User

Request:

```
<configConfMo cookie="1360213362/5a499e50-d51b-151b-8008-30339ee53d50"
inHierarchical="false" dn="sys/user-ext/user-11">
 <inConfig>
   <aaaUser id="11" accountStatus="active" name="master.work" priv="admin"
    pwd="password"  dn="sys/user-ext/user-11"/>
  </inConfig>
```

Response:

```
<configConfMo cookie="1360213362/5a499e50-d51b-151b-8008-30339ee53d50" response="yes"
 dn="sys/user-ext/user-11">
  <outConfig>
    <aaaUser id="11" accountStatus="active" name="master.work"
     priv="admin" pwd=""  dn="sys/user-ext/user-11" status="modified"/>
  </outConfig>
</configConfMo>
```

Configuring User ID 3, Deactivating this User and Changing the Password

Request:

```
<configConfMo cookie="1360213362/5a499e50-d51b-151b-8008-30339ee53d50"
inHierarchical="false" dn="sys/user-ext/user-3">
 <inConfig>
   <aaaUser id="3" accountStatus="inactive" name="server.monitor" priv="user"
    pwd="Game(hang#" dn="sys/user-ext/user-3"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1360213362/5a499e50-d51b-151b-8008-30339ee53d50" response="yes"
  dn="sys/user-ext/user-3" >
  <outConfig>
   <aaaUser id="3" accountStatus="inactive" name="server.monitor" priv="user"
    pwd="" dn="sys/user-ext/user-3" status="modified"/>
  </outConfig>
```

Disabling or Enabling Strong Password

Enabling Strong Password

Request:

```
<configConfMo cookie="1438173516/dd4b406b-1c03-1c03-8002-a3209f054ef4"
dn="sys/user-ext/policy" inHierarchical="false">
  <inConfig>
      <aaaUserPolicy userPasswordPolicy="enabled" dn="sys/user-ext/policy"/>
  </inConfig>
</configConfMo>
```

Disabling Strong Password

Request:

```
<configConfMo cookie="1438173516/dd4b406b-1c03-1c03-8002-a3209f054ef4"
dn="sys/user-ext/policy" inHierarchical="false">
   <inConfig>
      <aaaUserPolicy userPasswordPolicy="disabled" dn="sys/user-ext/policy"/>
   </inConfig>
</configConfMo>
```

Retrieving Memory Unit Statistics

Request:

```
<configResolveClass cookie='1350453563/f8f69e20-cc3a-1c3a-8003-6cdd29114ca4'
inHierarchical='false' classId='memoryUnitEnvStats'>
```

Response:

```
<configResolveClass cookie="1354217286/484b4498-cfa7-1fa7-8002-aab825098d58" response="yes"

 classId="memoryUnitEnvStats">
<configResolveClass cookie="1354217286/484b4498-cfa7-1fa7-8002-aab825098d58"
response="yes" classId="memoryUnitEnvStats">
  <outConfigs>
    <memoryUnitEnvStats dn="sys/rack-unit-1/board/memarray-1/mem-9/dimm-env-stats"
      id="9" description="CPU1_B0_DIMM_1" temperature="16.0"
```

```
timeCollected="2013-2-5T19:33:41">
    </memoryUnitEnvStats>
    <memoryUnitEnvStats dn="sys/rack-unit-1/board/memarray-1/mem-13/dimm-env-stats"
      id="13" description="CPU1_B1_DIMM_1" temperature="18.0"
timeCollected="2013-2-5T19:33:42">
    </memoryUnitEnvStats>
   </outConfigs>
</configResolveClass>
```

Retrieving Specific DIMM Memory Unit Statistics

Request:

```
<configResolveDn cookie='1350453563/f8f69e20-cc3a-1c3a-8003-6cdd29114ca4'
inHierarchical='false' dn='sys/rack-unit-1/board/memarray-1/mem-45/dimm-env-stats' >
```

Response:

```
<configResolveClass cookie="1354217286/484b4498-cfa7-1fa7-8002-aab825098d58" response="yes"

classId="memoryUnitEnvStats">
 <outConfigs>
  <memoryUnitEnvStats dn="sys/rack-unit-1/board/memarray-1/mem-9/dimm-env-stats"
   id="9" description="CPU1_B0_DIMM_1" temperature="16.0" timeCollected="2013-2-5T19:33:41"

  </memoryUnitEnvStats>
 </outConfigs>
</configResolveClass>
```

Retrieving Processor Environment Statistics

Request:

```
<configResolveClass cookie='1350453563/f8f69e20-cc3a-1c3a-8003-6cdd29114ca4'
inHierarchical='false' classId='processorEnvStats'>
```

Response:

```
<configResolveClass cookie="1354217286/484b4498-cfa7-1fa7-8002-aab825098d58" response="yes"

 classId="processorEnvStats">
 <outConfigs>
  <processorEnvStats dn="sys/rack-unit-1/board/cpu-1/env-stats"
   id="1" description="P1_TEMP_SENS" temperature="36.0" timeCollected="2013-2-9T19:40:37">
  </processorEnvStats>
  <processorEnvStats dn="sys/rack-unit-1/board/cpu-2/env-stats"
   id="2" description="P2_TEMP_SENS" temperature="35.0" timeCollected="2013-2-9T19:40:37">
   </processorEnvStats>
  </outConfigs>
</configResolveClass>
```

Retrieving Specific DIMM Processor Environment Statistics

Request:

```
<configResolveDn cookie='1350453563/f8f69e20-cc3a-1c3a-8003-6cdd29114ca4'
inHierarchical='false' dn='sys/rack-unit-1/board/cpu-2/env-stats' >
```

Response:

```
<configResolveClass cookie="1354217286/484b4498-cfa7-1fa7-8002-aab825098d58" response="yes"

classId="processorEnvStats">
  <outConfigs>
    <processorEnvStats dn="sys/rack-unit-1/board/cpu-1/env-stats"
    id="1" description="P1_TEMP_SENS" temperature="36.0" timeCollected="2012-11-29T19:40:37">

    </processorEnvStats>
    <processorEnvStats dn="sys/rack-unit-1/board/cpu-2/env-stats"
    id="2" description="P2_TEMP_SENS" temperature="35.0" timeCollected="2012-11-29T19:40:37">

    </processorEnvStats>
  </outConfigs>
</configResolveClass>
```

Retrieving Motherboard Temperature Statistics

Request:

```
<configResolveClass cookie='1350453563/f8f69e20-cc3a-1c3a-8003-6cdd29114ca4'
classId='computeRackUnitMbTempStats' inHierarchical='false'>
```

Response:

```
<configResolveClass cookie="1354217286/484b4498-cfa7-1fa7-8002-aab825098d58" response="yes"

 classId="computeRackUnitMbTempStats">
  <outConfigs>
    <computeRackUnitMbTempStats dn="sys/rack-unit-1/board/temp-stats" ambientTemp="18.0"
     frontTemp="18.0"  ioh1Temp="46.0" ioh2Temp="53.0"
     rearTemp="32.0"  timeCollected="2013-2-9T19:41:29" >
   </computeRackUnitMbTempStats>
  </outConfigs>
</configResolveClass>
```

Retrieving Specific DIMM Motherboard Temperature Statistics

Request:

```
<configResolveDn cookie='1350453563/f8f69e20-cc3a-1c3a-8003-6cdd29114ca4'
inHierarchical='false'dn='sys/rack-unit-1/board/temp-stats' >
```

Response:

```
<configResolveClass cookie="1354217286/484b4498-cfa7-1fa7-8002-aab825098d58" response="yes"

classId="computeRackUnitMbTempStats">
  <outConfigs>
   <computeRackUnitMbTempStats dn="sys/rack-unit-1/board/temp-stats"
     ambientTemp="18.0" frontTemp="18.0" ioh1Temp="46.0" ioh2Temp="53.0" rearTemp="32.0"
     timeCollected="2013-2-9T19:41:29" >
   </computeRackUnitMbTempStats>
  </outConfigs>
</configResolveClass>
```

Retrieving Motherboard Power Statistics

Request:

```
<configResolveClass cookie='1350453563/f8f69e20-cc3a-1c3a-8003-6cdd29114ca4'
classId='computeMbPowerStats' inHierarchical='false'>
```

Response:

```
<configResolveClass cookie="1354217286/484b4498-cfa7-1fa7-8002-aab825098d58" response="yes"

classId="computeMbPowerStats">
  <outConfigs>
   <computeMbPowerStats dn="sys/rack-unit-1/board/power-stats"
    consumedPower="280" inputCurrent="" inputVoltage="" timeCollected="2012-11-29T19:49:49"
 >
   </computeMbPowerStats>
  </outConfigs>
</configResolveClass>
```

Retrieving Specific DIMM Motherboard Power Statistics

Request:

```
<configResolveDn cookie='1350453563/f8f69e20-cc3a-1c3a-8003-6cdd29114ca4'
inHierarchical='false'dn='sys/rack-unit-1/board/power-stats'>
```

Response:

```
<configResolveClass cookie="1354217286/484b4498-cfa7-1fa7-8002-aab825098d58" response="yes"

classId="computeMbPowerStats">
  <outConfigs>
   <computeMbPowerStats dn="sys/rack-unit-1/board/power-stats"
    consumedPower="280" inputCurrent="" inputVoltage="" timeCollected="2013-2-9T19:49:49">

   </computeMbPowerStats>
  </outConfigs>
</configResolveClass>
```

Retrieving iSCSI Parameters

Request:

```
<configResolveDn cookie='1350453563/f8f69e20-cc3a-1c3a-8003-6cdd29114ca4'
inHierarchical='false' dn='sys/rack-unit-1/adaptor-1/host-eth-adad/ethiscsi'>
```

Response:

```
<configResolveClass cookie="1350515994/821a1d18-cc49-1c49-8007-6cdd29114ca4" response="yes"

classId="adaptorEthISCSIProfile">
 <outConfigs>
   <adaptorEthISCSIProfile dn="sys/rack-unit-1/adaptor-2/host-eth-eth0/ethiscsi"
    linkupTimeout="15" linkBusyRetryCount="15" ipVer="IPv4" dhcpId="" dhcpTimeout="60"
    dhcpNetworkSettings="enabled" dhcpISCSI="enabled" initiatorName="test"
initiatorTCPTimeout="15"
   primaryTargetName="test.com" primaryTargetIPAddress="192.xxx.1.1" primaryTargetPort="3260"

    primaryTargetBootLun="0">
   </adaptorEthISCSIProfile>
 </outConfigs>
</configResolveClass>
```

Removing iSCSI Boot

Request:

```
<configConfMo cookie='1350517826/ef4dd140-cc49-1c49-8008-6cdd29114ca4'
inHierarchical='false' dn='sys/rack-unit-1/adaptor-2/host-eth-eth1/ethiscsi' >
 <inConfig>
  <adaptorEthISCSIProfile linkupTimeout='85' linkBusyRetryCount='135' dhcpId='vendrocisco'

   dhcpTimeout='88' dhcpNetworkSettings='enabled' dhcpISCSI='enabled' status='removed'
   dn='sys/rack-unit-1/adaptor-2/host-eth-eth1/ethiscsi'>
  </adaptorEthISCSIProfile>
 </inConfig>
</configConfMo>
```

Response: Verify that the iSCSI boot is disabled in the web user interface or CLI.

```
<configConfMo  cookie="1350517826/ef4dd140-cc49-1c49-8008-6cdd29114ca4" "response="yes"
dn="sys/rack-unit-1/adaptor-2/host-eth-eth1/ethiscsi">
<outConfig>
</outConfig>
</configConfMo>
```

Retrieving Fault Objects Identified by Cisco IMC

Request:

```
<configResolveClass cookie="1360461607/26daf980-d555-1555-8004-0834b6fdd0d0"
inHierarchical="false" classId="faultInst">
```

Response:

```
<configResolveClass cookie="1360461607/26daf980-d555-1555-8004-0834b6fdd0d0" response="yes"

classId="faultInst">
  <outConfigs>
    <faultInst ack="yes" cause="powerproblem" code="F0883"
     created="Sat Feb  9 00:30:40 2013"
     descr="Power supply 4 is in a degraded state, or has bad input voltage"
     affectedDN="sys/rack-unit-1/psu-4" highestSeverity="critical" id="167773192"
    lastTransition="Sat Feb  9 00:24:08 2013" lc="flapping" occur="16" origSeverity="cleared"

     prevSeverity="cleared" rule="fltEquipmentPsuInputError" severity="critical"
     tags="server" type="server" dn="sys/rack-unit-1/fault-F0883"/>
    <faultInst ack="yes" cause="psuRedundancyFail" code="F0743"
     created="Sat Feb  9 00:30:40 2013"
     descr="Power Supply redundancy is lost : Reseat or replace Power Supply "
     affectedDN="sys/rack-unit-1/psu" highestSeverity="critical" id="352321544"
    lastTransition="Sat Feb  9 00:24:08 2013" lc="flapping" occur="16" origSeverity="cleared"

     prevSeverity="cleared" rule="fltPowerChassisMemberChassisPsuRedundanceFailure"
     severity="major" tags="server" type="server" dn="sys/rack-unit-1/fault-F0743"/>
    <faultInst ack="yes" cause="equipmentDegraded" code="F0969"
     created="Fri Feb  8 23:57:44 2013" descr="Storage Raid Battery 11 Degraded:
     please check the battery or the storage controller"
     affectedDN="sys/rack-unit-1/board/storage-SAS-SLOT-SAS/raid-battery-11"
     highestSeverity="critical" id="3539995392" lastTransition="Fri Feb  8 23:11:08 2013"
     lc="flapping" occur="2" origSeverity="cleared" prevSeverity="cleared"
     rule="fltStorageRaidBatteryDegraded" severity="major" tags="storage" type="server"
     dn="sys/rack-unit-1/fault-F0969"/>
    <faultInst ack="yes" cause="equipmentInoperable" code="F0531"
```

```
     created="Fri Feb  8 23:57:44 2013"
     descr="Storage Raid Battery 11 is inoperable: Check Controller battery"
     affectedDN="sys/rack-unit-1/board/storage-SAS-SLOT-SAS/raid-battery-11"
     highestSeverity="critical" id="3539995392" lastTransition="Fri Feb  8 23:11:08 2013"
     lc="flapping" occur="2" origSeverity="cleared"  prevSeverity="cleared"
     rule="fltStorageRaidBatteryInoperable" severity="major" tags="storage"
     type="server" dn="sys/rack-unit-1/fault-F0531"/>
  </outConfigs>
</configResolveClass>
```

Generating Temporary Authentication Tokens and Launching the KVM

Launching the KVM console using the XML APIs include the following:

- Retrieving a session cookie.
- Generating temporary authentication tokens.
- Accessing the URL to download the JNLP file using the tokens.
- Launching the KVM.

Request for obtaining authentication tokens:

```
<aaaGetComputeAuthTokens  cookie="1363034734/412ce290-d7ac-17ac-8006-c979e5e53d50" />'
```

Response for obtaining authentication tokens:

```
<aaaGetComputeAuthTokens cookie="1363034734/412ce290-d7ac-17ac-8006-c979e5e53d50"
     outTokens="1957747793,424238335" response="yes">
</aaaGetComputeAuthTokens>
```

To access the URL, use the tokens in the tkn1 and tkn2 parts of the following URL within 60 seconds of generation:

javaws http://<Cisco IMC IP address>/kvm.jnlp?cimcAddr=<Cisco IMC IP address>**&tkn1=1957747793&tkn2=424238335**

Download the JNLP file from the URL and launch it to start a KVM session.

Retrieving usNIC Device Parameters

Request:

```
<configResolveClass cookie='1301262014/6a0d66ca-3b1a-49e1-b5d4-334749717158'
classId='adaptorEthUSNICProfile' inHierarchical='true'>
```

Response:

```
<configResolveClass cookie="1369708188/0a09aa88-ddbe-1dbe-8003-1fc9e1a85750"
 response="yes"  classId="adaptorEthUSNICProfile">
 <outConfigs>
  <adaptorEthUSNICProfile dn="sys/rack-unit-1/adaptor-1/host-eth-eth0/ethusnic"
   usnicCount="1" transmitQueueCount="2" transmitQueueRingSize="256"
   receiveQueueCount="2"    receiveQueueRingSize="512"
   completionQueueCount="4" interruptCount="4" coalescingType="MIN"
   coalescingTime="125" classOfService="0" tcpSegment="disabled"
   largeReceive="disabled" tcpTxChecksum="disabled"
   tcpRxChecksum="disabled" >
  </adaptorEthUSNICProfile>
 </outConfigs>
</configResolveClass>
```

Creating Ethernet Interface usNIC Profiles

Request:

```
<configConfMo cookie="1364563172/1f244b38-d910-1910-8002-02249ee53d50"
dn="sys/rack-unit-1/adaptor-1/host-eth-eth0/ethusnic">
  <inConfig>
    <adaptorEthUSNICProfile dn="sys/rack-unit-1/adaptor-1/host-eth-eth0/ethusnic"
     usnicCount="3"/>
  </inConfig>
</configConfMo>"
```

Response:

```
<configConfMo dn="sys/rack-unit-1/adaptor-1/host-eth-eth0/ethusnic"
cookie="1364563172/1f244b38-d910-1910-8002-02249ee53d50" response="yes">
  <outConfig>
    <adaptorEthUSNICProfile dn="sys/rack-unit-1/adaptor-1/host-eth-eth0/ethusnic"
     usnicCount="3" transmitQueueCount="2" transmitQueueRingSize="256"
     receiveQueueCount="2" receiveQueueRingSize="512" completionQueueCount="4"
     interruptCount="4" coalescingType="MIN" coalescingTime="125"
     classOfService="0" tcpSegment="disabled" largeReceive="disabled"
     tcpTxChecksum="disabled" tcpRxChecksum="disabled" status="modified">
   </adaptorEthUSNICProfile>
 </outConfig>
</configConfMo>
```

Modifying Ethernet Interface usNIC Profiles

Request:

```
  <configConfMo cookie="1364563172/1f244b38-d910-1910-8002-02249ee53d50"
dn="sys/rack-unit-1/adaptor-1/host-eth-eth0/ethusnic">
    <inConfig>
        <adaptorEthUSNICProfile dn="sys/rack-unit-1/adaptor-1/host-eth-eth0/ethusnic"
transmitQueueCount="9"
transmitQueueRingSize="3024" receiveQueueCount="11" receiveQueueRingSize="4024"
completionQueueCount="12"
interruptCount="13" coalescingType="IDLE" coalescingTime="1400" classOfService="5"
tcpSegment="enabled"
largeReceive="enabled" tcpTxChecksum="enabled" tcpRxChecksum="enabled"/>
    </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/adaptor-1/host-eth-eth0/ethusnic"
cookie="1364563172/1f244b38-d910-1910-8002-02249ee53d50" response="yes">
    <outConfig>
        <adaptorEthUSNICProfile dn="sys/rack-unit-1/adaptor-1/host-eth-eth0/ethusnic"
        usnicCount="3" transmitQueueCount="9" transmitQueueRingSize="3024"
        receiveQueueCount="11" receiveQueueRingSize="4024"
        completionQueueCount="12" interruptCount="13" coalescingType="IDLE"
        coalescingTime="1400" classOfService="5"
        tcpSegment="enabled" largeReceive="enabled" tcpTxChecksum="enabled"
        tcpRxChecksum="enabled" status="modified"/>
    </outConfig>
</configConfMo>
```

Retrieving LDAP Server Details

Request:

```
<configResolveClass cookie="1370404868/3f5f79b8-de60-1e60-8002-1ec9e1a85750"
response="yes" classId="aaaLdap">
```

Response:

```
<outConfigs>
  <aaaLdap dn="sys/ldap-ext" adminState="enabled" basedn="1.2.3.4"
   domain="tfb.com" filter="sAMAccountName" attribute="CiscoAvPair"
   timeout="1800" encryption="disabled" locateDirectoryUsingDNS="yes"
   dnsDomainSource="extracted-domain" dnsSearchDomain="" dnsSearchForest=""
   ldapServer1="172.26.53.36" ldapServerPort1="636"
   ldapServer2="0.0.0.0" ldapServerPort2="636"
   ldapServer3="ServThree.com" ldapServerPort3="9636"
   ldapServer4="myfinance.com" ldapServerPort4="3269"
   ldapServer5="199.22.44.253" ldapServerPort5="9269"
   ldapServer6="" ldapServerPort6="3269"
   bindMethod="login-credentials" bindDn="someDn" password=""
   groupAuth="enabled" groupAttribute="memberOf">
  <aaaLdapRoleGroup id="1" name="" domain="" role="admin" rn="rolegroup-1" >
  </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="2" name="" domain="" role="user" rn="rolegroup-2" >
  </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="3" name="" domain="" role="read-only" rn="rolegroup-3">
  </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="4" name="" domain="" role="" rn="rolegroup-4" >
  </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="5" name="" domain="" role="" rn="rolegroup-5" >
  </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="6" name="" domain="" role="" rn="rolegroup-6" >
  </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="7" name="" domain="" role="" rn="rolegroup-7" >
  </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="8" name="" domain="" role="" rn="rolegroup-8" >
  </aaaLdapRoleGroup>
 </aaaLdap>
</outConfigs>
```

Configuring LDAP Server IP Address and Port Numbers

Request:

```
<configConfMo cookie="1351062607/c6c74fd8-ccc8-1cc8-8005-1ec9e1a85750"
inHierarchical="true" dn="sys/ldap-ext">
  <inConfig>
   <aaaLdap dn="sys/ldap-ext" adminState="disabled" basedn="" domain="tfb.com"
    filter="sAMAccountName" attribute="CiscoAvPair" timeout="60"
    encryption="disabled" locateDirectoryUsingDNS="yes"
    dnsDomainSource="extracted-domain"
    ldapServer1="172.26.53.36"  ldapServerPort1="636"
    ldapServer2="0.0.0.0" ldapServerPort2="636"
    ldapServer3="ServThree.com" ldapServerPort3="9636"
    ldapServer4="myfinance.com" ldapServerPort4="3269"
    ldapServer5="199.22.44.253" ldapServerPort5="9269"
    ldapServer6=""  ldapServerPort6="3269"
    bindMethod="login-credentials" bindDn="" password=""
    groupAuth=disabled"  groupAttribute="memberOf">
</inConfig>
```

Response:

```
<outConfigs>
  <aaaLdap dn="sys/ldap-ext" adminState="disabled" basedn="" domain="tfb.com"
    filter="sAMAccountName" attribute="CiscoAvPair" timeout="60"
```

```
    encryption="disabled" locateDirectoryUsingDNS="yes"
    dnsDomainSource="extracted-domain"
   ldapServer1="172.26.53.36" ldapServerPort1="636"
   ldapServer2="0.0.0.0" ldapServerPort2="636"
   ldapServer3="ServThree.com" ldapServerPort3="9636"
   ldapServer4="myfinance.com" ldapServerPort4="3269"
   ldapServer5="199.22.44.253" ldapServerPort5="9269"
   ldapServer6="" ldapServerPort6="3269"
   bindMethod="login-credentials" bindDn="someDn" password=""
   groupAuth="disabled" groupAttribute="memberOf" status="modified">
  <aaaLdapRoleGroup id="1" name="" domain="" role="admin" rn="rolegroup-1" >
  status="modified" </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="2" name="" domain="" role="user" rn="rolegroup-2" >
  status="modified" </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="3" name="" domain="" role="read-only" rn="rolegroup-3">
  status="modified" </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="4" name="" domain="" role="" rn="rolegroup-4" >
  status="modified" </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="5" name="" domain="" role="" rn="rolegroup-5" >
  status="modified" </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="6" name="" domain="" role="" rn="rolegroup-6" >
  status="modified" </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="7" name="" domain="" role="" rn="rolegroup-7" >
  status="modified" </aaaLdapRoleGroup>
  <aaaLdapRoleGroup id="8" name="" domain="" role="" rn="rolegroup-8" >
  status="modified" </aaaLdapRoleGroup>
 </aaaLdap>
</outConfigs>
```

Configuring LDAP Parameters

You can configure LDAP parameters such as, LDAP status, encryption, timeout, domain, base Dn, binding parameters, DNS parameters, group authorization parameters, LDAP role groups and so on. The following example shows configuring LDAP parameters:

Request:

```
<configConfMo cookie="1351062607/c6c74fd8-ccc8-1cc8-8005-1ec9e1a85750"
inHierarchical="true" dn="sys/ldap-ext">
<inConfig>
 <aaaLdap dn="sys/ldap-ext" adminState="enabled" basedn="ExampleDn"
  domain="Example.com" filter="MysAMAccountNameYes" attribute="CiscoAviator"
  timeout="160" encryption="enabled" locateDirectoryUsingDNS="no"
  dnsDomainSource="extracted-domain" dnsSearchDomain="child.cp.com"
  dnsSearchForest="cp.com"
  ldapServer1="172.26.53.36" ldapServerPort1="636"
  ldapServer2="0.0.0.0" ldapServerPort2="636"
  ldapServer3="ServThree.com" ldapServerPort3="9636"
  ldapServer4="myfinance.com" ldapServerPort4="3269"
  ldapServer5="199.22.44.253" ldapServerPort5="9269"
  ldapServer6="" ldapServerPort6="3269"
  bindMethod="anonymous" bindDn="myexampleDn"
  password="magic@#$%(!#&$" groupAuth=enabled"
  groupAttribute="memberOfExample">
 <aaaLdapRoleGroup id="1" name="name1"
  domain="name1.cisco.com" role="user" rn="rolegroup-1"/>
  <aaaLdapRoleGroup id="2" name="" domain="" role="read-only"
   rn="rolegroup-2"/>
  <aaaLdapRoleGroup id="3" name="" domain="" role="admin"
   rn="rolegroup-3"/>
  <aaaLdapRoleGroup id="4" name="name2"
   domain="sjssjsj.djdjdjd.cook.com" role="user" rn="rolegroup-4"/>
  <aaaLdapRoleGroup id="5" name="" domain="" role="" rn="rolegroup-5"/>
```

```
  <aaaLdapRoleGroup id="6" name="" domain="" role="" rn="rolegroup-6"/>
  <aaaLdapRoleGroup id="7" name="" domain="domainname.com"
   role="admin" rn="rolegroup-7"/>
  <aaaLdapRoleGroup id="8" name="" domain="" role="" rn="rolegroup-8"/>
  <aaaLdapRoleGroup id="9" name="" domain="" role="" rn="rolegroup-9"/>
  <aaaLdapRoleGroup id="10" name="name3"
   domain="dorm.ucs.com" role="read-only" rn="rolegroup-10"/>
  </aaaLdap>
 </inConfig>
</configMo>"
```

Response:

```
<configConfMo cookie="1370760204/fb173e00-deb2-1eb2-8002-1ec9e1a85750"
response="yes"  dn="sys/ldap-ext" >
<outConfig>
 <aaaLdap dn="sys/ldap-ext" adminState="enabled" basedn="ExampleDn"
  domain="Example.com" filter="MysAMAccountNameYes" attribute="CiscoAviator"
  timeout="160" encryption="enabled" locateDirectoryUsingDNS="yes"
  dnsDomainSource="configured-domain" dnsSearchDomain="child.cp.com"
  dnsSearchForest="cp.com"
  ldapServer1="172.26.53.36" ldapServerPort1="636"
  ldapServer2="0.0.0.0" ldapServerPort2="636"
  ldapServer3="ServThree.com" ldapServerPort3="9636"
  ldapServer4="myfinance.com" ldapServerPort4="3269"
  ldapServer5="199.22.44.253" ldapServerPort5="9269"
  ldapServer6="" ldapServerPort6="3269"
  bindMethod="anonymous" bindDn="myexampleDn" password=""
  groupAuth="enabled" groupAttribute="memberOfExample"
  status="modified">
<aaaLdapRoleGroup id="1" name="name1"
   domain="name1.cisco.com" role="user" rn="rolegroup-1"
   status="modified" />
  <aaaLdapRoleGroup id="2" name="" domain="" role="read-only"
   rn="rolegroup-2" anonymous status="modified"/>
  <aaaLdapRoleGroup id="3" name="" domain="" role="admin"
   rn="rolegroup-3" status="modified"/>
  <aaaLdapRoleGroup id="4" name="name2"
   domain="sjssjsj.djdjdjd.cook.com" role="user"
   rn="rolegroup-4" status="modified"/>
  <aaaLdapRoleGroup id="5" name="" domain="" role="" rn="rolegroup-5"
   status="modified"/>
  <aaaLdapRoleGroup id="6" name="" domain="" role="" rn="rolegroup-6"
   status="modified"/>
  <aaaLdapRoleGroup id="7" name="" domain="domainname.com"
   role="admin" rn="rolegroup-7" status="modified"/>
  <aaaLdapRoleGroup id="8" name="" domain="" role="" rn="rolegroup-8"
   status="modified"/>
  <aaaLdapRoleGroup id="9" name="" domain="" role="" rn="rolegroup-9"
   status="modified"/>
  <aaaLdapRoleGroup id="10" name="name3"
   domain="dorm.ucs.com" role="read-only"
   rn="rolegroup-10" status="modified"/>
  </aaaLdap>
 </inConfig>
</configMo>"
```

Querying to Check Cisco IMC for NI-IOD Support

Request

```
 <configResolveClass cookie="1375699222/ef7afa00-e330-1330-8004-22bcaa4c93a4"
inHierarchical="false" classId="iodController"/>
```

Response

```
<configResolveClass cookie="1375699222/ef7afa00-e330-1330-8004-22bcaa4c93a4"
response="yes" classId="iodController">
    <outConfigs>
      <iodController dn="sys/iod"
       description="Non-Interactive Offline Diagnostics (IOD)"/>
    </outConfigs>
</configResolveClass>
```

Triggering Snapshot based on Parameters Provided with Request

Request

```
<configConfMo cookie="1375699222/ef7afa00-e330-1330-8004-22bcaa4c93a4"
inHierarchical="true" dn="sys/iod/snapshotStart">
<inConfig>
  <iodSnapshotStart dn="sys/iod/snapshotStart"
   adminState="trigger"    isoShareIp="10.10.10.10"
   isoShare="/home/sriparim/xfer/ucs-cxx-scu-3.1.2.iso"
   isoShareType="nfs" username="none" password="none" timeOut="30"
   remoteShareIp="10.10.10.10" remoteSharePath="/home/sriparim/xfer"
   remoteShareFile="" remoteShareType="scp" remoteShareUsername="root"
   remoteSharePassword="topspin123" />
  </inConfig>
</configConfMo>
```

Response

```
<configConfMo cookie="1375699222/ef7afa00-e330-1330-8004-22bcaa4c93a4"
dn="sys/iod/snapshotStart">
 <outConfig>
  <iodSnapshotStart dn="sys/iod/snapshotStart" adminState="triggered"
   isoShareIp="10.10.10.10" isoSharePath="/home/sriparim/xfer"
   isoShareFile="ucs-cxx-scu-3.1.2.iso" isoShareType="nfs"
   username="none" password="" remoteShareIp="10.10.10.10"
   remoteSharePath="/home/sriparim/xfer" remoteShareFile=""
   remoteShareType="scp" remoteShareUsername="root" remoteSharePassword=""
   timeOut="30" status="modified" />
 </outConfig>
</configConfMo>
```

Querying Status of Current or Previous Snapshot Operation

Request

```
<configResolveClass inHierarchical="false"
cookie="1375695710/1e1ff5c8-e330-1330-8002-22bcaa4c93a4"
 classId="iodSnapshotStatus"/>
```

Response: Host Booting

```
<configResolveClass cookie="1375695710/1e1ff5c8-e330-1330-
8002-22bcaa4c93a4" response="yes" classId="iodSnapshotStatus">
 <outConfigs>
  <iodSnapshotStatus dn="sys/iod/snapshotStatus" currentStatus=
   "SCU (NI-IOD) booting in progress" currentTime="Mon Aug  5 09:46:00 2013 "
   startTime="Mon Aug  5 09:46:00 2013 " runningTime="NA"
   snapshotReport="yes" remoteShareIp="NA"
    remoteSharePath="NA" remoteShareFile="NA" />
 </outConfigs>
</configResolveClass>
```

Response: IOD Tests in Progress

```
<configResolveClass cookie="1375699222/ef7afa00-e330
-1330-8004-22bcaa4c93a4" response="yes" classId="iodSnapshotStatus">
 <outConfigs>
  <iodSnapshotStatus dn="sys/iod/snapshotStatus"
    currentStatus="SCU Non-interactive IOD tests is in progress"
    currentTime="Mon Aug 5 10:48:54 2013
    "startTime="Mon Aug  5 10:40:29 2013" runningTime="
  0 Hours 8 Minutes 49 Seconds" snapshotReport="yes" remoteShareIp="NA"
    remoteSharePath="NA"remoteShareFile="NA" />
    </outConfigs>
</configResolveClass>
```

Response: IOD Tests Completed

```
<configResolveClass cookie="1375699222/ef7afa00-e330-1330
-8004-22bcaa4c93a4" response="yes" classId="iodSnapshotStatus">
 <outConfigs>
  <iodSnapshotStatus dn="sys/iod/snapshotStatus" currentStatus="
   Snapshot completed on this CIMC" currentTime="Mon Aug  5 11:11:24 2013"
   startTime="Mon Aug  5 10:40:29 2013 " runningTime="
   0 Hours 31 Minutes 0 Seconds" snapshotReport="yes"
   remoteShareIp="10.10.10.10" remoteSharePath="/home/sriparim/xfer"
   remoteShareFile="" />
 </outConfigs>
</configResolveClass>
```

Response: No Session in Progress

```
<configResolveClass cookie="1375710321/850e6910-e333-1333
-8006-22bcaa4c93a4" response="yes" classId="iodSnapshotStatus">
<outConfigs>
 <iodSnapshotStatus dn="sys/iod/snapshotStatus"
  currentStatus="NI-IOD session not found" currentTime="Sat Jan 3 00:26:05 1970"
  startTime="NA" runningTime="NA" snapshotReport="no" remoteShareIp="NA"
  remoteSharePath="NA" remoteShareFile="NA" />
 </outConfigs>
</configResolveClass>
```

Retrieving the Existing Fault Events on a Server

Request:

```
<configResolveClass cookie='1307953743/b63ff130-a593-1593-8004-2e4ac2e14388'
classId='faultInst' inHierarchical='true'>
```

Response:

```
<configResolveClass cookie="1373297279/b08308c8-e101-1101
-8007-5afca0114ca4" response="yes" classId="faultInst">
 <outConfigs>
  <faultInst ack="yes" cause="equipmentDegraded" code="F1008"
   created="Sun Jun 30 18:51:36 2013" descr="Storage Virtual Drive 0
   Degraded: please check the storage controller, or reseat the storage drive"
   affectedDN="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-0"
   highestSeverity="critical" id="3523280896" lastTransition="" lc="flapping"
   occur="1" origSeverity="cleared" prevSeverity="cleared"
   rule="fltStorageVirtualDriveDegraded" severity="warning" tags="storage"
   type="server"   dn="sys/rack-unit-1/fault-F1008" >
  </faultInst>
 </outConfigs>
</configResolveClass>
```

Retrieving Object and Fault Details of an affectedDn

This retrieves the details of the object and the associated faults.

Request:

```
<configResolveDn cookie="1374520602/84383130-e21e-121e-8003-5afca0114ca4"
  response="yes" dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-16">
```

Response:

```
<outConfig>
 <storageLocalDisk id="16" pdStatus="Rebuilding" health="Moderate Fault"
  predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SATA"
  mediaType="HDD" coercedSize="476416 MB" vendor="ATA" productId="ST9500620NS"
  driveFirmware="CC02" driveSerialNumber="9XF14F21" driveState="rebuild"
  online="false" dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-16" >
 <storageLocalDiskProps rn="general-props" physicalDrive="16"
  enclosureDeviceId="8" deviceId="12" sequenceNumber="4" mediaErrorCount="0"
  otherErrorCount="0" predictiveFailureCount="0" linkSpeed="6.0 Gb/s"
  interfaceType="SATA" mediaType="HDD" blockSize="512" blockCount="976773168"
  rawSize="476940 MB" nonCoercedSize="476428 MB" coercedSize="476416 MB"
  powerState="active" sasAddress0="a44c11a0fc5a009f" sasAddress1="0x0" >
 </storageLocalDiskProps>
<faultInst ack="yes" cause="equipment-inoperable" code="F0181"
  created="Mon Jul 22 18:48:14 2013" descr="Storage Local disk 16 is inoperable:
  reseat or replace the storage drive 16"
  affectedDN="sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-16"
  highestSeverity="critical" id="3506704384" lastTransition=""
  lc="flapping" occur="1" origSeverity="0" prevSeverity="0"
  rule="fltStorageLocalDiskInoperable" severity="3" tags="2" type="server"
  rn="fault-F0181" >
 </faultInst>
</storageLocalDisk>
</outConfig>
</configResolveDn>
```

Retrieving Fault Details of a Fault Dn

Request:

```
<configResolveDn cookie="1374520602/84383130-e21e-121e-8003-5afca0114ca4"
dn="sys/rack-unit-1/fan-module-1-1/fan-1/fault-F0395">
```

Response:

```
<configResolveDn cookie="1388395900/1c7baee0-eebd-1ebd-808c-1fc9e1a85750"
 response="yes" dn="sys/rack-unit-1/fan-module-1-1/fan-1/fault-F0395">
 <outConfig>
   <faultInst ack="yes" cause="performance-problem" code="F0395"
    created="Mon Dec 30 09:35:19 2013" descr="FAN1_TACH1:
    Fan speed for fan-1 is lower non critical:Check the air intake to the server"
    affectedDN="sys/rack-unit-1/fan-module-1-1/fan-1"
    highestSeverity="critical" id="486539524" lastTransition="" lc="flapping"
    occur="1" origSeverity="cleared" prevSeverity="cleared"
    rule="fltEquipmentFanPerfThresholdNonCritical" severity="minor"
    tags="server" type="server"
    dn="sys/rack-unit-1/fan-module-1-1/fan-1/fault-F0395" >
  </faultInst>
 </outConfig>
</configResolveDn>
```

Configuring BIOS Parameters Across Various Platforms Using a Master XML Request

Using the XML API interface, you can use the master BIOS parameters configuration XML request to configure BIOS parameters across different C-series servers. The BIOS parameters in this master XML request that are not supported on a specific platform are ignored. The supported parameters are configured as specified in the XML request.

Request:

```
<configConfMo dn="sys/rack-unit-1/bios/bios-settings"
inHierarchical="true" cookie="1379605932/898925a0-e6be-16be-922b-5bfca0114ca4">
<inConfig>
 <biosSettings>
 <biosVfAdjacentCacheLinePrefetch dn="sys/rack-unit-1
  /bios/bios-settings/ Adjacent-Cache-Line-Prefetch"
  vpAdjacentCacheLinePrefetch="enabled"/>
 <biosVfAltitude dn="sys/rack-unit-1/bios/bios-settings
  /Altitude-Param" vpAltitude="900-m"/>
 <biosVfASPMSupport dn="sys/rack-unit-1/bios/bios-settings
  /ASPM-Support" vpASPMSupport="Disabled"/>
 <biosVfAssertNMIOnPERR dn="sys/rack-unit-1/bios/bios-settings
  /Assert-NMI-on-PERR" vpAssertNMIOnPERR="enabled"/>
 <biosVfAssertNMIOnSERR dn="sys/rack-unit-1/bios/bios-settings
  /Assert-NMI-on-SERR"  vpAssertNMIOnSERR="enabled"/>
 <biosVfBootOptionRetry dn="sys/rack-unit-1/bios/bios-settings
  /Boot-option-retry" vpBootOptionRetry="disabled"/>
 <biosVfCkeLowPolicy dn="sys/rack-unit-1/bios/bios-settings
  /Cke-Low-Policy" vpCkeLowPolicy="auto"/>
 <biosVfConsoleRedirection dn="sys/rack-unit-1/bios/bios-settings
  /Console-redirection" vpLegacyOSRedirection="disabled"
  vpRedirectionAfterPOST="Always Enable" vpPuttyKeyPad="ESCN"
  vpTerminalType="vt100-plus" vpFlowControl="none"
  vpConsoleRedirection="enabled" vpBaudRate="115200"/>
 <biosVfCoreMultiProcessing dn="sys/rack-unit-1/bios/bios-settings
  /Core-MultiProcessing"  vpCoreMultiProcessing="all"/>
 <biosVfCPUEnergyPerformance dn="sys/rack-unit-1/bios/bios-settings
  /CPU-EngPerfBias"vpCPUEnergyPerformance="balanced-performance"/>
 <biosVfCPUFrequencyFloor dn="sys/rack-unit-1/bios/bios-settings
  /CPU-FreqFloor" vpCPUFrequencyFloor="disabled"/>
 <biosVfCPUPerformance dn="sys/rack-unit-1/bios/bios-settings
  /CPU-Performance" vpCPUPerformance="enterprise"/>
 <biosVfCPUPowerManagement dn="sys/rack-unit-1/bios/bios-settings
  /CPU-PowerManagement" vpCPUPowerManagement="energy-efficient"/>
 <biosVfDCUPrefetch dn="sys/rack-unit-1/bios/bios-settings
  /DCU-Prefetch" vpIPPrefetch="enabled"
  vpStreamerPrefetch="enabled"/>
 <biosVfDemandScrub dn="sys/rack-unit-1/bios/bios-settings
  /Demand-Scrub-Param"
  vpDemandScrub="enabled"/>
 <biosVfDirectCacheAccess dn="sys/rack-unit-1/bios/bios-settings
  /Direct-Cache-Access" vpDirectCacheAccess="enabled"/>
 <biosVfDRAMClockThrottling dn="sys/rack-unit-1/bios/bios-settings
  /DRAM-Clock-Throttling" vpDRAMClockThrottling="Balanced"/>
 <biosVfDramRefreshRate dn="sys/rack-unit-1/bios/bios-settings
  /dram-refresh-rate" vpDramRefreshRate="Auto"/>
 <biosVfEnhancedIntelSpeedStepTech dn="sys/rack-unit-1/bios
  /bios-settings/Enhanced-Intel-SpeedStep-Tech"
  vpEnhancedIntelSpeedStepTech="enabled"/>
 <biosVfExecuteDisableBit dn="sys/rack-unit-1/bios/bios-settings
  /Execute-Disable-Bit" vpExecuteDisableBit="enabled"/>
 <biosVfFRB2Enable dn="sys/rack-unit-1/bios/bios-settings
  /FRB2-Enable" vpFRB2Enable="enabled"/>
 <biosVfHardwarePrefetch dn="sys/rack-unit-1/bios/bios-settings
  /Hardware-Prefetch"  vpHardwarePrefetch="enabled"/>
```

```
<biosVfIntelHyperThreadingTech dn="sys/rack-unit-1/bios
 /bios-settings/Intel-HyperThreading-Tech"
 vpIntelHyperThreadingTech="enabled"/>
<biosVfIntelTurboBoostTech dn="sys/rack-unit-1/bios/bios-settings
 /Intel-Turbo-Boost-Tech" vpIntelTurboBoostTech="enabled"/>
<biosVfIntelVirtualizationTechnology dn="sys/rack-unit-1
 /bios/bios-settings/Intel-Virtualization-Technology"
 vpIntelVirtualizationTechnology="enabled"/>
<biosVfIntelVTForDirectedIO dn="sys/rack-unit-1/bios/bios-settings
 /Intel-VT-for-directed-IO"  vpIntelVTForDirectedIO="enabled"
 vpIntelVTDPassThroughDMASupport="enabled"
 vpIntelVTDInterruptRemapping="enabled"
 vpIntelVTDCoherencySupport="disabled"
 vpIntelVTDATSSupport="enabled"/>
<biosVfIOHResource dn="sys/rack-unit-1/bios/bios-settings
 /ioh-resource" vpIOHResource="IOH0 40k IOH1 24k"/>
<biosVfLegacyUSBSupport dn="sys/rack-unit-1/bios
 /bios-settings /LegacyUSB-Support" vpLegacyUSBSupport="enabled"/>
<biosVfLOMPortOptionROM dn="sys/rack-unit-1/bios/bios-settings
 /LOMPort-OptionROM" vpLOMPort3State="Enabled"
 vpLOMPort2State="Enabled" vpLOMPort1State="Enabled"
 vpLOMPort0State="Enabled" vpLOMPortsAllState="Enabled"/>
<biosVfLvDIMMSupport dn="sys/rack-unit-1/bios/bios-settings
 /LvDIMM-Support" vpLvDDRMode="power-saving-mode"/>
<biosVfMemoryInterleave dn="sys/rack-unit-1/bios/bios-settings
 /Memory-Interleave" vpRankInterLeave="auto"
 vpChannelInterLeave="auto"/>
<biosVfMemoryMappedIOAbove4GB dn="sys/rack-unit-1/bios/bios-settings/
 Memory-mapped-IO-above-4GB" vpMemoryMappedIOAbove4GB="enabled"/>
<biosVfMirroringMode dn="sys/rack-unit-1/bios/bios-settings
 /Mirroring-Mode" vpMirroringMode="intra-socket"/>
<biosVfNUMAOptimized dn="sys/rack-unit-1/bios/bios-settings
 /NUMA-optimized" vpNUMAOptimized="enabled"/>
<biosVfOnboardNIC dn="sys/rack-unit-1/bios/
 bios-settings/Onboard-NIC" vpOnboard10GbitLOM="enabled"
 vpOnboardGbitLOM="enabled"/>
<biosVfOnboardStorage dn="sys/rack-unit-1/bios/bios-settings
 /Onboard-Storage" vpOnboardSCUStorageSupport="disabled"/>
<biosVfOnboardStorageSWStack dn="sys/rack-unit-1/bios
 /bios-settings/ Onboard-SCU-Storage-SWStack"
 vpOnboardSCUStorageSWStack="LSI SW RAID"/>
<biosVfOSBootWatchdogTimer dn="sys/rack-unit-1/bios/bios-settings/
 OS-Boot-Watchdog-Timer-Param" vpOSBootWatchdogTimer="disabled"/>
<biosVfOSBootWatchdogTimerPolicy dn="sys/rack-unit-1/bios
 /bios-settings/ OS-Boot-Watchdog-Timer-Policy"
 vpOSBootWatchdogTimerPolicy="power-off"/>
<biosVfOSBootWatchdogTimerTimeout dn="sys/rack-unit-1/bios
 /bios-settings/ OS-Boot-Watchdog-Timer-Time-Out"
 vpOSBootWatchdogTimerTimeout="10-minutes"/>
<biosVfOutOfBandMgmtPort dn="sys/rack-unit-1/bios/bios-settings
 /OoB-MgmtPort" vpOutOfBandMgmtPort="Enabled"/>
<biosVfPackageCStateLimit dn="sys/rack-unit-1/bios/bios-settings/
 Package-CState-Limit" vpPackageCStateLimit="c3-state"/>
<biosVfPatrolScrub dn="sys/rack-unit-1/bios/bios-settings
 /Patrol-Scrub-Param" vpPatrolScrub="enabled"/>
<biosVfPatrolScrubDuration dn="sys/rack-unit-1/bios/bios-settings/
 Patrol-Scrub-Duration" vpPatrolScrubDuration="8"/>
<biosVfPCIOptionROMs dn="sys/rack-unit-1/bios/bios-settings
 /PCI-OptionROMs" vpPCIOptionROMs="Legacy Only"/>
<biosVfPCISlotOptionROMEnable dn="sys/rack-unit-1/bios/bios-settings
 /PCI-Slot-OptionROM-Enable" vpSlotMezzState="Enabled"
 vpSlot7LinkSpeed="GEN3"   vpSlot6LinkSpeed="GEN2"
 vpSlot5LinkSpeed="GEN2" vpSlot4LinkSpeed="GEN2"
 vpSlot3LinkSpeed="GEN2" vpSlot2LinkSpeed="GEN2"
```

```
  vpSlot1LinkSpeed="GEN2" vpSlot10State="Enabled"
  vpSlot9State="Enabled" vpSlot8State="Enabled"
  vpSlot7State="Enabled" vpSlot6State="Enabled"
  vpSlot5State="Enabled" vpSlot4State="Enabled"
  vpSlot3State="Enabled" vpSlot2State="Enabled"
  vpSlot1State="Enabled"/>
 <biosVfPOSTErrorPause dn="sys/rack-unit-1/bios/bios-settings
  /POST-error-pause" vpPOSTErrorPause="disabled"/>
 <biosVfProcessorC1E dn="sys/rack-unit-1/bios/bios-settings
  /Processor-C1E" vpProcessorC1E="enabled"/>
<biosVfProcessorC3Report dn="sys/rack-unit-1/bios
/bios-settings/Processor-C3-Report" vpProcessorC3Report="enabled"/>
 <biosVfProcessorC6Report dn="sys/rack-unit-1/bios/bios-settings
  /Processor-C6-Report" vpProcessorC6Report="enabled"/>
 <biosVfProcessorCState dn="sys/rack-unit-1/bios/bios-settings
  /Processor-C-State" vpProcessorCState="enabled"/>
 <biosVfPStateCoordType dn="sys/rack-unit-1/bios
  /bios-settings/p-state-coord" vpPStateCoordType="HW ALL"/>
 <biosVfQPIConfig dn="sys/rack-unit-1/bios/bios-settings
  /QPI-Config" vpQPILinkFrequency="auto"/>
 <biosVfSelectMemoryRASConfiguration dn="sys/rack-unit-1/bios
  /bios-settings/SelectMemory-RAS-configuration"
  vpSelectMemoryRASConfiguration="sparing"/>
<!-- port A supported in Alpine and SM -->
 <biosVfSerialPortAEnable dn="sys/rack-unit-1/bios/bios-settings
  /Serial-port-A-enable" vpSerialPortAEnable="enabled"/>
 <biosVfSparingMode dn="sys/rack-unit-1/bios/bios-settings
  /Sparing-Mode" vpSparingMode="rank-sparing"/>
 <biosVfSrIov dn="sys/rack-unit-1/bios/bios-settings/sr-iov"
  vpSrIov="disabled"/>
 <biosVfTPMSupport dn="sys/rack-unit-1/bios/bios-settings
  /TPM-Support" vpTPMSupport="disabled"/>
 <biosVfUCSMBootOrderRuleControl dn="sys/rack-unit-1/bios
  /bios-settings/Boot-Order-Rules" vpUCSMBootOrderRule="Loose"/>
 <biosVfUSBBootConfig dn="sys/rack-unit-1/bios/bios-settings
  /USB-Boot-Config" vpMakeDeviceNonBootable="disabled"/>
 <biosVfUSBEmulation dn="sys/rack-unit-1/bios/bios-settings
  /USBEmulation-Support" vpUSBEmul6064="enabled"/>
 <biosVfUSBPortsConfig dn="sys/rack-unit-1/bios/bios-settings
  /USB-Ports-Config" vpUsbPortSDCard="enabled"
  vpUsbPortVMedia="enabled" vpUsbPortKVM="enabled"
  vpUsbPortInternal="enabled" vpUsbPortFront="enabled"
  vpUsbPortRear="enabled" vpAllUsbDevices="enabled"/>
 <biosVfVgaPriority dn="sys/rack-unit-1/bios/bios-settings
  /VgaPriority" vpVgaPriority="Onboard"/>
 </biosSettings>
</inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/bios/bios-settings"
cookie="1379605932/898925a0-e6be-16be-922b-5bfca0114ca4" response="yes">
<outConfig>
 <biosSettings dn="sys/rack-unit-1/bios/bios-settings" status="modified" >
 <biosVfIntelVTForDirectedIO rn="Intel-VT-for-directed-IO"
  vpIntelVTDATSSupport="enabled" vpIntelVTDCoherencySupport="disabled"
  vpIntelVTForDirectedIO="enabled" status="modified" >
 </biosVfIntelVTForDirectedIO><biosVfSelectMemoryRASConfiguration
  rn="SelectMemory-RAS-configuration" vpSelectMemoryRASConfiguration=
  "maximum-performance" status="modified" >
 </biosVfSelectMemoryRASConfiguration>
 <biosVfProcessorC6Report rn="Processor-C6-Report"
  vpProcessorC6Report="enabled" status="modified" >
 </biosVfProcessorC6Report>
```

```
<biosVfIntelHyperThreadingTec rn="Intel-HyperThreading-Tech"
 vpIntelHyperThreadingTech="enabled" status="modified" >
</biosVfIntelHyperThreadingTech>
<biosVfEnhancedIntelSpeedStepTech rn="Enhanced-Intel-SpeedStep-Tech"
 vpEnhancedIntelSpeedStepTech="enabled" status="modified" >
</biosVfEnhancedIntelSpeedStepTech>
<biosVfIntelVirtualizationTechnology rn="Intel-Virtualization-Technology"
 vpIntelVirtualizationTechnology="enabled" status="modified" >
</biosVfIntelVirtualizationTechnology>
<biosVfMemoryMappedIOAbove4GB rn="Memory-mapped-IO-above-4GB"
 vpMemoryMappedIOAbove4GB="enabled" status="modified" >
</biosVfMemoryMappedIOAbove4GB>
<biosVfCPUPerformance rn="CPU-Performance" vpCPUPerformance="enterprise"
 status="modified" ></biosVfCPUPerformance>
<biosVfLvDIMMSupport rn="LvDIMM-Support" vpLvDDRMode="power-saving-mode"
 status="modified" >
 .
 .
 .
<biosVfUSBPortsConfig rn="USB-Ports-Config" vpAllUsbDevices="enabled"
 vpUsbPortRear="enabled" vpUsbPortFront="enabled"
 vpUsbPortInternal="enabled" vpUsbPortKVM="enabled"
 vpUsbPortVMedia="enabled" status="modified" >
</biosVfUSBPortsConfig>
<biosVfQPIConfig rn="QPI-Config" vpQPILinkFrequency="auto"
 status="modified" > </biosVfQPIConfig>
<biosVfOnboardStorage rn="Onboard-Storage" vpOnboardSCUStorageSupport="disabled"
 status="modified" ></biosVfOnboardStorage>
<biosVfLegacyUSBSupport rn="LegacyUSB-Support" vpLegacyUSBSupport="enabled"
 status="modified" ></biosVfLegacyUSBSupport>
<biosVfUSBEmulation rn="USBEmulation-Support" vpUSBEmul6064="enabled"
 status="modified" ></biosVfUSBEmulation>
<biosVfUCSMBootOrderRuleControl rn="Boot-Order-Rules" vpUCSMBootOrderRule="Loose"
 status="modified" > </biosVfUCSMBootOrderRuleControl>
<biosVfPCIOptionROMs rn="PCI-OptionROMs" vpPCIOptionROMs="Legacy Only"
 status="modified" ></biosVfPCIOptionROMs>
<biosVfLOMPortOptionROM rn="LOMPort-OptionROM" vpLOMPortsAllState="Enabled"
 vpLOMPort0State="Enabled" vpLOMPort1State="Enabled" status="modified" >
</biosVfLOMPortOptionROM>
<biosVfPCISlotOptionROMEnable rn="PCI-Slot-OptionROM-Enable"
 vpSlot1State="Enabled" vpSlot2State="Enabled" vpSlot3State="Enabled"
 vpSlot4State="Enabled" vpSlot5State="Enabled" vpSlot1LinkSpeed="GEN2"
 vpSlot2LinkSpeed="GEN2" vpSlot3LinkSpeed="GEN2" vpSlot4LinkSpeed="GEN2"
 vpSlot5LinkSpeed="GEN2" status="modified" >
</biosVfPCISlotOptionROMEnable><biosVfPStateCoordType
 rn="p-state-coord" vpPStateCoordType="HW ALL" status="modified" >
</biosVfPStateCoordType><biosVfDramRefreshRate rn="dram-refresh-rate"
 vpDramRefreshRate="Auto" status="modified" >
</biosVfDramRefreshRate>
<biosVfOutOfBandMgmtPort rn="OoB-MgmtPort" vpOutOfBandMgmtPort="Enabled"
 status="modified" >
 </biosVfOutOfBandMgmtPort>
</biosSettings>
</outConfig>
</configConfMo>
```

Retrieving TPM Information

Request:

```
<configResolveClass cookie='1382189754/215a42c8-e918-1918-8003-dafea0114ca4'
classId='equipmentTpm' inHierarchical='true'> </configResolveClass>"
```

Response:

```
<configResolveClass cookie="1383875054/8504b1f8-eaa0-1aa0-8005-140197ebfab0"
 response="yes" classId="equipmentTpm">
 <outConfigs>
   <equipmentTpm dn="sys/rack-unit-1/board/tpm" presence="equipped"
    enabledStatus="enabled" activeStatus="activated" ownership="unowned"
    tpmRevision="1" model="UCSX-TPM1-001" vendor="Cisco Systems Inc"
    serial="FCH1526749E" version="A" >
   </equipmentTpm>
  </outConfigs>
</configResolveClass>
```

Retrieving PCI Slot Information

Request:

```
<configResolveClass cookie='1307953743/b63ff130-a593-1593-8004-2e4ac2e14388'
classId='pciEquipSlot' inHierarchical='true'>
</configResolveClass>"
```

Response:

```
<configResolveClass cookie="0987076388/a17ea2c8-81bd-11bd-8003-4c40daf6083c" response="yes"

classId="pciEquipSlot">
 <outConfigs>
    <pciEquipSlot controllerReported="L" hostReported="NOTINCP-0" id="L"
    macLeft="NOTINCP-00:00:00:00:00:00" macRight="NOTINCP-00:00:00:00:00:00"
    model="Intel(R) I350 1 Gbps Network Controller" serial="NOTINCP-"
    smbiosId="L" vendor="0x8086" version="0x80000B16-1.997.9"
    dn="sys/rack-unit-1/equipped-slot-L">
    </pciEquipSlot>
    <pciEquipSlot controllerReported="HBA"
    hostReported="NOTINCP-0" id="HBA" macLeft="NOTINCP-00:00:00:00:00:00"
    macRight="NOTINCP-00:00:00:00:00:00" model="Cisco 12G SAS Modular Raid
    Controller" serial="NOTINCP-" smbiosId="HBA" vendor="0x1000" version="N/A"
    dn="sys/rack-unit-1/equipped-slot-HBA">
    </pciEquipSlot>
  </outConfigs>
</configResolveClass>
```

Retrieving DIMM Blacklisting Status

Beginning from the release 4.3.2.230207, DIMM Blacklisting Status API is updated to DIMM Blocklisting Status.

Request:

```
<configResolveClass cookie="d29028fd12/9edaa8cd-b83b-c826-f1b4-4982a7904eb0"
inHierarchical="false" classId="memoryArray"/>' https://10.10.10.10/nuova
<configResolveClass cookie="d29028fd12/9edaa8cd-b83b-c826-f1b4-4982a7904eb0" response="yes"

 classId="memoryArray"/>
```

Response:

```
<outConfigs>
<memoryArray dn="sys/rack-unit-1/board/memarray-1" id="1" presence="equipped"
maxDevices="32" populated="32" currCapacity="2097152" redundantMemory="0"
memoryRASPossible="MaximumPerformance Mirroring PartialMirror "
memoryConfiguration="MaximumPerformance " failedMemory="0" ignoredMemory="0"
numOfIgnoredDimms="0" numOfFailedDimms="0" overallDIMMStatus="green"
dimmBlackList="disabled" dimmBlockList="disabled" ></memoryArray>
```

```
</outConfigs>
</configResolveClass>
```

Retrieving Network Settings

Request:

```
<configResolveClass cookie="1428279919/7887a3d3-1303-1303-8002-4a791e1b0ff4"
inHierarchical="false" classId="mgmtIf"/>
```

Response:

```
<configResolveClass cookie="1428279919/7887a3d3-1303-1303-8002-4a791e1b0ff4"
response="yes" classId="mgmtIf">
<outConfigs>
 <mgmtIf dn="sys/rack-unit-1/mgmt/if-1" description="Management Interface Network Settings"
 id="1"
   extEnabled="yes" extIp="10.10.10.10" extMask="255.255.255.0" extGw="10.10.10.10"
   ifType="physical" mac="F4:0F:1B:1E:79:4A" hostname="Unknown" dhcpEnable="no"
   dnsUsingDhcp="no" ddnsEnable="yes" ddnsDomain="" dnsPreferred="72.163.128.140"
  dnsAlternate="171.70.168.183" nicMode="dedicated" vicSlot="flex-lom" nicRedundancy="none"

   vlanEnable="no" vlanId="1" vlanPriority="0" portProfile="" v6extEnabled="no"
   v6extIp="::" v6extGw="::" v6prefix="64" v6linkLocal="::" v6SlaacIp="::"
   v6dhcpEnable="no" v6dnsUsingDhcp="no" v6dnsPreferred="::"
   v6dnsAlternate="::" subject="blade" autoNeg="disabled" adminNetSpeed="100Mbps"
   adminDuplex="full" operNetSpeed="100Mbps" operDuplex="full"/>
  </outConfigs>
</configResolveClass>
```

Enabling Auto-Negotiation

Request:

```
<configConfMo cookie="1439377526/06f404d9-1d1c-1d1c-8002-a2209f054ef4" inHierarchical="false">

 <inConfig>
  <mgmtIf dn="sys/rack-unit-1/mgmt/if-1" nicMode="dedicated" autoNeg="enabled"/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="" cookie="1439377526/06f404d9-1d1c-1d1c-8002-a2209f054ef4"
response="yes">
 <outConfig>
  <mgmtIf
   dn="sys/rack-unit-1/mgmt/if-1" description="Management Interface Network Settings"
   id="1" extEnabled="yes" extIp="10.10.10.10" extMask="255.255.255.0"
   extGw="10.10.10.10" ifType="physical" mac="F4:4E:05:9F:20:A2" hostname="Cxxx-FCH1841V1AZ"

   dhcpEnable="no" dnsUsingDhcp="no" ddnsEnable="yes" ddnsDomain="" dnsPreferred="0.0.0.0"

   dnsAlternate="0.0.0.0" nicMode="dedicated" vicSlot="flex-lom" nicRedundancy="none"
   vlanEnable="no" vlanId="1" vlanPriority="0" portProfile="" v6extEnabled="no"
   v6extIp="::" v6extGw="::" v6prefix="64" v6linkLocal="::" v6SlaacIp="::"
   v6dhcpEnable="no" v6dnsUsingDhcp="no" v6dnsPreferred="::" v6dnsAlternate="::"
   subject="blade" autoNeg="enabled" adminNetSpeed="auto" adminDuplex="auto"
   operNetSpeed="1Gbps" operDuplex="full"  status="modified"/>
 </outConfig>
</configConfMo>
```

Disabling Auto-Negotiation

Request:

```
<configConfMo cookie="1439377526/06f404d9-1d1c-1d1c-8002-a2209f054ef4" inHierarchical="false">

 <inConfig>
  <mgmtIf dn="sys/rack-unit-1/mgmt/if-1" nicMode="dedicated" autoNeg="disabled"/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="" cookie="1439377526/06f404d9-1d1c-1d1c-8002-a2209f054ef4"
response="yes">
 <outConfig>
  <mgmtIf
   dn="sys/rack-unit-1/mgmt/if-1" description="Management Interface Network Settings"
   id="1" extEnabled="yes" extIp="10.10.10.10" extMask="255.255.255.0"
   extGw="10.10.10.10" ifType="physical" mac="F4:4E:05:9F:20:A2" hostname="Cxxx-FCH1841V1AZ"

   dhcpEnable="no" dnsUsingDhcp="no" ddnsEnable="yes" ddnsDomain="" dnsPreferred="0.0.0.0"

   dnsAlternate="0.0.0.0" nicMode="dedicated" vicSlot="flex-lom" nicRedundancy="none"
   vlanEnable="no" vlanId="1" vlanPriority="0" portProfile="" v6extEnabled="no"
   v6extIp="::" v6extGw="::" v6prefix="64" v6linkLocal="::" v6SlaacIp="::"
   v6dhcpEnable="no" v6dnsUsingDhcp="no" v6dnsPreferred="::" v6dnsAlternate="::"
   subject="blade" autoNeg="disabled"    adminNetSpeed="100Mbps"
   adminDuplex="full" operNetSpeed="100Mbps" operDuplex="full"
   status="modified"/>
 </outConfig>
</configConfMo>
```

Configuring Network Port Speed and Duplex With Auto-negotiation in Disabled State

Request:

```
<configConfMo cookie="1439377526/06f404d9-1d1c-1d1c-8002-a2209f054ef4"
inHierarchical="false">
 <inConfig>
  <mgmtIf dn="sys/rack-unit-1/mgmt/if-1" nicMode="dedicated" autoNeg=”disabled”
   adminNetSpeed=“10Mbps” adminDuplex=“half”/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="" cookie="1439377526/06f404d9-1d1c-1d1c-8002-a2209f054ef4"
 response="yes">
 <outConfig>
  <mgmtIf
   dn="sys/rack-unit-1/mgmt/if-1" description="Management Interface Network Settings"
   id="1" extEnabled="yes" extIp="10.10.10.10" extMask="255.255.255.0"
   extGw="10.10.10.10" ifType="physical" mac="F4:4E:05:9F:20:A2" hostname="Cxxx-FCH1841V1AZ"

   dhcpEnable="no" dnsUsingDhcp="no" ddnsEnable="yes" ddnsDomain="" dnsPreferred="0.0.0.0"

   dnsAlternate="0.0.0.0" nicMode="dedicated" vicSlot="flex-lom" nicRedundancy="none"
   vlanEnable="no" vlanId="1" vlanPriority="0" portProfile="" v6extEnabled="no" v6extIp="::"

   v6extGw="::" v6prefix="64" v6linkLocal="::" v6SlaacIp="::" v6dhcpEnable="no"
   v6dnsUsingDhcp="no" v6dnsPreferred="::" v6dnsAlternate="::" subject="blade"
   autoNeg="enabled" adminNetSpeed=”10Mbps” adminDuplex=”half”
   operNetSpeed=“10Mbps” operDuplex=”half” status="modified"/>
```

```
 </outConfig>
</configConfMo>
```

Configuring Network Settings to Enable DDNS

Request:

```
<configConfMo cookie='0987076803/ba395308-81bd-11bd-8004-4c40daf6083c'
dn='sys/rack-unit-1/mgmt/if-1'>
 <inConfig>
  <mgmtIf dn='sys/rack-unit-1/mgmt/if-1' ddnsDomain='www.cisco.com'/>
 </inConfig>
</configConfMo>
```

Response:

This enables the DDNS.

```
<configConfMo dn="sys/rack-unit-1/mgmt/if-1"
cookie="1398652603/2f9bf4c8-f811-1811-8005-79bdaa4c93a4" response="yes">
  <outConfig>
     <mgmtIf dn="sys/rack-unit-1/mgmt/if-1" description="Management Interface
     Network Settings" id="1" extEnabled="yes" extIp="10.10.10.10"
     extMask="255.255.255.128" extGw="10.10.10.10" ifType="physical"
     mac="A4:93:4C:AA:BD:79" hostname="ucs-Cxxx-mx" dhcpEnable="no"
     dnsUsingDhcp="no" ddnsEnable="no" ddnsDomain="www.cisco.com"
     dnsPreferred="0.0.0.0" dnsAlternate="0.0.0.0" nicMode="shared_lom"
     nicRedundancy="active-active" vlanEnable="no" vlanId="1" vlanPriority="0"
     portProfile="test" v6extEnabled="no" v6extIp="::"
     v6extGw="::"v6prefix="64" v6linkLocal="::" v6dhcpEnable="no"
     v6dnsUsingDhcp="no" v6dnsPreferred="::" v6dnsAlternate="::"
     subject="blade" status="modified">
     </mgmtIf>
   </outConfig>
</configConfMo>
```

Creating PXE Boot Device

Request:

```
<configConfMo cookie='1390349461/f5c79390-f083-1083-8005-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
   status='modified'>
  <lsbootPxe name='pxe_slot1_port1' slot='1' port='1'
    state='Enabled' dn='sys/rack-unit-1/boot-precision/pxe-pxe_slot1_port1'
  rn='pxe-pxe_slot1_port1'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo  dn="sys/rack-unit-1/boot-precision"
cookie="1390349461/f5c79390-f083-1083-8005-93536d0df730" response="yes">
   <outConfig>
    <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" name="boot-precision"
    purpose="operational" rebootOnUpdate="no" bootMode="Legacy" status="modified" >
    <lsbootVMedia name="kvm-fdd" type="VMEDIA" subtype="kvm-mapped-dvd" access=
    "read-only-local" order="1" state="Enabled" rn="vm-kvm-fdd"
     status="modified" >
    </lsbootVMedia>
    <lsbootPxe name="pxe" type="PXE" slot='1' port='1'  order="2" state="Enabled"
    rn="pxe-pxe" status="modified" >
```

```
    </lsbootPxe>
    </lsbootDevPrecision>
   </outConfig>
</configConfMo>
```

Deleting PXE Boot Device

Request:

```
<configConfMo cookie='1390433433/82e32da8-f097-1097-8005-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
  status='modified'>
  <lsbootPxe name='PXE9' slot='9' port='' order='3' state='Enabled'
  status='deleted' />
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390433433/82e32da8-f097-1097-8005-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" name="boot-precision"
  purpose="operational" rebootOnUpdate="no" bootMode="Legacy" reapply="no"
  status="modified" >
  <lsbootPxe name="PXE1" type="PXE" slot="9" order="2" state="Enabled" rn="pxe-PXE1"
   status="modified">
   <lsbootVMedia name="kvm-fdd" type="VMEDIA" subtype="kvm-mapped-dvd" access=
"read-only-local"
   order="1" state="Enabled" rn="vm-kvm-fdd" status="modified">
   </lsbootPxe>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Modifying PXE Boot Device

Request:

```
<configConfMo cookie='1390882671/1b905748-f100-1100-8006-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
   status='modified'>
  <lsbootPxe name='pxe_slot1_port1' slot='2' port='1'
   state='Enabled' dn='sys/rack-unit-1/boot-precision/pxe-pxe_slot1_port1'
   order='1'
   rn='pxe-pxe_slot1_port1' />
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390882671/1b905748-f100-1100-8006-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision" purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy" reapply="no" status="modified" >
   <lsbootVMedia name="kvm-fdd" type="VMEDIA" subtype="kvm-mapped-dvd"
```

```
   access= "read-only-local" order="1" state="Enabled" rn="vm-kvm-fdd"
   status="modified" >
  </lsbootVMedia>
  <lsbootPxe name="pxe_slot1_port1" type="PXE" slot="1"
   port="1" order="1" state="Enabled" rn="pxe-pxe_slot1_port1"
   status="modified">
  </lsbootPxe>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Creating ISCSI Boot Device

Request:

```
<configConfMo cookie='1390443548/ddc28938-f099-1099-8007-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
  status='modified'>
  <lsbootIscsi name='myISCSIfist-device' slot='1' port='1'
   order='4' state='Enabled'
   dn='sys/rack-unit-1/boot-precision/iscsi-myISCSIfist-device'
   rn='iscsi-myISCSIfist-device' />
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390443548/ddc28938-f099-1099-8007-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision" purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy" status="modified" >
  <lsbootPxe name="PXE5" type="PXE" slot="9" order="1" state="Disabled"
    rn="pxe-PXE5" status="modified" >
  </lsbootPxe>
  <lsbootPxe name="PXE1" type="PXE" slot="9" order="2" state="Enabled"
    rn="pxe-PXE1" status="modified" >
  </lsbootPxe>
  <lsbootIscsi name="Iscsi" type="ISCSI" order="3" state="Disabled"
    rn="iscsi-Iscsi" status="modified" >
  </lsbootIscsi>
  <lsbootIscsi name="myISCSIfist-device" type="ISCSI" slot="1"
   port="1" order="4" state="Enabled" rn="iscsi-myISCSIfist-device"
   status="modified" >
  </lsbootIscsi>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Deleting ISCSI Boot Device

Request:

```
<configConfMo cookie='1390451709/c43d08b0-f09b-109b-800a-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
  status='modified'>
  <lsbootIscsi name='iscsi105' slot='3' port='6' order='1'
  state='Enabled' status='removed'/>
```

```
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390451709/c43d08b0-f09b-109b-800a-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision" purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy" status="modified" >
  <lsbootIscsi name="iscsi105" type="ISCSI" slot="3" port="6" order="1"
   state="Enabled" rn="iscsi-iscsi105"   status="modified">
  </lsbootIscsi>
  <lsbootIscsi name="iscsi101" type="ISCSI" slot="3"
   port="6" order="2" state="Enabled" rn="iscsi-iscsi101"
   status="modified">
  </lsbootIscsi>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Modifying ISCSI Boot Device

Request:

```
<configConfMo cookie='1390451709/c43d08b0-f09b-109b-800a-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
  status='modified'>
  <lsbootIscsi name='iscsi109' slot='100' port='100' order='1'
  state='Disabled'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390451709/c43d08b0-f09b-109b-800a-93536d0df730" response="yes">
<outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision"   purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy" status="modified" >
  <lsbootIscsi name="iscsi106" type="ISCSI" slot="3" port="6" order="1"
   state="Enabled" rn="iscsi-iscsi106" status="modified">
  </lsbootIscsi>
  <lsbootIscsi name="iscsi105" type="ISCSI" slot="3" port="6" order="2"
   state="Enabled" rn="iscsi-iscsi105" status="modified" >
  </lsbootIscsi>
  <lsbootIscsi name="iscsi109" type="ISCSI" slot="1" port="9" order="3"
   state="Disabled" rn="iscsi-iscsi109"   status="modified">
  </lsbootIscsi>
  <lsbootIscsi name="iscsi101" type="ISCSI" slot="3" port="6" order="4"
   state="Enabled" rn="iscsi-iscsi101"   status="modified">
  </lsbootIscsi>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Creating SAN Boot Device

Request:

```
<configConfMo cookie='1390514059/489111c0-f0aa-10aa-800b-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
   status='modified'>
  <lsbootSan name='mysanboot3' slot='100' lun='100'
   order='1' state='Enabled' dn='sys/rack-unit-1/boot-precision/san-  mysanboot3'
   rn='san-mysanboot3'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390514059/489111c0-f0aa-10aa-800b-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision" purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy" status="modified" >
  <lsbootSan name="mysanboot3" type="SAN" slot="100"
   lun="100" order="1" state="Enabled" rn="san-mysanboot3"
   status="modified">
  </lsbootSan>
  <lsbootSan name="mysanboot" type="SAN" order="2" state="Disabled"
   rn="san-mysanboot" status="modified">
  </lsbootSan>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Deleting SAN Boot Device

Request:

```
<configConfMo cookie='1390535353/3dc6e2b0-f0af-10af-8002-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
  status='modified'>
  <lsbootSan name='san16' slot='1' lun='9'
  order='1' state='Enabled' status='removed'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390535353/3dc6e2b0-f0af-10af-8002-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision" purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy" status="modified" >
  <lsbootPxe name="pxe" type="PXE" slot="1" port="1" order="4"
   state="Enabled" rn="pxe-pxe" status="modified">
  </lsbootPxe>
  <lsbootHdd name="myhdd" type="LOCALHDD" slot="1" lun="3" order="5"
   state="Enabled" rn="hdd-myhdd" status="modified">
  </lsbootHdd>
  <lsbootSan name="san16" type="SAN" slot="1" lun="9" order="1"
```

```
   state="Enabled" rn="san-san16" status="modified">
  </lsbootSan>
  <lsbootSan name="san10" type="SAN" slot="1" lun="9" order="2"
   state="Disabled" rn="san-san10" status="modified">
  </lsbootSan>
  <lsbootSan name="san9" type="SAN" slot="1" lun="9" order="3"
   state="Enabled" rn="san-san9" status="modified">
  </lsbootSan>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Modifying SAN Boot Device

Request:

```
<configConfMo cookie='1390535353/3dc6e2b0-f0af-10af-8002-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
   status='modified'>
  <lsbootSan name='san9' slot='99' lun='99' order='1'
   state='Disabled' />
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390535353/3dc6e2b0-f0af-10af-8002-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision"   purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy"   status="modified" >
  <lsbootSan name="san9" type="SAN" slot="1" lun="9"
   order="1" state="Enabled" rn="san-san9" status="modified" >
  </lsbootSan>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Retrieving a System Generated Password for the User

Request:

```
<configResolveClass cookie="0000257903/822c9ad3-003c-103c-800a-d06f72ebfab0"
response="yes" classId="generateRandomPassword">
<outConfigs>
```

Response:

```
<outConfigs>
<generateRandomPassword dn="sys/user-ext/generate-random-pwd" password="yS!7_DF7"/>
</outConfigs>
</configResolveClass>
```

Examples of Common Server Management Tasks Contd.

The examples in this section show how to use the Cisco IMC XML API to perform common server management tasks. Each example shows the XML API request followed by the response from Cisco IMC.

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Creating LOCALHDD Boot Device

Request:

```
<configConfMo cookie='1390538599/ff40b380-f0af-10af-8003-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision'
   rebootOnUpdate='no' status='modified'>
  <lsbootHdd name='MySecondLocalHDD' slot='99' lun='99' order='1'
   state='Enabled'
   dn='sys/rack-unit-1/boot-precision/hdd-MySecondLocalHDD' rn='hdd-MySecondLocalHDD'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390538599/ff40b380-f0af-10af-8003-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision"    purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy"  status="modified" >
  <lsbootHdd name="MySecondLocalHDD" type="LOCALHDD" slot="99"
   lun="99"   order="1" state="Disabled" rn="hdd-MySecondLocalHDD"
   status="modified" >
  </lsbootHdd>
  <lsbootHdd name="myhdd" type="LOCALHDD" order="2" state="Disabled"
    rn="hdd-myhdd" status="modified" >
  </lsbootHdd>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Deleting LOCALHDD Boot Device

Request:

```
<configConfMo cookie='1390544308/538d3b88-f0b1-10b1-8005-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
  status='modified'>
  <lsbootHdd name='HDD8' order='1' state='Enabled' status='removed' />
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390544308/538d3b88-f0b1-10b1-8005-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision" purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy" status="modified" >
  <lsbootHdd name="HDD8" type="LOCALHDD" order="1" state="Enabled"
   rn="hdd-HDD8" status="modified" >
  </lsbootHdd><lsbootHdd name="HDD8" type="LOCALHDD" order="2"
   state="Enabled" rn="hdd-HDD6" status="modified" >
  </lsbootHdd>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Modifying LOCALHDD Boot Device

Request:

```
<configConfMo cookie='1390544308/538d3b88-f0b1-10b1-8005-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
   status='modified'>
  <lsbootHdd name='HDD7' order='1' state='Enabled'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390544308/538d3b88-f0b1-10b1-8005-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision"   purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy" status="modified" >
  <lsbootHdd name="HDD6" type="LOCALHDD" order="1" state="Enabled"
   rn="hdd-HDD6" status="modified" >
  </lsbootHdd>
  <lsbootHdd name="HDD7" type="LOCALHDD" slot="1" lun="99"
   order="2" state="Disabled" rn="hdd-HDD7" status="modified" >
  </lsbootHdd>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Creating SDCARD Boot Device

Request:

```
<configConfMo cookie='1390548710/59ead228-f0b2-10b2-8008-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision'
   rebootOnUpdate='no' status='modified'>
  <lsbootSd  name='sdcard2' order='1' state='Enabled'
   dn='sys/rack-unit-1/boot-precision/sd-sdcard2' rn='sd-sdcard2'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390548710/59ead228-f0b2-10b2-8008-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision"  purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy" status="modified">
  <lsbootSd name="sdcard2" type="SDCARD" order="1"
   state="Enabled" rn="sd-sdcard1" status="modified" >
  </lsbootSd>
  <lsbootSd name="mySd" type="SDCARD" order="1" state="Enabled"
   rn="sd-mySd" status="modified" >
  </lsbootSd>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Deleting SDCARD Boot Device

Request:

```
<configConfMo cookie='1390606215/bd813540-f0bf-10bf-800c-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
   status='modified'>
  <lsbootSd  name='sdcard5' order='2' state='Enabled' status='deleted'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390606215/bd813540-f0bf-10bf-800c-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision"    purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy" status="modified" >
  <lsbootSd name="sdcard" type="SDCARD" order="1" state="Disabled"
   rn="sd-sdcard" status="modified" >
  </lsbootSd>
  <lsbootSd name="sdcard5" type="SDCARD" order="2" state="Enabled"
   rn="sd-sdcard5" status="modified" >
  </lsbootSd>
  </lsbootDevPrecision>
</outConfig>
```

Modifying SDCARD Boot Device

Request:

```
<configConfMo cookie='1390606215/bd813540-f0bf-10bf-800c-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
   status='modified'>
  <lsbootSd  name='sdcard6' order='1' state='Enabled'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390606215/bd813540-f0bf-10bf-800c-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" name="boot-precision"
   purpose="operational" rebootOnUpdate="no" bootMode="Legacy" status="modified" >
  <lsbootSd name="sdcard6" type="SDCARD" order="1"
   state="Disabled" rn="sd-sdcard" status="modified" >
  </lsbootSd>
  <lsbootSd name="sdcard6" type="SDCARD" order="2"
   state="Enabled" rn="sd-sdcard6" status="modified" >
  </lsbootSd>
  <lsbootSd name="sdcard6" type="SDCARD" order="3"
   state="Enabled" rn="sd-sdcard5" status="modified" >
  </lsbootSd>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Creating USB Boot Device

Request:

```
<configConfMo cookie='1390608715/5288c220-f0c0-10c0-800d-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision'  rebootOnUpdate='no'
   status='modified'>
  <lsbootUsb  name='firstusb' order='1' state='Enabled'
   subtype='usb-cd'  dn='sys/rack-unit-1/boot-precision/usb-firstusb'
   rn='usb firstusb'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390608715/5288c220-f0c0-10c0-800d-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" name="boot-precision"
   purpose="operational" rebootOnUpdate="no" bootMode="Legacy" status="modified" >
  <lsbootUsb name="firstusb" type="USB" subtype="usb-hdd" order="1"
   state="Enabled" rn="usb-firstusb" status="modified" >
  </lsbootUsb>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Deleting USB Boot Device

Request:

```
<configConfMo cookie='1390610306/b1565da8-f0c0-10c0-800e-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision'
   rebootOnUpdate='no' status='modified'>
  <lsbootUsb name='usb-hdd'  order='1' state='Enabled'
   subtype='usb-hdd' status='removed'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390610306/b1565da8-f0c0-10c0-800e-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" name="boot-precision"
   purpose="operational" rebootOnUpdate="no" bootMode="Legacy"
   status="modified" >
  <lsbootUsb name="usb-hdd" type="USB" subtype="usb-hdd" order="1"
   state="Enabled" rn="usb-usb-hdd" status="modified">
  </lsbootUsb>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Modifying USB Boot Device

Request:

```
<configConfMo cookie='1390793785/698fd000-f0eb-10eb-8010-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
   status='modified'>
  <lsbootUsb name='usb-usb1' order='2' state='Enabled' subtype='usb-hdd'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390793785/698fd000-f0eb-10eb-8010-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision" purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy" status="modified" >
  <lsbootUsb name="usb-usb1" type="USB" subtype="usb-hdd" order="1"
   state="Disabled" rn="usb-usb-usb1" status="modified" >
  </lsbootUsb>
  <lsbootUsb name="usb-hdd1" type="USB" subtype="usb-hdd" order="2"
   state="Enabled" rn="usb-usb-hdd1" status="modified" >
  </lsbootUsb>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Creating VMEDIA Boot Device

Request:

```
<configConfMo cookie='1390798614/8965d518-f0ec-10ec-8013-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision' rebootOnUpdate='no'
   status='modified'>
  <lsbootVMedia name='CIMC-DVD2'  order='1' state='Enabled'
   access='read-only-remote' subtype='cimc-mapped-dvd'
   dn='sys/rack-unit-1/boot-precision/vm-CIMC-DVD2' rn='vm-CIMC-DVD2'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390798614/8965d518-f0ec-10ec-8013-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
    name="boot-precision" purpose="operational" rebootOnUpdate="no"
    bootMode="Legacy" status="modified">
  <lsbootVMedia name="CIMC-DVD2" type="VMEDIA" subtype="cimc-mapped-dvd"
   access="read-only-remote" order="1" state="Enabled"
   rn="vm-CIMC-DVD1" status="modified">
  </lsbootVMedia>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Deleting VMEDIA Boot Device

Request:

```
<configConfMo cookie='1390860610/f89cf200-f0fa-10fa-801a-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision'
   rebootOnUpdate='no' status='modified'>
  <lsbootVMedia name='CIMC-DVD-a-s-d'  order='1' state='Enabled'
   access='read-only-local' status='removed'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390860610/f89cf200-f0fa-10fa-801a-93536d0df730" response="yes">
 <outConfig>
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision" name="boot-precision"
   purpose="operational" rebootOnUpdate="no" bootMode="Legacy" status="modified">
  <lsbootVMedia name="CIMC-DVD-a-s-d" type="VMEDIA"
   subtype="kvm-mapped-dvd" access="read-only-local"
   order="1" state="Enabled" rn="vm-CIMC-DVD-a-s-d" status="modified">
  </lsbootVMedia>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Modifying vMEDIA Boot Device

Request:

```
<configConfMo cookie='1390860610/f89cf200-f0fa-10fa-801a-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
 <inConfig>
  <lsbootDevPrecision dn='sys/rack-unit-1/boot-precision'  rebootOnUpdate='no'
   status='modified'>
  <lsbootVMedia name='CIMC-DVD-a-s-d'  order='1' state='Disabled'
    access='read-only-local'/>
  </lsbootDevPrecision>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390860610/f89cf200-f0fa-10fa-801a-93536d0df730" response="yes">
 <outConfig>
```

```
  <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
   name="boot-precision" purpose="operational" rebootOnUpdate="no"
   bootMode="Legacy" status="modified">
  <lsbootVMedia name="CIMC-DVD-a-s-d" type="VMEDIA"
   subtype="kvm-mapped-dvd" access="read-only-local" order="1"
   state="Enabled" rn="vm-CIMC-DVD-a-s-d" status="modified">
  </lsbootVMedia>
  </lsbootDevPrecision>
 </outConfig>
</configConfMo>
```

Retrieving PCI Inventory Details

Request:

```
<configResolveClass cookie='1307953743/b63ff130-a593-1593-8004-2e4ac2e14388'
classId='pciEquipSlot' inHierarchical='true'>
```

Response:

```
<configResolveClass cookie="0000058570/a30d32b0-000d-100d-8003-83a538e14388"
response="yes" classId="pciEquipSlot">
<outConfigs>
  <pciEquipSlot controllerReported="1" hostReported="0" id="1"
   macLeft="CP_REL-00:00:00:00:00:00" macRight="CP_REL-00:00:00:00:00:00"
   model="UCS VIC P81E 10 Gbps 2 port CNA" revision="0" serial="CP_REL-"
   smbiosId="1" vendor="0x1137" dn="sys/rack-unit-1/equipped-slot-1">
 </pciEquipSlot>
 <pciEquipSlot controllerReported="5" hostReported="0" id="5"
   macLeft="CP_REL-00:00:00:00:00:00" macRight="CP_REL-00:00:00:00:00:00"
   model="Qlogic QLE2462 4 Gbps 2 port FC HBA" revision="0"
   serial="CP_REL-" smbiosId="5" vendor="0x1077"
  dn="sys/rack-unit-1/equipped-slot-5">
  </pciEquipSlot>
 </outConfigs>
</configResolveClass>
```

Enabling Cisco IMC Secure Boot

Request:

```
<configConfMo dn='sys/rack-unit-1/mgmt/fw-updatable'
cookie='1382421711/231014e0-e94e-194e-8002-9e56e1a85750' inHierarchical='true'>
 <inConfig>
  <firmwareUpdatable adminState='trigger' dn='sys/rack-unit-1/mgmt/fw-updatable'
   protocol='tftp' remoteServer='10.10.10.10' remotePath='SL2EP29.bin'
   type='blade-controller' secureBoot='enable'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/mgmt/fw-updatable"
cookie="1382421711/231014e0-e94e-194e-8002-9e56e1a85750" response="yes">
 <outConfig>
  <firmwareUpdatable dn="sys/rack-unit-1/mgmt/fw-updatable" adminState="triggered"
  deployment="backup" operState="updating" version="66.77(67.1380790153)"
  protocol="none" remoteServer="" remotePath="" user="" pwd="" progress="0"
  type="blade-controller" secureBoot="enabled" status="modified">
  </firmwareUpdatable>
 </outConfig>
</configConfMo>
```

Disabling Cisco IMC Secure Boot

Request:

```
<configConfMo cookie='1382421711/231014e0-e94e-194e-8002-9e56e1a85750'
dn='sys/rack-unit-1/mgmt/fw-updatable' inHierarchical='true'>
 <inConfig>
  <firmwareUpdatable adminState='trigger' dn='sys/rack-unit-1/mgmt/fw-updatable'
  protocol='tftp' remoteServer='10.10.10.10' remotePath='SL2EP29.bin'
  type='blade-controller' secureBoot='disable'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/mgmt/fw-updatable"
cookie="1382421711/231014e0-e94e-194e-8002-9e56e1a85750" response="yes">
 <outConfig>
  <firmwareUpdatable dn="sys/rack-unit-1/mgmt/fw-updatable"
   adminState="triggered" deployment="backup" operState="updating"
   version="66.77(67.1380790153)"   protocol="none" remoteServer=""
   remotePath="" user="" pwd="" progress="0" type="blade-controller"
   secureBoot="disabled" status="modified">
  </firmwareUpdatable>
 </outConfig>
</configConfMo>
```

Retrieving Windows Secure Boot Details

Request:

```
<configResolveClass classId='lsbootBootSecurity'
cookie='1383937224/feaf3d08-eaae-1aae-800a-dafea0114ca4' inHierarchical='true'>
</configResolveClass>
```

Response:

```
<configResolveClass response="yes" classId="lsbootBootSecurity"
 cookie="1383937224/feaf3d08-eaae-1aae-800a-dafea0114ca4">
 <outConfigs>
  <lsbootBootSecurity dn="sys/rack-unit-1/boot-policy/boot-security"
   secureBoot="disabled">
  </lsbootBootSecurity>
 </outConfigs>
</configResolveClass>
```

Enabling Windows Secure Boot

Request:

```
<configConfMo cookie='1383937224/feaf3d08-eaae-1aae-800a-dafea0114ca4'
inHierarchical='true'>
 <inConfig>
  <lsbootBootSecurity dn='sys/rack-unit-1/boot-policy/boot-security'
   secureBoot='enable'>
  </lsbootBootSecurity>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="" cookie="1383832397/9675eb78-ea96-1a96-8002-dafea0114ca4"
response="yes">
 <outConfig>
  <lsbootBootSecurity dn="sys/rack-unit-1/boot-policy/boot-security"
```

```
  secureBoot="enabled" status="modified">
  </lsbootBootSecurity>
 </outConfig>
</configConfMo>
```

Disabling Windows Secure Boot

Request:

```
<configConfMo cookie='1383937224/feaf3d08-eaae-1aae-800a-dafea0114ca4'
inHierarchical='true'>
 <inConfig>
  <lsbootBootSecurity dn='sys/rack-unit-1/boot-policy/boot-security'
  secureBoot='disable'>
  </lsbootBootSecurity>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="" cookie="1383832397/9675eb78-ea96-1a96-8002-dafea0114ca4"
response="yes">
 <outConfig>
  <lsbootBootSecurity dn="sys/rack-unit-1/boot-policy/boot-security"
   secureBoot="disable" status="modified">
  </lsbootBootSecurity>
 </outConfig>
</configConfMo>
```

Configuring IPV6 Properties

Request:

```
<configConfMo cookie="1383832397/9675eb78-ea96-1a96-8002-dafea0114ca4"
dn='sys/rack-unit-1/mgmt/if-1' inHierarchical='false'>
 <inConfig>
  <mgmtIf v6extEnabled='yes' v6dhcpEnable='no'
   v6extIp='2010:201::97'   v6prefix='64' v6extGw='2010:201::1'
   v6dnsPreferred='2010:201::199'  dn='sys/rack-unit-1/mgmt/if-1'>
  </mgmtIf>
 </inConfig>
</configConfMo>"
```

Response:

Creating Virtual Drives

Request:

```
<configConfMo cookie='1392018227/7ffe1220-f208-1208-8005-93536d0df730'
inHierarchical='false' dn='sys/rack-unit-1/board/storage-SAS-SLOT-5/virtual-drive-create'>

 <inConfig>
  <storageVirtualDriveCreatorUsingUnusedPhysicalDrive
   dn='sys/rack-unit-1/board/storage-SAS-SLOT-5/virtual-drive-create'
   virtualDriveName='test3' raidLevel='1' size='2000 MB' driveGroup='[8,9]'
  writePolicy='Write Through' adminState='trigger'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-5/virtual-drive-create"
cookie="1392018227/7ffe1220-f208-1208-8005-93536d0df730" response="yes">
```

```
  <outConfig>
    <storageVirtualDriveCreatorUsingUnusedPhysicalDrive
    dn="sys/rack-unit-1/board/storage-SAS-SLOT-5/virtual-drive-create"
    description="Create a new virtual drive from unused physical drive(s)
    available in the rack server. Children objects of this object, lists all currently
    available unused physical drives." minRequiredPhysicalDrives="RAID 0 at least 1
    physical drive, RAID 1 at least 2 physical drives, RAID 5 at least 3 physical drives,
    RAID 6 at least 3 physical drives, RAID 10 at least 4 physical drives, RAID 50 or RAID

    60 at least 6 physical drives" virtualDriveName="test3" raidLevel="1" size="2000 MB"
    driveGroup="[8.9]" writePolicy="Write Through"
    operStatus="The requested virtual drive     creation is under way.
    Query the storageVirtualDrive class to retrieve details of the
    newly created virtual drive." adminState="triggered"
    status="modified"/>
  </outConfig>
</configConfMo>
```

Initiating Virtual Drive

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2'
inHierarchical='true' cookie=''1397033553/38b812a0-f698-1698-80037f9eeabd2200'>
 <inConfig>
  <storageVirtualDrive dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2' id='2'
  adminAction='start-full-initialization'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2"
cookie='"1392899555/b33b2bf0-f2d5-12d5-8003-0977e1a85750" response="yes">
  <outConfig>
     <storageVirtualDrive id="2" name="testshared" raidLevel="RAID 1"
      size="2000 MB" vdStatus="Cache Degraded" health="Moderate Fault"
      bootDrive="false" stripSize="64 KB" drivesPerSpan="2" spanDepth="1"
      accessPolicy="Read-Write"      cachePolicy="Direct"
      readAheadPolicy="Adaptive" requestedWriteCachePolicy="Write
      Back Good BBU" currentWriteCachePolicy="Write Through"
      diskCachePolicy="Unchanged"      allowBackgroundInit="true"
      autoSnapshot="false" autoDeleteOldest="true" driveState="Optimal"
      adminAction="no-op" targetId="2"
      dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2" status="modified">
     <storageLocalDiskUsage startingBlock="2048000" numberOfBlocks="4096000"
      virtualDrive="2" physicalDrive="4" state="online" span="0"
      rn="pd-4" status="modified"/>
      <storageLocalDiskUsage startingBlock="2048000" numberOfBlocks="4096000"
      virtualDrive="2"  physicalDrive="5" state="online" span="0" rn="pd-5"
      status="modified"/>
     <storageOperation rn="storage-operation" lropInProgress="false"
      currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"
      status="modified"/>
     <faultInst ack="yes" cause="equipment-degraded" code="F1008"
      created="Thu Feb 20 12:34:48 2014" descr="Storage Virtual Drive 2 Degraded:
      please check the storage controller, or reseat the storage drive"
      affectedDN="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2"
      highestSeverity="critical" id="3523281408" lastTransition="" lc="flapping"
      occur="1" origSeverity="cleared" prevSeverity="cleared"
      rule="fltStorageVirtualDriveDegraded" severity="warning"
      tags="storage" type="server" rn="fault-F1008" status="modified"/>
    </storageVirtualDrive>
```

```
  </outConfig>
</configConfMo>
```

Setting Virtual Drive as Boot Drive

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2'
inHierarchical='true' cookie='1397033553/38b812a0-f698-1698-80037f9eeabd2200'>
  <inConfig>
   <storageVirtualDrive dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2' id='2'
   adminAction='set-boot-drive'/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-1"
cookie='"1392922328/0098c088-f2db-12db-8004-0977e1a85750" response="yes">
  <outConfig>
    <storageVirtualDrive id="1" name="test4" raidLevel="RAID 1" size="1000 MB"
     vdStatus="Cache Degraded" health="Moderate Fault" bootDrive="true" stripSize="64 KB"
     drivesPerSpan="2" spanDepth="1" accessPolicy="Read-Write" cachePolicy="Direct"
     readAheadPolicy="Adaptive" requestedWriteCachePolicy="Write Back Good BBU"
     currentWriteCachePolicy="Write Through" diskCachePolicy="Unchanged"
     allowBackgroundInit="true" autoSnapshot="false" autoDeleteOldest="true"
     driveState="Optimal" adminAction="no-op" targetId="1"
    dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-1" status="modified">
      <storageLocalDiskUsage startingBlock="0" numberOfBlocks="2048000"
      virtualDrive="1" physicalDrive="4" state="online" span="0" rn="pd-4"
      status="modified"/>
      <storageLocalDiskUsage startingBlock="0" numberOfBlocks="2048000" virtualDrive="1"
      physicalDrive="5" state="online" span="0" rn="pd-5" status="modified"/>
      <storageOperation rn="storage-operation" lropInProgress="false"
      currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"
      status="modified"/>
      <faultInst ack="yes" cause="equipment-degraded" code="F1008"
      created="Thu Feb 20 12:02:19 2014" descr="Storage Virtual Drive 1 Degraded:
      please check the storage controller, or reseat the storage drive"
      affectedDN="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-1"
      highestSeverity="critical" id="3523281152" lastTransition="Thu
      Feb 20 11:59:32 2014" lc="flapping" occur="3" origSeverity="cleared"
      prevSeverity="cleared" rule="fltStorageVirtualDriveDegraded" severity="warning"
      tags="storage" type="server" rn="fault-F1008" status="modified"/>
    </storageVirtualDrive>
  </outConfig>
</configConfMo>
```

Changing Virtual Drive Write Cache

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2'
inHierarchical='true' cookie='1397033553/38b812a0-f698-1698-80037f9eeabd2200'>
 <inConfig>
  <storageVirtualDrive dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2'
  id='2' requestedWriteCachePolicy='Write Through'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-1"
cookie='"1392923392/40026120-f2db-12db-8005-0977e1a85750" response="yes">
```

```
  <outConfig>
    <storageVirtualDrive id="1" name="test4" raidLevel="RAID 1" size="1000 MB"
    vdStatus="Optimal" health="Good" bootDrive="true" stripSize="64 KB" drivesPerSpan="2"
   spanDepth="1" accessPolicy="Read-Write" cachePolicy="Direct" readAheadPolicy="Adaptive"

    requestedWriteCachePolicy="Write Through" currentWriteCachePolicy="Write Through"
    diskCachePolicy="Unchanged" allowBackgroundInit="true" autoSnapshot="false"
    autoDeleteOldest="true" driveState="Optimal" adminAction="no-op" targetId="1"
    dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-1" status="modified">
      <storageLocalDiskUsage startingBlock="0" numberOfBlocks="2048000" virtualDrive="1"
      physicalDrive="4" state="online" span="0" rn="pd-4" status="modified"/>
      <storageLocalDiskUsage startingBlock="0" numberOfBlocks="2048000" virtualDrive="1"
      physicalDrive="5" state="online" span="0" rn="pd-5" status="modified"/>
      <storageOperation rn="storage-operation" lropInProgress="false"
      currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"
      status="modified"/>
    </storageVirtualDrive>
  </outConfig>
</configConfMo>
```

Configuring Physical Drive as Global Hot Spare

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8'
inHierarchical='true' cookie='1397033553/38b812a0-f698-1698-80037f9eeabd2200'>
 <inConfig>
  <storageLocalDisk dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8'
  id='8' adminAction='make-global-hot-spare'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8"
cookie="1397033553/38b812a0-f698-1698-8003-7f9eeabd2200" response="yes">
  <outConfig>
    <storageLocalDisk id="8" pdStatus="Global Hot Spare" health="Good"
     predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS" mediaType="HDD"
     coercedSize="139648 MB" vendor="FUJITSU" productId="MBE2147RC" driveFirmware="5701"
     driveSerialNumber="D310PBC01PSC" driveState="hot spare" online="false"
     dedicatedHotSpareForVDId="" adminAction="no-op"
     dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8" status="modified">
    <storageLocalDiskProps rn="general-props" physicalDrive="8"
     pdStatus="Global Hot Spare" health="Good" enclosureDeviceId="40" deviceId="44"
     sequenceNumber="8" mediaErrorCount="0" otherErrorCount="0" predictiveFailureCount="0"

     linkSpeed="6.0 Gb/s" interfaceType="SAS" mediaType="HDD" blockSize="512"
     blockCount="287277984" bootDrive="false" rawSize="140272 MB" nonCoercedSize="139760
MB"
     coercedSize="139648 MB" powerState="active" sasAddress0="500000e1191313e2"
     sasAddress1="0x0" status="modified"/>
    <storageOperation rn="storage-operation" lropInProgress="false"
     currentLrop="No operation in progress" progressPercent="0"
     elapsedSeconds="0" status="modified"/>
    </storageLocalDisk>
  </outConfig>
</configConfMo>
```

Configuring Physical Drive as Dedicated Hot Spare

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8'
inHierarchical='true' cookie='1397033553/38b812a0-f698-1698-80037f9eeabd2200'>
 <inConfig>
  <storageLocalDisk dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8'
  id='8' dedicatedHotSpareForVDId='1' adminAction='make-dedicated-hot-spare'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8"
cookie="1397033553/38b812a0-f698-1698-8003-7f9eeabd2200" response="yes">
  <outConfig>
    <storageLocalDisk id="8" pdStatus="Dedicated Hot Spare" health="Good"
    predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS" mediaType="HDD"
    coercedSize="139648 MB" vendor="FUJITSU" productId="MBE2147RC" driveFirmware="5701"
    driveSerialNumber="D310PBC01PSC" driveState="hot spare" online="false"
    dedicatedHotSpareForVDId="" adminAction="no-op"
    dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8" status="modified">
   <storageLocalDiskProps rn="general-props" physicalDrive="8"
    pdStatus="Dedicated Hot Spare" health="Good" enclosureDeviceId="40"
    deviceId="44" sequenceNumber="12" mediaErrorCount="0" otherErrorCount="0"
    predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
    mediaType="HDD" blockSize="512" blockCount="287277984" bootDrive="false"
    rawSize="140272 MB" nonCoercedSize="139760 MB" coercedSize="139648 MB"
    powerState="active" sasAddress0="500000e1191313e2" sasAddress1="0x0"
    status="modified"/>
   <storageOperation rn="storage-operation" lropInProgress="false"
    currentLrop="No operation in progress" progressPercent="0"
    elapsedSeconds="0" status="modified"/>
   </storageLocalDisk>
  </outConfig>
</configConfMo>
```

Configuring Physical Drive as Unconfigured Good from JBOD Mode

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8'
inHierarchical='true' cookie='1397033553/38b812a0-f698-1698-80037f9eeabd2200'>
 <inConfig>
  <storageLocalDisk dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8' id='8'
  adminAction='make-unconfigured-good'/>
 </inConfig>
</configConfMo>
```

Locating LED for Physical Drives

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8'
inHierarchical='true' cookie='1397033553/38b812a0-f698-1698-80037f9eeabd2200'>
 <inConfig>
  <storageLocalDisk dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8' id='8'
  dedicatedHotSpareForVDId='1' adminAction='locator-led-on'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8"
cookie="1392897951/53a283f0-f2d5-12d5-8002-0977e1a85750" response="yes">
  <outConfig>
    <storageLocalDisk id="8" pdStatus="Unconfigured Good" health="Good"
```

```
     predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS" mediaType="HDD"
     coercedSize="139648 MB" vendor="FUJITSU" productId="MBE2147RC" driveFirmware="5701"
     driveSerialNumber="D310PBC01PSC" driveState="unconfigured good" online="true"
     dedicatedHotSpareForVDId="" adminAction="no-op"
     dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8" status="modified">
   <storageLocalDiskProps rn="general-props" physicalDrive="8"
    pdStatus="Unconfigured Good" health="Good" enclosureDeviceId="40" deviceId="44"
    sequenceNumber="1" mediaErrorCount="0" otherErrorCount="0" predictiveFailureCount="0"
    linkSpeed="6.0 Gb/s" interfaceType="SAS" mediaType="HDD" blockSize="512"
    blockCount="287277984" bootDrive="false" rawSize="140272 MB"
    nonCoercedSize="139760 MB" coercedSize="139648 MB" powerState="active"
    sasAddress0="500000e1191313e2" sasAddress1="0x0" status="modified"/>
   <storageOperation rn="storage-operation" lropInProgress="false"
    currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"
    status="modified"/>
   </storageLocalDisk>
 </outConfig>
</configConfMo>
```

Setting Physical Drive as Boot Drive

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8'
inHierarchical='true' cookie='1397033553/38b812a0-f698-169880037f9eeabd2200'>
 <inConfig>
  <storageLocalDisk dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-8' id='8'
   dedicatedHotSpareForVDId='1' adminAction='set-boot-drive'/>
 </inConfig>
</configConfMo>
```

Importing Foreign Configuration on Supported Configuration for MegaRAID Storage

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4'
inHierarchical='true' cookie='1397214630/61b2d990-f6c2-16c2-80027f9eeabd2200'>
 <inConfig>
  <storageController dn='sys/rack-unit-1/board/storage-SAS-SLOT-4'
   adminAction='import-foreign-config'/>
 </inConfig>
</configConfMo>
```

Clearing Foreign Configuration on Supported Configuration for MegaRAID Storage

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4'
inHierarchical='true' cookie='1397214630/61b2d990-f6c2-16c2-80027f9eeabd2200'>
 <inConfig>
  <storageController dn='sys/rack-unit-1/board/storage-SAS-SLOT-4'
   adminAction='clear-foreign-config'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-4"
cookie="1392979972/6c729268-f2e8-12e8-8006-0977e1a85750" response="yes">
<outConfig>
 <storageController id="SLOT-4" model="LSI MegaRAID SAS 9266-8i"
  pciSlot="SLOT-4" presence="equipped" raidSupport="yes" serial="SV21400468"
  type="SAS" vendor="LSI Logic" adminAction="no-op"
  dn="sys/rack-unit-1/board/storage-SAS-SLOT-4" status="modified">
```

```
 <storageControllerProps rn="controller-props" pciSlot="SLOT-4"
  health="Moderate Fault" controllerStatus="Optimal" batteryStatus="no
  battery" bbuPresent="false" raidChipTempCentigrade="51"
  backendPortCount="8" memorySize="1024 MB" cacheMemorySize="873 MB"
  virtualDriveCount="3" degradedVirtualDriveCount="0"
  offlineVirtualDriveCount="0" physicalDriveCount="8"
  criticalPhysicalDriveCount="0" failedPhysicalDriveCount="0"
  memoryCorrectableErrors="0" memoryUncorrectableErrors="0" bootDrive="1"
  bootDriveIsPhysicalDrive="false" supportsRaid0="true" supportsRaid1="true"
  supportsRaid5="true" supportsRaid6="true" supportsRaid00="true"
  supportsRaid10="true" supportsRaid50="true" supportsRaid60="true"
  supportsRaid1e="false" supportsRaid1erlq0="true"
  supportsRaid1e0rlq0="true" supportsRaidsrl03="true"
  dateOfManufacture="2012-04-01" revision="03A"
  prebootCliVersion="05.07-00:#%00011" webBiosVersion="6.1-62-e_62-Rel"
  nvdataVersion="2.1304.03-0124" bootBlockVersion="2.05.00.00-0010"
  bootVersion="07.26.13.219" nvramPresent="true"
  serialDebuggerPresent="true" flashPresent="true"
  sasAddress0="5057a8e1770800bf" sasAddress1="0000000000000000"
  sasAddress2="0000000000000000" sasAddress3="0000000000000000"
  sasAddress4="0000000000000000" sasAddress5="0000000000000000"
  sasAddress6="0000000000000000" sasAddress7="0000000000000000"
  serial="SV21400468" firmwarePackageBuild="23.12.0-0021" ttyLogStatus="Not
  Downloaded" status="modified"/>
 <storageRaidBattery rn="raid-battery" batteryType="No Battery"
  health="N/A" batteryStatus="BBU Not Present" batteryPresent="false"
  chargingState="no battery" retentionTime="N/A hours" temperature="0
  degrees C" temperatureHigh="false" designVoltage="0.000 V" voltage="0.000
  V" current="0.000 A" learnMode="Auto" completedChargeCycles="0"
  learnCycleStatus="Successful" learnCycleRequested="false"
  nextLearnCycle="N/A" designCapacity="0 mAh" fullCapacity="Unknown"
  remainingCapacity="Unknown" relativeStateOfCharge="Unknown"
  absoluteStateOfCharge="Unknown" expectedMarginOfError="0 %"
  manufacturer="" dateOfManufacture="0000-00-00" serialNumber="0"
  firmwareVersion="" adminAction="no-op" status="modified"/>
 <storageVirtualDriveCreatorUsingUnusedPhysicalDrive
  rn="virtual-drive-create" description="Create a new virtual drive from
  unused physical drive(s) available in the rack server. Children objects of
  this object, lists all currently available unused physical drives."
  minRequiredPhysicalDrives="RAID 0 at least 1 physical drive, RAID 1 at
  least 2 physical drives, RAID 5 at least 3 physical drives, RAID 6 at
  least 3 physical drives, RAID 10 at least 4 physical drives, RAID 50 or
  RAID 60 at least 6 physical drives" virtualDriveName="" raidLevel=""
  size="" driveGroup="[span1_pd_id1,span1_pd_id2,span1_pd_id3...,span1_pd_idN]
  [span2_pd_id1,span2_pd_id2,span2_pd_id3...,span2_pd_idN]..." writePolicy=""
  createdVirtualDriveDn="" operStatus="" adminState="triggered"
  status="modified">
<storageUnusedLocalDisk id="8" pdStatus="Unconfigured Good"
 coercedSize="139648 MB" health="Good" mediaType="HDD" vendor="FUJITSU"
 rn="pd-8" status="modified"/>
</storageVirtualDriveCreatorUsingUnusedPhysicalDrive>
      <storageVirtualDriveCreatorUsingVirtualDriveGroup
rn="virtual-drive-carve" description="Create a new virtual drive from an
existing virtual drive, with available physical drive group space.
Children objects of this object, lists all virtual drives with available
drive group space." sharedVirtualDriveId="" virtualDriveName="" size=""
writePolicy="" createdVirtualDriveDn="" operStatus=""
adminState="triggered" status="modified">
        <storageVirtualDriveWithDriveGroupSpace id="1" name="test4"
raidLevel="1" usedPhysicalDriveIds="4,5" maxAvailableSpace="136648 MB"
rn="vd-1" status="modified"/>
        <storageVirtualDriveWithDriveGroupSpace id="2" name="testshared"
raidLevel="1" usedPhysicalDriveIds="4,5" maxAvailableSpace="136648 MB"
rn="vd-2" status="modified"/>
```

```
      </storageVirtualDriveCreatorUsingVirtualDriveGroup>
      <storageLocalDisk id="1" pdStatus="Online" health="Good"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" coercedSize="139648 MB" vendor="FUJITSU"
productId="MBE2147RC" driveFirmware="5701"
driveSerialNumber="D310PBC01PDS" driveState="online" online="true"
dedicatedHotSpareForVDId="" adminAction="no-op" rn="pd-1"
status="modified">
        <storageLocalDiskProps rn="general-props" physicalDrive="1"
pdStatus="Online" health="Good" enclosureDeviceId="40" deviceId="36"
sequenceNumber="2" mediaErrorCount="0" otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="287277984" bootDrive="false"
rawSize="140272 MB" nonCoercedSize="139760 MB" coercedSize="139648 MB"
powerState="active" sasAddress0="500000e11912c4e2" sasAddress1="0x0"
status="modified"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0"
elapsedSeconds="0" status="modified"/>
      </storageLocalDisk>
      <storageLocalDisk id="2" pdStatus="Online" health="Good"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" coercedSize="139648 MB" vendor="FUJITSU"
productId="MBE2147RC" driveFirmware="5701"
driveSerialNumber="D310PBC01PNJ" driveState="online" online="true"
dedicatedHotSpareForVDId="" adminAction="no-op" rn="pd-2"
status="modified">
        <storageLocalDiskProps rn="general-props" physicalDrive="2"
pdStatus="Online" health="Good" enclosureDeviceId="40" deviceId="37"
sequenceNumber="2" mediaErrorCount="0" otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="287277984" bootDrive="false"
rawSize="140272 MB" nonCoercedSize="139760 MB" coercedSize="139648 MB"
powerState="active" sasAddress0="500000e1191306e2" sasAddress1="0x0"
status="modified"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0"
elapsedSeconds="0" status="modified"/>
      </storageLocalDisk>
      <storageLocalDisk id="3" pdStatus="Dedicated Hot Spare"
health="Good" predictiveFailureCount="0" linkSpeed="6.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="139648 MB"
vendor="FUJITSU" productId="MBE2147RC" driveFirmware="5701"
driveSerialNumber="D310PBC01PL1" driveState="hot spare" online="false"
dedicatedHotSpareForVDId="" adminAction="no-op" rn="pd-3"
status="modified">
        <storageLocalDiskProps rn="general-props" physicalDrive="3"
pdStatus="Dedicated Hot Spare" health="Good" enclosureDeviceId="40"
deviceId="38" sequenceNumber="2" mediaErrorCount="0" otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="287277984" bootDrive="false"
rawSize="140272 MB" nonCoercedSize="139760 MB" coercedSize="139648 MB"
powerState="active" sasAddress0="500000e11912f0a2" sasAddress1="0x0"
status="modified"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0"
elapsedSeconds="0" status="modified"/>
      </storageLocalDisk>
      <storageLocalDisk id="4" pdStatus="Online" health="Good"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" coercedSize="139648 MB" vendor="FUJITSU"
productId="MBE2147RC" driveFirmware="5701"
driveSerialNumber="D310PBC01PR4" driveState="online" online="true"
dedicatedHotSpareForVDId="" adminAction="no-op" rn="pd-4"
```

```
status="modified">
        <storageLocalDiskProps rn="general-props" physicalDrive="4"
pdStatus="Online" health="Good" enclosureDeviceId="40" deviceId="39"
sequenceNumber="2" mediaErrorCount="0" otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="287277984" bootDrive="false"
rawSize="140272 MB" nonCoercedSize="139760 MB" coercedSize="139648 MB"
powerState="active" sasAddress0="500000e119130c02" sasAddress1="0x0"
status="modified"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0"
elapsedSeconds="0" status="modified"/>
      </storageLocalDisk>
      <storageLocalDisk id="5" pdStatus="Online" health="Good"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" coercedSize="139648 MB" vendor="FUJITSU"
productId="MBE2147RC" driveFirmware="5701"
driveSerialNumber="D310PBC01PPW" driveState="online" online="true"
dedicatedHotSpareForVDId="" adminAction="no-op" rn="pd-5"
status="modified">
        <storageLocalDiskProps rn="general-props" physicalDrive="5"
pdStatus="Online" health="Good" enclosureDeviceId="40" deviceId="41"
sequenceNumber="2" mediaErrorCount="0" otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="287277984" bootDrive="false"
rawSize="140272 MB" nonCoercedSize="139760 MB" coercedSize="139648 MB"
powerState="active" sasAddress0="500000e119130af2" sasAddress1="0x0"
status="modified"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0"
elapsedSeconds="0" status="modified"/>
      </storageLocalDisk>
      <storageLocalDisk id="6" pdStatus="Foreign Configuration"
health="Good" predictiveFailureCount="0" linkSpeed="6.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="139648 MB"
vendor="FUJITSU" productId="MBE2147RC" driveFirmware="5701"
driveSerialNumber="D310PBC01MLC" driveState="unconfigured good"
online="true" dedicatedHotSpareForVDId="" adminAction="no-op" rn="pd-6"
status="modified">
        <storageLocalDiskProps rn="general-props" physicalDrive="6"
pdStatus="Foreign Configuration" health="Good" enclosureDeviceId="40"
deviceId="42" sequenceNumber="1" mediaErrorCount="0" otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="287277984" bootDrive="false"
rawSize="140272 MB" nonCoercedSize="139760 MB" coercedSize="139648 MB"
powerState="active" sasAddress0="500000e1191153a2" sasAddress1="0x0"
status="modified"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0"
elapsedSeconds="0" status="modified"/>
        <faultInst ack="yes" cause="equipment-degraded" code="F0996"
created="Thu Feb 20 12:02:03 2014" descr="Storage Local disk 6 is
degraded: please check if rebuild or copyback of drive is required"
affectedDN="sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-6"
highestSeverity="critical" id="3506701824" lastTransition="Thu Feb 20
11:59:16 2014" lc="flapping" occur="3" origSeverity="cleared"
prevSeverity="cleared" rule="fltStorageLocalDiskDegraded"
severity="warning" tags="storage" type="server" rn="fault-F0996"
status="modified"/>
      </storageLocalDisk>
      <storageLocalDisk id="7" pdStatus="Foreign Configuration"
health="Good" predictiveFailureCount="0" linkSpeed="6.0 Gb/s"
interfaceType="SAS" mediaType="HDD" coercedSize="139648 MB"
vendor="FUJITSU" productId="MBE2147RC" driveFirmware="5701"
```

```
driveSerialNumber="D310PBC01PMS" driveState="unconfigured good"
online="true" dedicatedHotSpareForVDId="" adminAction="no-op" rn="pd-7"
status="modified">
        <storageLocalDiskProps rn="general-props" physicalDrive="7"
pdStatus="Foreign Configuration" health="Good" enclosureDeviceId="40"
deviceId="43" sequenceNumber="1" mediaErrorCount="0" otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="287277984" bootDrive="false"
rawSize="140272 MB" nonCoercedSize="139760 MB" coercedSize="139648 MB"
powerState="active" sasAddress0="500000e1191302c2" sasAddress1="0x0"
status="modified"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0"
elapsedSeconds="0" status="modified"/>
        <faultInst ack="yes" cause="equipment-degraded" code="F0996"
created="Thu Feb 20 12:02:08 2014" descr="Storage Local disk 7 is
degraded: please check if rebuild or copyback of drive is required"
affectedDN="sys/rack-unit-1/board/storage-SAS-SLOT-4/pd-7"
highestSeverity="critical" id="3506702080" lastTransition="Thu Feb 20
11:59:21 2014" lc="flapping" occur="3" origSeverity="cleared"
prevSeverity="cleared" rule="fltStorageLocalDiskDegraded"
severity="warning" tags="storage" type="server" rn="fault-F0996"
status="modified"/>
      </storageLocalDisk>
      <storageLocalDisk id="8" pdStatus="Unconfigured Good" health="Good"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" coercedSize="139648 MB" vendor="FUJITSU"
productId="MBE2147RC" driveFirmware="5701"
driveSerialNumber="D310PBC01PSC" driveState="unconfigured good"
online="true" dedicatedHotSpareForVDId="" adminAction="no-op" rn="pd-8"
status="modified">
        <storageLocalDiskProps rn="general-props" physicalDrive="8"
pdStatus="Unconfigured Good" health="Good" enclosureDeviceId="40"
deviceId="44" sequenceNumber="1" mediaErrorCount="0" otherErrorCount="0"
predictiveFailureCount="0" linkSpeed="6.0 Gb/s" interfaceType="SAS"
mediaType="HDD" blockSize="512" blockCount="287277984" bootDrive="false"
rawSize="140272 MB" nonCoercedSize="139760 MB" coercedSize="139648 MB"
powerState="active" sasAddress0="500000e1191313e2" sasAddress1="0x0"
status="modified"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0"
elapsedSeconds="0" status="modified"/>
      </storageLocalDisk>
      <storageVirtualDrive id="0" name="RAID1_12" raidLevel="RAID 1"
size="139648 MB" vdStatus="Cache Degraded" health="Moderate Fault"
bootDrive="false" stripSize="64 KB" drivesPerSpan="2" spanDepth="1"
accessPolicy="Read-Write" cachePolicy="Direct" readAheadPolicy="Adaptive"
requestedWriteCachePolicy="Write Back Good BBU"
currentWriteCachePolicy="Write Through" diskCachePolicy="Unchanged"
allowBackgroundInit="true" autoSnapshot="false" autoDeleteOldest="true"
driveState="Optimal" adminAction="no-op" targetId="0" rn="vd-0"
status="modified">
        <storageLocalDiskUsage startingBlock="0"
numberOfBlocks="285999104" virtualDrive="0" physicalDrive="1"
state="online" span="0" rn="pd-1" status="modified"/>
        <storageLocalDiskUsage startingBlock="0"
numberOfBlocks="285999104" virtualDrive="0" physicalDrive="2"
state="online" span="0" rn="pd-2" status="modified"/>
        <storageLocalDiskUsage startingBlock="0"
numberOfBlocks="285999104" virtualDrive="0" physicalDrive="3" state="hot
spare" span="0" rn="pd-3" status="modified"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0"
elapsedSeconds="0" status="modified"/>
```

```
        <faultInst ack="yes" cause="equipment-degraded" code="F1008"
created="Thu Feb 20 12:02:17 2014" descr="Storage Virtual Drive 0
Degraded: please check the storage controller, or reseat the storage
drive" affectedDN="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-0"
highestSeverity="critical" id="3523280896" lastTransition="Thu Feb 20
11:59:30 2014" lc="flapping" occur="3" origSeverity="cleared"
prevSeverity="cleared" rule="fltStorageVirtualDriveDegraded"
severity="warning" tags="storage" type="server" rn="fault-F1008"
status="modified"/>
      </storageVirtualDrive>
      <storageVirtualDrive id="1" name="test4" raidLevel="RAID 1"
size="1000 MB" vdStatus="Optimal" health="Good" bootDrive="true"
stripSize="64 KB" drivesPerSpan="2" spanDepth="1"
accessPolicy="Read-Write" cachePolicy="Direct" readAheadPolicy="Adaptive"
requestedWriteCachePolicy="Always Write Back"
currentWriteCachePolicy="Write Back" diskCachePolicy="Unchanged"
allowBackgroundInit="true" autoSnapshot="false" autoDeleteOldest="true"
driveState="Optimal" adminAction="no-op" targetId="1" rn="vd-1"
status="modified">
        <storageLocalDiskUsage startingBlock="0" numberOfBlocks="2048000"
virtualDrive="1" physicalDrive="4" state="online" span="0" rn="pd-4"
status="modified"/>
        <storageLocalDiskUsage startingBlock="0" numberOfBlocks="2048000"
virtualDrive="1" physicalDrive="5" state="online" span="0" rn="pd-5"
status="modified"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0"
elapsedSeconds="0" status="modified"/>
      </storageVirtualDrive>
      <storageVirtualDrive id="2" name="testshared" raidLevel="RAID 1"
size="2000 MB" vdStatus="Cache Degraded" health="Moderate Fault"
bootDrive="false" stripSize="64 KB" drivesPerSpan="2" spanDepth="1"
accessPolicy="Read-Write" cachePolicy="Direct" readAheadPolicy="Adaptive"
requestedWriteCachePolicy="Write Back Good BBU"
currentWriteCachePolicy="Write Through" diskCachePolicy="Unchanged"
allowBackgroundInit="true" autoSnapshot="false" autoDeleteOldest="true"
driveState="Optimal" adminAction="no-op" targetId="2" rn="vd-2"
status="modified">
        <storageLocalDiskUsage startingBlock="2048000"
numberOfBlocks="4096000" virtualDrive="2" physicalDrive="4" state="online"
span="0" rn="pd-4" status="modified"/>
        <storageLocalDiskUsage startingBlock="2048000"
numberOfBlocks="4096000" virtualDrive="2" physicalDrive="5" state="online"
span="0" rn="pd-5" status="modified"/>
        <storageOperation rn="storage-operation" lropInProgress="false"
currentLrop="No operation in progress" progressPercent="0"
elapsedSeconds="0" status="modified"/>
        <faultInst ack="yes" cause="equipment-degraded" code="F1008"
created="Thu Feb 20 12:34:48 2014" descr="Storage Virtual Drive 2
Degraded: please check the storage controller, or reseat the storage
drive" affectedDN="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2"
highestSeverity="critical" id="3523281408" lastTransition="" lc="flapping"
occur="1" origSeverity="cleared" prevSeverity="cleared"
rule="fltStorageVirtualDriveDegraded" severity="warning" tags="storage"
type="server" rn="fault-F1008" status="modified"/>
      </storageVirtualDrive>
      <firmwareRunning rn="fw-boot-loader" deployment="boot-loader"
type="storage-controller" version="5.42.00_4.14.05.00_0x05280000"
status="modified"/>
      <firmwareRunning rn="fw-system" deployment="system"
type="storage-controller" version="3.240.95-2788" status="modified"/>
      <firmwareBootDefinition rn="fw-boot-def" type="storage-controller"
status="modified">
        <firmwareBootUnit rn="bootunit-combined" adminState="triggered"
```

```
image="running" resetOnActivate="no" type="combined"
version="5.42.00_4.14.05.00_0x05280000" status="modified"/>
      </firmwareBootDefinition>
      <storageControllerSettings rn="controller-settings" pciSlot="SLOT-4"
predictiveFailPollInterval="300 sec" rebuildRate="30 %" patrolReadRate="30
%" consistencyCheckRate="30 %" reconstructionRate="30 %"
cacheFlushInterval="4 sec" spinupDriveCount="2" spinupDelay="12 sec"
physDriveCoercionMode="128 MB" clusterEnable="false" batteryWarning="true"
eccBucketLeakRate="1440 min" exposeEnclosureDevices="true"
maintainPdFailHistory="false" enableCopybackOnSmart="false"
enableCopybackToSsdOnSmartError="true" disableNcq="false"
enableJbod="false" spinDownUnconfigured="true" enableSsdPatrolRead="false"
autoEnhancedImport="true" status="modified"/>
    </storageController>
  </outConfig>
</configConfMo>
```

Enabling JBOD Mode on Supported Controller for MegaRAID Storage

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4'
inHierarchical='true' cookie='1397214630/61b2d990-f6c2-16c2-8002-7f9eeabd2200'>
 <inConfig>
  <storageController dn='sys/rack-unit-1/board/storage-SAS-SLOT-4'
  adminAction='enable-jbod'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-5"
cookie="1392988666/72ab0028-f2ea-12ea-8003-bb4ee9bd2200" response="yes">
  <outConfig>
    <storageController id="SLOT-5" model="MegaRAID 9240-8i (RAID
     0,1,10,5)" pciSlot="SLOT-5" presence="equipped" raidSupport="yes"
     serial="SP23807568" type="SAS" vendor="LSI Logic" adminAction="no-op"
     dn="sys/rack-unit-1/board/storage-SAS-SLOT-5" status="modified">
      .
      .
      .
      .
      .
    <storageControllerSettings rn="controller-settings" pciSlot="SLOT-5"
     predictiveFailPollInterval="300 sec" rebuildRate="30 %" patrolReadRate="30
     %" consistencyCheckRate="30 %" reconstructionRate="30 %"
     cacheFlushInterval="4 sec" spinupDriveCount="4" spinupDelay="2 sec"
     physDriveCoercionMode="128 MB" clusterEnable="false"
     batteryWarning="false" eccBucketLeakRate="1440 min"
     exposeEnclosureDevices="true" maintainPdFailHistory="false"
     enableCopybackOnSmart="false" enableCopybackToSsdOnSmartError="true"
     disableNcq="false" enableJbod="true" spinDownUnconfigured="true"
     enableSsdPatrolRead="false" autoEnhancedImport="true" status="modified"/>
   </storageController>
 </outConfig>
</configConfMo>
```

Clearing Boot Drive on Supported Configuration for MegaRAID Storage

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4'
inHierarchical='true' cookie='1397214630/61b2d990-f6c2-16c2-8002-7f9eeabd2200'>
 <inConfig>
```

```
  <storageController dn='sys/rack-unit-1/board/storage-SAS-SLOT-4'
  adminAction='clear-boot-drive'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-4"
cookie="1393009392/46069e38-f2ef-12ef-8008-0977e1a85750" response="yes">
 <outConfig>
  <storageController id="SLOT-4" model="LSI MegaRAID SAS 9266-8i"
   pciSlot="SLOT-4" presence="equipped" raidSupport="yes" serial="SV21400468"
   type="SAS" vendor="LSI Logic" adminAction="no-op"
   dn="sys/rack-unit-1/board/storage-SAS-SLOT-4" status="modified">
  <storageControllerProps rn="controller-props" pciSlot="SLOT-4"
   health="Moderate Fault" controllerStatus="Optimal" batteryStatus="no
   battery" bbuPresent="false" raidChipTempCentigrade="52"
   backendPortCount="8" memorySize="1024 MB" cacheMemorySize="873 MB"
   virtualDriveCount="2" degradedVirtualDriveCount="0"
   offlineVirtualDriveCount="0" physicalDriveCount="8"
   criticalPhysicalDriveCount="0" failedPhysicalDriveCount="0"
   memoryCorrectableErrors="0" memoryUncorrectableErrors="0" bootDrive="none"
   bootDriveIsPhysicalDrive="false" supportsRaid0="true" supportsRaid1="true"
   supportsRaid5="true" supportsRaid6="true" supportsRaid00="true"
   supportsRaid10="true" supportsRaid50="true" supportsRaid60="true"
   supportsRaid1e="false" supportsRaid1erlq0="true"
   supportsRaid1e0rlq0="true" supportsRaidsrl03="true"
   dateOfManufacture="2012-04-01" revision="03A"
   .
   .
   .
   .
   .

 <storageControllerSettings rn="controller-settings" pciSlot="SLOT-4"
  predictiveFailPollInterval="300 sec" rebuildRate="30 %" patrolReadRate="30
  %" consistencyCheckRate="30 %" reconstructionRate="30 %"
  cacheFlushInterval="4 sec" spinupDriveCount="2" spinupDelay="12 sec"
  physDriveCoercionMode="128 MB" clusterEnable="false" batteryWarning="true"
  eccBucketLeakRate="1440 min" exposeEnclosureDevices="true"
  maintainPdFailHistory="false" enableCopybackOnSmart="false"
  enableCopybackToSsdOnSmartError="true" disableNcq="false"
  enableJbod="false" spinDownUnconfigured="true" enableSsdPatrolRead="false"
  autoEnhancedImport="true" status="modified"/>
  </storageController>
 </outConfig>
</configConfMo>
```

Enabling Auto Learn on Supported Configuration for RAID Battery

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-2/raid-battery'
inHierarchical='true' cookie='1392964576/d6be88d8-f2e4-12e4-8003-5e47f122c7e4'>
 <inConfig>
  <storageRaidBattery dn='sys/rack-unit-1/board/storage-SAS-SLOT-2/raid-battery'
   adminAction='enable-auto-learn'/>
 </inConfig>
</configConfMo>
```

Creating Virtual Drive by Using Existing Virtual Drive Group

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/virtual-drive-carve'
inHierarchical='false' cookie='1397214630/61b2d990-f6c2-16c2-80027f9eeabd2200'>
 <inConfig>
  <storageVirtualDriveCreatorUsingVirtualDriveGroup
  dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/virtual-drive-carve'
  status='modified'   adminState='trigger' writePolicy='Write Through'
  sharedVirtualDriveId='2' size='200 MB' virtualDriveName='test1'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo
dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/virtual-drive-carve"
cookie="1397214630/61b2d990-f6c2-16c2-8002-7f9eeabd2200" response="yes">
  <outConfig>
    <storageVirtualDriveCreatorUsingVirtualDriveGroup
     dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/virtual-drive-carve"
     description="Create a new virtual drive from an existing virtual drive,
     with available physical drive group space. Children objects of this
     object, lists all virtual drives with available drive group space."
     sharedVirtualDriveId="2" virtualDriveName="test1" size="200 MB"
     writePolicy="Write Through"
     createdVirtualDriveDn="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-3"
     operStatus="The requested virtual drive creation is under way. Query the
     storageVirtualDrive class to retrieve details of the newly created virtual
     drive." adminState="triggered" status="modified"/>
  </outConfig>
</configConfMo>
```

Retrieving Storage Virtual Drive Creator Details

Request:

```
<configResolveClass cookie='1397214630/61b2d990-f6c2-16c2-8002-7f9eeabd2200'
classId='storageVirtualDriveCreatorUsingVirtualDriveGroup' inHierarchical='true'>
</configResolveClass>
```

Response:

```
<configResolveClass
cookie="1397214630/61b2d990-f6c2-16c2-8002-7f9eeabd2200" response="yes"
classId="storageVirtualDriveCreatorUsingVirtualDriveGroup">
    <outConfigs>
     <storageVirtualDriveCreatorUsingVirtualDriveGroup
      dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/virtual-drive-carve"
      description="Create a new virtual drive from an existing virtual drive,
      with available physical drive group space. Children objects of this
      object, lists all virtual drives with available drive group space."
      sharedVirtualDriveId="" virtualDriveName="" size="" writePolicy=""
      createdVirtualDriveDn="" operStatus="" adminState="triggered">
     <storageVirtualDriveWithDriveGroupSpace id="2" name="RAID0_357"
      raidLevel="0" usedPhysicalDriveIds="3,5,7" maxAvailableSpace="417543 MB"
      rn="vd-2"/>
     <storageVirtualDriveWithDriveGroupSpace id="3" name="test1" raidLevel="0"
      usedPhysicalDriveIds="3,5,7" maxAvailableSpace="417543 MB" rn="vd-3"/>
     <storageVirtualDriveWithDriveGroupSpace id="4" name="" raidLevel="0"
      usedPhysicalDriveIds="3,5,7" maxAvailableSpace="417543 MB" rn="vd-4"/>
    </storageVirtualDriveCreatorUsingVirtualDriveGroup>
  </outConfigs>
</configResolveClass>
```

Changing RAID Level by Adding Drives in Virtual Drive Reconstruction

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2'
inHierarchical='false' cookie='1394109081/5096bd00-f3ef-13ef-80020977e1a85750'>
 <inConfig>
  <storageVirtualDrive dn='sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2'
  adminAction='reconstruct-virtual-drive' physicalDrivesList='3,4'
  raidLevel='1'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2"
cookie="1394402794/b33dfc40-f433-1433-8003-0977e1a85750" response="yes">
  <outConfig>
    <storageVirtualDrive id="2" name="RAID0_6" raidLevel="RAID 0"
     size="500 MB" vdStatus="Cache Degraded" health="Moderate Fault"
     bootDrive="false" stripSize="64 KB" drivesPerSpan="1" spanDepth="1"
     accessPolicy="Read-Write" cachePolicy="Cached I/O" readAheadPolicy="None"
     requestedWriteCachePolicy="Write Back Good BBU"
     currentWriteCachePolicy="Write Through" diskCachePolicy="Unchanged"
     allowBackgroundInit="true" autoSnapshot="false" autoDeleteOldest="false"
     driveState="Optimal" adminAction="no-op" targetId="2"
     physicalDrivesList="Physical drives to be used for virtual drive
     reconstruction. pd_id1,pd_id2,...pd_idN"
     dn="sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-2" status="modified"/>
  </outConfig>
</configConfMo>
```

Configuring configureBootMode to Legacy/Uefi and reapply='yes/no' and rebootOnUpdate='yes/no'

Request:

```
<configConfMo cookie='1390349461/f5c79390-f083-1083-8005-93536d0df730'
dn='sys/rack-unit-1/boot-precision' inHierarchical='true'>
<inConfig>
<lsbootDevPrecision dn='sys/rack-unit-1/boot-precision'
rebootOnUpdate='no' configuredBootMode='Legacy' reapply='no'
status='modified'>
</lsbootDevPrecision>
</inConfig>
</configConfMo
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision"
cookie="1390349461/f5c79390-f083-1083-8005-93536d0df730" response="yes">
<outConfig>
 <lsbootDevPrecision dn="sys/rack-unit-1/boot-precision"
 name="boot-precision" purpose="operational" rebootOnUpdate="no"
 confoguredBootMode="Legacy" reapply="no" status="modified" >
 <lsbootVMedia name="kvm-fdd" type="VMEDIA" subtype="kvm-mapped-dvd"
 access= "read-only-local" order="1" state="Enabled" rn="vm-kvm-fdd"
 status="modified" >
 </lsbootVMedia>
 <lsbootPxe name="pxe_slot1_port1" type="PXE" slot='2' port='1' order="1"
 state="Enabled" rn="pxe-pxe_slot1_port1" status="modified" >
 </lsbootPxe>
 </lsbootDevPrecision>
</outConfig>
</configConfMo>
```

Configuring SNMP Properties for a Specific ID

Request:

```
<configConfMo cookie='1398652603/2f9bf4c8-f811-1811-8005-79bdaa4c93a4'
inHierarchical='true' dn='sys/svc-ext/snmp-svc/snmp-trap-2'>
<inConfig>
<commSnmpTrap id='2' adminState='enabled' port='900' version='v3'
notificationType='traps' hostname='10.10.10.10' user='test'>
</commSnmpTrap>
</inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/svc-ext/snmp-svc/snmp-trap-2"
cookie="1398652603/2f9bf4c8-f811-1811-8005-79bdaa4c93a4" response="yes">
<outConfig>
<commSnmpTrap id="2" adminState="enabled" version="v3"
notificationType="traps" port="900" hostname="10.10.10.10" user="test"
dn="sys/svc-ext/snmp-svc/snmp-trap-2" status="modified">
</commSnmpTrap>
</outConfig>
</configConfMo>
```

Retrieving Certificate Details

Request:

```
<configResolveClass cookie="1448761796/eb8a8234-25a4-15a4-8002-9a6ae7925a88"
classId="currentCertificate" inHierarchical="false"></configResolveClass>
```

Response:

```
<configResolveClass cookie="1448761796/eb8a8234-25a4-15a4-8002-9a6ae7925a88"
response="yes" classId="currentCertificate">
 <outConfigs>
  <currentCertificate dn="sys/cert-mgmt/curr-cert" serialNumber="C764DC592E154539"
   countryCode="US" state="California" locality="San Jose" organization="cisco"
   organizationalUnit="cisco" commonName="cisco" issuerCountryCode="US"
   issuerState="California" issuerLocality="San Jose" issuerOrganization="cisco"
   issuerOrganizationalUnit="cisco" issuerCommonName="cisco"
   validFrom="Nov 20 05:11:22 2015 GMT" validTo="Nov 17 05:11:22 2025 GMT"/>
  </outConfigs>
</configResolveClass>
```

Generating Certificate Signing Request

Request:

```
<configConfMo cookie='1448761796/eb8a8234-25a4-15a4-8002-9a6ae7925a88'
dn="sys/cert-mgmt/gen-csr-req" inHierarchical="false">
 <inConfig>
  <generateCertificateSigningRequest commonName="cisco" organization="cisco"
   organizationalUnit="cisco" locality="San Jose" state="California" countryCode="United
States"
   protocol="ftp" remoteServer="10.10.10.10" user="user" pwd="cisco123"
   remoteFile="/tmp/host.csr" dn="sys/cert-mgmt/gen-csr-req"/>
 </inConfig>
</configConfMo>
```

Response:

```
<configResolveClass cookie="1448761796/eb8a8234-25a4-15a4-8002-9a6ae7925a88"
response="yes" classId="currentCertificate">
 <outConfigs>
  <currentCertificate dn="sys/cert-mgmt/curr-cert" serialNumber="C764DC592E154539"
   countryCode="US" state="California" locality="San Jose" organization="cisco"
   organizationalUnit="cisco" commonName="cisco" issuerCountryCode="US"
   issuerState="California" issuerLocality="San Jose" issuerOrganization="cisco"
   issuerOrganizationalUnit="cisco" issuerCommonName="cisco"
   validFrom="Nov 20 05:11:22 2015 GMT" validTo="Nov 17 05:11:22 2025 GMT"/>
 </outConfigs>
</configResolveClass>
```

Retrieving the Status of a Certificate Signing Request

Request:

```
<configResolveClass cookie="1448761796/eb8a8234-25a4-15a4-8002-9a6ae7925a88"
 classId="generateCertificateSigningRequest" inHierarchical="false">
</configResolveClass>
```

Response:

```
<configResolveClass cookie="1448761796/eb8a8234-25a4-15a4-8002-9a6ae7925a88"
response="yes" classId="generateCertificateSigningRequest">
 <outConfigs>
  <generateCertificateSigningRequest dn="sys/cert-mgmt/gen-csr-req"
   commonName="Common Name" organization="Organization" organizationalUnit="Organizational

   Unit" locality="Locality" state="State" countryCode="Country Code" email="Email Address"

   selfSigned="no" protocol="none" remoteServer="" remoteFile="" user="" pwd=""
   csrStatus="Completed CSR"/>
 </outConfigs>
</configResolveClass>
```

Generating Self-Signed Certificate

Request:

```
<configConfMo cookie='1448761796/eb8a8234-25a4-15a4-8002-9a6ae7925a88'
dn="sys/cert-mgmt/gen-csr-req" inHierarchical="false">
 <inConfig>
 <generateCertificateSigningRequest commonName="cisco" organization="cisco"
  organizationalUnit="cisco" locality="Banglore" state="KARNATAKA"
  countryCode="India" dn="sys/cert-mgmt/gen-csr-req" selfSigned="yes"/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMocookie="1448761796/eb8a8234-25a4-15a4-8002-9a6ae7925a88" response="yes"
dn="sys/cert-mgmt/gen-csr-req">
 <outConfig>
  <generateCertificateSigningRequest dn="sys/cert-mgmt/gen-csr-req" commonName="Common Name"

   organization="Organization" organizationalUnit="Organizational Unit" locality="Locality"

   state="State" countryCode="Country Code" email="Email Address" selfSigned="no"
   protocol="none" remoteServer="" remoteFile="" user="" pwd=""
```

```
   csrStatus="Completed CSR" status="modified"/>
 </outConfig>
</configConfMo>
```

Uploading a Signed Certificate

Request:

```
<configConfMo cookie='1448762867/b32d6bdd-25a4-15a4-8002-9a6ae7925a88'
dn="sys/cert-mgmt/upload-cert" inHierarchical="false">
<inConfig>
 <uploadCertificate adminAction="remote-cert-upload" protocol="sftp" user="user"
  remoteServer="10.10.10.10" remoteFile="/tmp/xmlTest.crt" pwd="cisco123"
  dn="sys/cert-mgmt/upload-cert"/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/cert-mgmt/upload-cert"
cookie="1448762867/b32d6bdd-25a4-15a4-8002-9a6ae7925a88"
response="yes">
 <outConfig>
  <uploadCertificate dn="sys/cert-mgmt/upload-cert" adminAction="no-op" protocol="none"
   remoteServer="" remoteFile="" user="" pwd="" certificateContent="Certificate Content"
   status="modified"/>
  </outConfig>
</configConfMo>
```

Enabling Security on Existing Virtual Drive Groups

Request:

```
<configConfMo cookie="1443751990/88100a71-2116-1116-8060-deabcdf9eca0"
 dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/virtual-drive-create"
 inHierarchical="false">
 <inConfig>
  <storageVirtualDriveCreatorUsingUnusedPhysicalDrive
   adminAction="enable-self-encrypt" virtualDriveName="1" raidLevel="1" size="600MB"
   driveGroup="[4,3]" writePolicy="write-through" adminState="trigger"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1443751990/88100a71-2116-1116-8060-deabcdf9eca0"
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/virtual-drive-create"
inHierarchical="false">
 <outConfigs>
  <storageVirtualDrive id="0" name="1" raidLevel="RAID 1" size="600 MB"
   vdStatus="Optimal" health="Good" bootDrive="false" stripSize="64k"
   drivesPerSpan="2" spanDepth="1" accessPolicy="read-write" cachePolicy="direct-io"
   readPolicy="no-read-ahead" requestedWriteCachePolicy="write-through"
   currentWriteCachePolicy="write-through" diskCachePolicy="unchanged"
   allowBackgroundInit="true" autoSnapshot="false" autoDeleteOldest="true"
   driveState="Optimal" fdeCapable="yes" fdeEnabled="no" adminAction="no-op" targetId="0"
   physicalDrivesList="Physical drives to be used for virtual drive reconstruction.
   pd_id1,pd_id2,...pd_idN" dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/vd-0"/>
  </outConfigs>
</configConfMo>
```

Enabling Binding of an LDAP CA Certificate

Request:

```
<configConfMo cookie='1457742601/2dd5f334-2dcf-1dcf-8005-515545067ff0'
dn='sys/ldap-ext/ldap-ca-cert-mgmt'>
<inConfig>
 <ldapCACertificateManagement dn='sys/ldap-ext/ldap-ca-cert-mgmt'
  bindingCertificate='enabled'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/ldap-ext/ldap-ca-cert-mgmt"
cookie="1470032930/13a3ed5e-38fd-18fd-800f-ad7c7d74a254" response="yes">
 <outConfig>
  <ldapCACertificateManagement dn="sys/ldap-ext/ldap-ca-cert-mgmt"
   description="LDAP CA Certificate Management"
   bindingCertificate="enabled" status="modified">
  </ldapCACertificateManagement>
 </outConfig>
</configConfMo>
```

Disabling Binding of CA Certificate

Request:

```
<configConfMo cookie='1457742601/2dd5f334-2dcf-1dcf-8005-515545067ff0'
dn='sys/ldap-ext/ldap-ca-cert-mgmt'>
 <inConfig>
  <ldapCACertificateManagement
   dn='sys/ldap-ext/ldap-ca-cert-mgmt' bindingCertificate='disabled'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/ldap-ext/ldap-ca-cert-mgmt"
cookie="1470032930/13a3ed5e-38fd-18fd-800f-ad7c7d74a254" response="yes">
 <outConfig>
  <ldapCACertificateManagement dn="sys/ldap-ext/ldap-ca-cert-mgmt"
   description="LDAP CA Certificate Management"
  bindingCertificate="disabled" status="modified" >
  </ldapCACertificateManagement>
 </outConfig>
</configConfMo>
```

Downloading LDAP CA Certificate using TFTP Protocol

Request:

```
<configConfMo cookie='1470032930/13a3ed5e-38fd-18fd-800f-ad7c7d74a254'
dn='sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert-download' inHierarchical='false'>
 <inConfig>
  <downloadLdapCACertificate protocol='tftp'
   remoteServer='10.10.10.10' remoteFile='new_com_chain.cer'
dn='sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert-download'/>
 </inConfig>
</configConfMo>
```

TFTP used in the preceding example is the default protocol. You can also download the LDAP CA certificate using the other available protocols such as the FTP, SFTP, SCP and HTTP.

Response:

```
<configConfMo dn="sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert-download"
cookie="1470032930/13a3ed5e-38fd-18fd-800f-ad7c7d74a254" response="yes">
 <outConfig>
  <downloadLdapCACertificate dn="sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert-download"
  protocol="none" remoteServer="" remoteFile="" user="" pwd=""
downloadStatus="COMPLETED"  downloadProgress="100%" status="modified" >
  </downloadLdapCACertificate>
 </outConfig>
</configConfMo>
```

Testing LDAP Binding

Request:

```
<configConfMo cookie='1470032930/13a3ed5e-38fd-18fd-800f-ad7c7d74a254'
dn='sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert' inHierarchical='false'>
 <inConfig>
  <ldapCACertificate adminAction='test-ldap-binding' user='user' pwd='Test123'
  dn='sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert"
cookie="1470032930/13a3ed5e-38fd-18fd-800f-ad7c7d74a254" response="yes">
 <outConfig>
  <ldapCACertificate dn="sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert"
  adminAction="" user="" pwd="" status="modified" >
  </ldapCACertificate>
 </outConfig>
</configConfMo>
```

Exporting LDAP CA Certificate

Request:

```
<configConfMo cookie='1463635956/27a0d4af-332c-132c-8004-9206a0395bfc'
dn='sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert-export' inHierarchical='false'>
 <inConfig>
  <exportLdapCACertificate protocol='tftp' remoteServer='10.10.10.10'
  remoteFile='fasfsaf.csr'
  dn='sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert-export'/>
 </inConfig>
</configConfMo>"
```

Response:

```
<configConfMo dn="sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert-export"
cookie="1470032930/13a3ed5e-38fd-18fd-800f-ad7c7d74a254" response="yes">
 <outConfig>
  <exportLdapCACertificate dn="sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert-export"
   protocol="none" remoteServer="" remoteFile="" user="" pwd=""
   exportStatus="COMPLETED" exportProgress="100%" status="modified" >
```

```
  </exportLdapCACertificate>
 </outConfig>
</configConfMo>
```

Deleting LDAP CA Certificate

Request:

```
<configConfMo cookie='1457746251/9ec8b64d-2dd0-1dd0-8008-515545067ff0'
dn='sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert' inHierarchical='false'>
 <inConfig>
  <ldapCACertificate adminAction='delete-ca-certificate'
  dn='sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert"
cookie="1470032930/13a3ed5e-38fd-18fd-800f-ad7c7d74a254" response="yes">
 <outConfig>
  <ldapCACertificate dn="sys/ldap-ext/ldap-ca-cert-mgmt/ldap-ca-cert"
   adminAction="" user="" pwd="" status="modified" >
  </ldapCACertificate>
 </outConfig>
</configConfMo>
```

Uploading PID Catalog

Request:

```
<configConfMo cookie="1469999952/1c3dc79a-38f5-18f5-8005-9206a0395bfc"
dn="sys/rack-unit-1/board/pid/upload-catalog" inHierarchical="false">
 <inConfig>
  <uploadPIDCatalog protocol="tftp"
   remoteServer="10.10.10.10" remoteFile="latestpid.tar.gz"
  dn="sys/rack-unit-1/board/pid/upload-catalog"/>
 </inConfig>
</configConfMo>'
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pid/upload-catalog"
cookie="1469999952/1c3dc79a-38f5-18f5-8005-9206a0395bfc" response="yes">
 <outConfig>
  <uploadPIDCatalog dn="sys/rack-unit-1/board/pid/upload-catalog" protocol="none"
   remoteServer="" remoteFile="" user="" pwd=""
pidUploadStatus="Upload Successful"  status="modified" >
  </uploadPIDCatalog>
 </outConfig>
</configConfMo>
```

Activating PID Catalog

Request:

```
<configConfMo cookie="1470039855/432ebd0e-38ff-18ff-8004-d5362a2fa074"
dn="sys/rack-unit-1/board/pid/activate-catalog" inHierarchical="false">
 <inConfig>
```

```
  <activatePIDCatalog  adminState="trigger"
  dn="sys/rack-unit-1/board/pid/activate-catalog"/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pid/activate-catalog"
cookie="1470039855/432ebd0e-38ff-18ff-8004-d5362a2fa074" response="yes">
 <outConfig>
  <activatePIDCatalog dn="sys/rack-unit-1/board/pid/activate-catalog"
  adminState="triggered" pidActivationStatus="Activation Successful"
  status="modified" >
 </activatePIDCatalog>
</outConfig>
```

Showing PID Catalog

Request:

```
<configResolveClass cookie="1473213767/1591338e-3be2-1be2-8002-ac988322e470"
 inHierarchical="false" classId="pidCatalog”/>
```

Response:

```
<configResolveClass cookie="1473213767/1591338e-3be2-1be2-8002-ac988322e470"
 response="yes" classId="pidCatalog">
  <outConfigs>
  <pidCatalog dn="sys/rack-unit-1/board/pid" name="Cisco Product Identifiers (PID)"
   version=2.0(13a)09>
 </pidCatalog>
  </outConfigs>
</configResolveClass>
```

Retrieving PID Catalog of CPUs

Request:

```
<configResolveClass cookie='1282522267/f91bd068-8e72-1e72-8002-7e573e8f835c'
inHierarchical='false' classId='pidCatalogCpu'/>
```

Response:

```
<configResolveClass cookie="1470739643/d6acc6cc-a139-19a1-8002-5a45145daae4"
response="yes" classId="pidCatalogCpu">
 <outConfigs>
  <pidCatalogCpu id="1" socketdesignation="CPU1" description="Intel(R)
   Xeon(R) CPU E5-2620 v4 @ 2.10GHz/85W 8C/20MB Cache/DDR4 2133MHz"
   pid="UCS-CPU-E52620E" model="Intel(R) Xeon(R) CPU E5-2620 v4 @ 2.10GHz"
   signature="Type 0, Family 6, Model 79, Stepping 1" currentspeed="2100"
   operState="Enabled" dn="sys/chassis-1/server-1/board/pid/pid-cpu-1" >
  </pidCatalogCpu>
  <pidCatalogCpu id="2" socketdesignation="CPU2" description="Intel(R)
   Xeon(R) CPU E5-2620 v4 @ 2.10GHz/85W 8C/20MB Cache/DDR4 2133MHz"
   pid="UCS-CPU-E52620E" model="Intel(R) Xeon(R) CPU E5-2620 v4 @ 2.10GHz"
   signature="Type 0, Family 6, Model 79, Stepping 1" currentspeed="2100"
   operState="Enabled" dn="sys/chassis-1/server-1/board/pid/pid-cpu-2" >
  </pidCatalogCpu>
  <pidCatalogCpu id="1" socketdesignation="CPU1" description="Intel(R)
   Xeon(R) CPU E5-2695 v4 @ 2.10GHz/120W 18C/45MB Cache/DDR4 2400MHz"
```

```
   pid="UCS-CPU-E52695E" model="Intel(R) Xeon(R) CPU E5-2695 v4 @ 2.10GHz"
   signature="Type 0, Family 6, Model 79, Stepping 1" currentspeed="2100"
   operState="Enabled" dn="sys/chassis-1/server-2/board/pid/pid-cpu-1" >
  </pidCatalogCpu>
  <pidCatalogCpu id="2" socketdesignation="CPU2" description="Intel(R)
   Xeon(R) CPU E5-2695 v4 @ 2.10GHz/120W 18C/45MB Cache/DDR4 2400MHz"
   pid="UCS-CPU-E52695E" model="Intel(R) Xeon(R) CPU E5-2695 v4 @ 2.10GHz"
   signature="Type 0, Family 6, Model 79, Stepping 1" currentspeed="2100"
   operState="Enabled" dn="sys/chassis-1/server-2/board/pid/pid-cpu-2" >
  </pidCatalogCpu>
 </outConfigs>
</configResolveClass>
```

Retrieving PID Catalog of DIMMs

Request:

```
<configResolveClass cookie='1282522267/f91bd068-8e72-1e72-8002-7e573e8f835c'
 inHierarchical='false' classId='pidCatalogDimm'/>
```

Response:

```
<configResolveClass cookie="1470739643/d6acc6cc-a139-19a1-8002-5a45145daae4"
 response="yes" classId="pidCatalogDimm">
 <outConfigs>
    <pidCatalogDimm name="DIMM_G1"
     description="32GB DDR4-2400-MHz RDIMM/PC4-19200/dual rank/x4/1.2v"
     pid="UCS-MR-1X322RV-A" mfgid="0xCE00" manufacturer="Samsung"
     serialnumber="02EB33FD"model="Mx93A4K40BB1-CRC"capacity="32768 MB"
     speed="2400" datawidth="64 bits" operability="Operable"
  dn="sys/chassis-1/server-2/board/pid/pid-dimm-DIMM_G1">
    </pidCatalogDimm>
     .
     .
     .
     .
    <pidCatalogDimm name="DIMM_G2"
     description="32GB DDR4-2400-MHz RDIMM/PC4-19200/dual rank/x4/1.2v"
     pid="UCS-MR-1X322RV-A" mfgid="0xCE00" manufacturer="Samsung"
     serialnumber="02EB3481" model="Mx93A4K40BB1-CRC"capacity="32768 MB"
     speed="2400" datawidth="64 bits" operability="Operable"
 dn="sys/chassis-1/server-2/board/pid/pid-dimm-DIMM_G2">
  </pidCatalogDimm>
 </outConfigs>
</configResolveClass>
```

Retrieving PID Catalog of HDDs

Request:

```
<configResolveClass cookie='1282522267/f91bd068-8e72-1e72-8002-7e573e8f835c'
 inHierarchical='false' classId='pidCatalogHdd'/>
```

Response:

```
<configResolveClass cookie="1470739643/d6acc6cc-a139-19a1-8002-5a45145daae4"
 response="yes" classId="pidCatalogHdd">
 <outConfigs>
  <pidCatalogHdd disk="8" controller="SBMezz1" description="4TB 6Gb SAS 7.2K RPM 3.5"
   pid="UCSC-Cxxx-HD4TB" vendor="WD" model="WD4001FYYG-01SL3"
```

```
   serialnumber="WMC1F1927555" dn="sys/chassis-1/server-1/board/pid/pid-hdd-8">
  </pidCatalogHdd>
  <pidCatalogHdd disk="9" controller="SBMezz1" description="4TB 6Gb SAS 7.2K RPM 3.5"
   pid="UCSC-Cxxx-HD4TB" vendor="WD" model="WD4001FYYG-01SL3"
   serialnumber="WMC1F1930050" dn="sys/chassis-1/server-1/board/pid/pid-hdd-9" >
  </pidCatalogHdd>
  <pidCatalogHdd disk="6" controller="SBMezz1" description="4TB 6Gb SAS 7.2K RPM 3.5"
   pid="UCSC-Cxxx-HD4TB" vendor="WD" model="WD4001FYYG-01SL3"
   serialnumber="WMC1F1927672" dn="sys/chassis-1/server-2/board/pid/pid-hdd-6" >
  </pidCatalogHdd>
  <pidCatalogHdd disk="7" controller="SBMezz1" description="4TB 6Gb SAS 7.2K RPM 3.5"
   pid="UCSC-Cxxx-HD4TB" vendor="WD" model="WD4001FYYG-01SL3" \
   serialnumber="WMC1F1928331" dn="sys/chassis-1/server-2/board/pid/pid-hdd-7" >
  </pidCatalogHdd>
  <pidCatalogHdd disk="10" controller="SBMezz1" description="4TB 6Gb SAS 7.2K RPM 3.5"
   pid="UCSC-Cxxx-HD4TB" vendor="WD" model="WD4001FYYG-01SL3"
   serialnumber="WMC1F1928305" dn="sys/chassis-1/server-2/board/pid/pid-hdd-10" >
  </pidCatalogHdd>
  <pidCatalogHdd disk="11" controller="SBMezz1" description="4TB 6Gb SAS 7.2K RPM 3.5"
   pid="UCSC-Cxxx-HD4TB" vendor="TOSHIBA" model="MG03SCA400"
   serialnumber="14P0A0E8FVU4" dn="sys/chassis-1/server-2/board/pid/pid-hdd-11" >
  </pidCatalogHdd>
  <pidCatalogHdd disk="12" controller="SBMezz1" description="4TB 6Gb SAS 7.2K RPM 3.5"
   pid="UCSC-Cxxx-HD4TB" vendor="TOSHIBA" model="MG03SCA400"
   serialnumber="14P0A069FVU4" dn="sys/chassis-1/server-2/board/pid/pid-hdd-12" >
  </pidCatalogHdd>
  <pidCatalogHdd disk="13" controller="SBMezz1" description="4TB 6Gb SAS 7.2K RPM 3.5"
   pid="UCSC-Cxxx-HD4TB" vendor="TOSHIBA" model="MG03SCA400"
   serialnumber="14P0A07BFVU4" dn="sys/chassis-1/server-2/board/pid/pid-hdd-13" >
  </pidCatalogHdd>
  <pidCatalogHdd disk="14" controller="SBMezz1" description="4TB 6Gb SAS 7.2K RPM 3.5"
   pid="UCSC-Cxxx-HD4TB" vendor="TOSHIBA" model="MG03SCA400"
   serialnumber="14O0A06EFVU4" dn="sys/chassis-1/server-2/board/pid/pid-hdd-14">
  </pidCatalogHdd>
  <pidCatalogHdd disk="28" controller="SBMezz1" description="4TB 6Gb SAS 7.2K RPM 3.5"
   pid="UCSC-Cxxx-HD4TB" vendor="TOSHIBA" model="MG03SCA400"
   serialnumber="14O0A08MFVU4" dn="sys/chassis-1/server-2/board/pid/pid-hdd-28" >
  </pidCatalogHdd>
 </outConfigs>
</configResolveClass>
```

Retrieving PID Catalog of PCI Adapters

Request:

```
<configResolveClass cookie='1282522267/f91bd068-8e72-1e72-8002-7e573e8f835c'
inHierarchical='false' classId='pidCatalogPCIAdapter'/>
```

Response:

```
<configResolveClass cookie="1470739643/d6acc6cc-a139-19a1-8002-5a45145daae4"
 response="yes" classId="pidCatalogPCIAdapter">
  <outConfigs>
   <pidCatalogPCIAdapter slot="SBNVMe1"
    description="800GB 2.5in NVMe based PCIe SSD drive"
    pid="UCSC-Cxxx-NV8" vendor="0x1c58" device="0x0003"
    subvendor="0x1137" subdevice="0x019e"
    dn="sys/chassis-1/server-1/board/pid/pid-pciadapter-SBNVMe1" >
   </pidCatalogPCIAdapter>
   <pidCatalogPCIAdapter slot="SIOC1" description="Cisco UCS 40Gb Ethernet"
    pid="UCSC-Cxxx-SIOC" vendor="0x1137" device="0x0042"
    subvendor="0x1137" subdevice="0x0157"
```

```
    dn="sys/chassis-1/server-1/board/pid/pid-pciadapter-SIOC1" >
   </pidCatalogPCIAdapter>
   <pidCatalogPCIAdapter slot="SBMezz1"
    description="Cisco UCS C3000 RAID controller for Mx Server Blade with 4G RAID Cache"
    pid="UCS-Cxxx-MxRAID" vendor="0x1000" device="0x00ce"
    subvendor="0x1137" subdevice="0x0197"
    dn="sys/chassis-1/server-1/board/pid/pid-pciadapter-SBMezz1" >
   </pidCatalogPCIAdapter>
   <pidCatalogPCIAdapter slot="SBMezz1"
    description="Cisco UCS C3000 RAID controller for Mx Server Blade with 4G RAID Cache"
    pid="UCSC-Cxxx-MxRAID" vendor="0x1000"
    device="0x00ce" subvendor="0x1137" subdevice="0x0197"
    dn="sys/chassis-1/server-2/board/pid/pid-pciadapter-SBMezz1" >
   </pidCatalogPCIAdapter>
  </outConfigs>
</configResolveClass>
```

Retrieving Platform Event Filters

Request:

```
<configResolveClass cookie='1393260215/ac3bb348-f329-1329-800a-0977e1a85750'
classId='platformEventFilters' inHierarchical='true'>
</configResolveClass>
```

Response:

```
<configResolveClass cookie="1400973402/97c009e9-fa2d-1a2d-8004-bcbec261b284"
 response="yes"
  classId="platformEventFilters">
  <outConfigs>
   <platformEventFilters id="1" event="Temperature Critical Assert Filter" action="none"
     dn="sys/rack-unit-1/event-management/pef-1"/>
    <platformEventFilters id="2" event="Voltage Critical Assert Filter" action="none"
     dn="sys/rack-unit-1/event-management/pef-2"/>
    <platformEventFilters id="3" event="Current Critical Assert Filter" action="none"
     dn="sys/rack-unit-1/event-management/pef-3"/>
    <platformEventFilters id="4" event="Fan Critical Assert Filter" action="none"
     dn="sys/rack-unit-1/event-management/pef-4"/>
    <platformEventFilters id="5" event="Processor Assert Filter" action="none"
     dn="sys/rack-unit-1/event-management/pef-5"/>
    <platformEventFilters id="6" event="Power Supply Critical Assert Filter" action="none"

     dn="sys/rack-unit-1/event-management/pef-6"/>
    <platformEventFilters id="7" event="Memory Critical Assert Filter" action="none"
     dn="sys/rack-unit-1/event-management/pef-7"/>
  </outConfigs>
</configResolveClass>
```

Enabling Platform Event Filters

Request:

```
<configConfMo dn='sys/rack-unit-1/event-management/pef-1 inHierarchical='false'
cookie='1394402794/b33dfc40-f433-1433-8003-0977e1a85750'>
<inConfig>
 <eventManagement
  dn='sys/rack-unit-1/event-management/pef-1' adminState='enabled'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/event-management"
cookie="1400975065/29082126-fa2e-1a2e-8005-bcbec261b284" response="yes">
  <outConfig>
    <eventManagement dn="sys/rack-unit-1/event-management" adminState="enabled"
     adminAction="no-op" status="modified"/>
  </outConfig>
</configConfMo>
```

Disabling Platform Event Filters

Request:

```
<configConfMo dn='sys/rack-unit-1/event-management/pef-1
inHierarchical='false'
cookie='1394402794/b33dfc40-f433-1433-8003-0977e1a85750'>
<inConfig>
<eventManagement dn='sys/rack-unit-1/event-management/pef-1'
adminState='disabled'/>
</inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/event-management"
cookie="1400975065/29082126-fa2e-1a2e-8005-bcbec261b284" response="yes">
  <outConfig>
    <eventManagement dn="sys/rack-unit-1/event-management"
   adminState="disabled"  adminAction="no-op" status="modified"/>
  </outConfig>
</configConfMo>
```

Configuring Platform Event Filters and Enabling or Disabling Platform Event Filters

Request:

```
<configConfMo cookie="1453104667/05fda47a-2998-1998-8002-1a4c5a74a254"
dn="sys/rack-unit-1/event-management" inHierarchical="true">
  <inConfig>
    <eventManagement adminState="enabled" dn="sys/rack-unit-1/event-management">
      <platformEventFilters dn="sys/rack-unit-1/event-management/pef-1" rn="pef-1"
       id="1" action="none"/>
      <platformEventFilters dn="sys/rack-unit-1/event-management/pef-2" action="none"/>
      <platformEventFilters dn="sys/rack-unit-1/event-management/pef-7"
      rn="pef-7" action="reboot"/>
    </eventManagement>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/event-management"
 cookie="1453108513/a2eb91d8-2998-1998-8003-1a4c5a74a254" response="yes">
  <outConfig>
    <eventManagement dn="sys/rack-unit-1/event-management" adminState="enabled"
      adminAction="no-op" status="modified">
      <platformEventFilters id="1" event="Temperature Critical Assert Filter"
       action="none" rn="pef-1" status="modified"/>
```

```
      <platformEventFilters id="2" event="Voltage Critical Assert Filter"
       action="none" rn="pef-2" status="modified"/>
      <platformEventFilters id="3" event="Current Critical Assert Filter"
       action="none" rn="pef-3" status="modified"/>
      <platformEventFilters id="4" event="Fan Critical Assert Filter" action="none"
       rn="pef-4" status="modified"/>
      <platformEventFilters id="5" event="Processor Assert Filter" action="none"
       rn="pef-5" status="modified"/>
      <platformEventFilters id="6" event="Power Supply Critical Assert Filter"
       action="none" rn="pef-6" status="modified"/>
      <platformEventFilters id="7" event="Memory Critical Assert Filter"
       action="reboot" rn="pef-7" status="modified"/>
    </eventManagement>
  </outConfig>
</configConfMo>
```

Resetting Platform Event Filters

Request:

```
<configConfMo dn='sys/rack-unit-1/event-management/pef-1
inHierarchical='false' cookie='1394402794/b33dfc40-f433-1433-8003-0977e1a85750'>
<inConfig>
<eventManagement adminAction="reset-event-filters"
dn='sys/rack-unit-1/event-management/pef-1/>
</inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/event-management"
cookie="1453108513/a2eb91d8-2998-1998-8003-1a4c5a74a254" response="yes">
  <outConfig>
    <eventManagement dn="sys/rack-unit-1/event-management" adminState="enabled"
     adminAction="no-op" status="modified">
      <platformEventFilters id="1" event="Temperature Critical Assert Filter"
       action="none" rn="pef-1" status="modified"/>
      <platformEventFilters id="2" event="Voltage Critical Assert Filter"
       action="none" rn="pef-2" status="modified"/>
      <platformEventFilters id="3" event="Current Critical Assert Filter"
       action="none" rn="pef-3" status="modified"/>
      <platformEventFilters id="4" event="Fan Critical Assert Filter"
       action="none" rn="pef-4" status="modified"/>
      <platformEventFilters id="5" event="Processor Assert Filter" action="none"
       rn="pef-5" status="modified"/>
      <platformEventFilters id="6" event="Power Supply Critical Assert Filter"
       action="none" rn="pef-6" status="modified"/>
      <platformEventFilters id="7" event="Memory Critical Assert Filter" action="none"
       rn="pef-7" status="modified"/>
    </eventManagement>
  </outConfig>
</configConfMo>
```

Updating SAS Expander Firmware

Request:

```
<configConfMo cookie='1461072403/492cc5da-30d7-10d7-8003-d4362a2fa074'
dn='sys/sas-expander-1/mgmt/fw-updatable'>
<inConfig>
<firmwareUpdatable dn='sys/sas-expander-1/mgmt/fw-updatable' adminState='trigger'
```

```
protocol='tftp' type='sas-expander'  remoteServer='10.10.10.10'
remotePath='sasexp.bin'/>
</inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/sas-expander-1/mgmt/fw-updatable"
 cookie="1461072403/492cc5da-30d7-10d7-8003-d4362a2fa074" response="yes">
<outConfig>
 <firmwareUpdatable dn="sys/sas-expander-1/mgmt/fw-updatable"
  description="SAS Expander backup  firmware version"
  adminState="triggered" deployment="backup" operState="DOWNLOADING"  protocol="none"
  remoteServer="" remotePath="" user="" pwd="" progress="0" type="sas-expander"
  status="modified"/>
</outConfig>
</configConfMo>
```

Activating SAS Expander Firmware

Request:

```
<configConfMo cookie='1430677438/2f89af96-3115-1531-8007-df8077e2cff4'
 dn='sys/sas-expander-1/mgmt/fw-boot-def/bootunit-combined'>
 <inConfig>
  <firmwareBootUnit dn='sys/sas-expander-1/mgmt./fw-boot-def/bootunit-combined'
   adminState='trigger' image='backup' resetOnActivate='yes'/>
</inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/sas-expander-1/mgmt/fw-boot-def/bootunit-combined"
  cookie="1281314857/87d987c9-8d59-1d59-8002-7e573e8f835c" response="yes">
 <outConfig>
  <firmwareBootUnit dn="sys/sas-expander-1/mgmt/fw-boot-def/bootunit-combined"
   description="SAS Expander startup firmware version" adminState="triggered"
   image="running" resetOnActivate="yes" type="combined"
   version="0x0408013F" status="modified"/>
 </outConfig>
</configConfMo>
```

Retrieving SAS Expander Firmware Updatable

Request:

```
<configResolveDn cookie='1392179711/9352dc53-f22e-122e-8002-ad7c7d74a254'
dn='sys/sas-expander-1/mgmt/fw-updatable' inHierarchical='true'>
</configResolveDn>
```

Response:

```
<configResolveDn cookie="1392179711/9352dc53-f22e-122e-8002-ad7c7d74a254"
 response="yes" dn="sys/sas-expander-1/mgmt/fw-updatable">
 <outConfig>
  <firmwareUpdatable dn="sys/sas-expander-1/mgmt/fw-updatable"
   description="SAS Expander backup  firmware version"
   adminState="triggered" deployment="backup" operState="UPDATE_FAILED"
   version="0xffffffff" protocol="none" remoteServer="" remotePath=""
   user="" pwd="" progress="0"  type="sas-expander"/>
```

```
 </outConfig>
</configResolveDn>
```

Setting up a Virtual Drive as Transport Ready with Exclude-All Options

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA/vd-0'
 inHierarchical='true' cookie='1390285111/1af97ad2-f075-1075-8003-bcbec261b284'>
  <inConfig>
   <storageVirtualDrive
    dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA/vd-0' id='0'
    adminAction='set-transport-ready' hotspareAction='exclude-all'/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/vd-0"
   cookie="1390285111/1af97ad2-f075-1075-8003-bcbec261b284" response="yes">
  <outConfig>
   <storageVirtualDrive id="0" name="RAID1_12" raidLevel="RAID 1"
    size="952720 MB" vdStatus="Optimal" health="Good" bootDrive="false"
    stripSize="64k"drivesPerSpan="2" spanDepth="1" accessPolicy="Transport Ready"
    cachePolicy="direct-io" readPolicy="no-read-ahead"
    requestedWriteCachePolicy="write-through" currentWriteCachePolicy="write-through"
    diskCachePolicy="unchanged" allowBackgroundInit="true" autoSnapshot="false"
    autoDeleteOldest="true" driveState="Optimal" fdeCapable="no" fdeEnabled="no"
    adminAction="no-op" hotspareAction="no-op" targetId="0"
    physicalDrivesList="Physical drives to be used for virtual drive reconstruction.
    pd_id1,pd_id2,...pd_idN" dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/vd-0"
    status="modified">
   <storageLocalDiskUsage startingBlock="0" numberOfBlocks="1951170560" virtualDrive="0"
    physicalDrive="1" state="online" span="0" rn="pd-1" status="modified"/>
   <storageLocalDiskUsage startingBlock="0" numberOfBlocks="1951170560" virtualDrive="0"
    physicalDrive="2" state="online" span="0" rn="pd-2" status="modified"/>
    <storageOperationVD rn="storage-operation" lropInProgress="false"
     currentLrop="No operation in progress" progressPercent="0"
     elapsedSeconds="0" status="modified"/>
    </storageVirtualDrive>
  </outConfig>
</configConfMo>
```

Note You can also set a Virtual Drive as Transport Ready using the **include-all** and **include-dhsp hotspareAction** values.

Clearing a Virtual Drive as Transport Ready

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA/vd-0'
 inHierarchical='true' cookie='1390285111/1af97ad2-f075-1075-8003-bcbec261b284'>
  <inConfig>
    <storageVirtualDrive dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA/vd-0' id='0'
     adminAction='clear-transport-ready'/>
```

```
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/vd-0"
  cookie="1390285111/1af97ad2-f075-1075-8003-bcbec261b284" response="yes">
  <outConfig>
   <storageVirtualDrive id="0" name="RAID1_12" raidLevel="RAID 1"
    size="952720 MB" vdStatus="Optimal" health="Good" bootDrive="false"
    stripSize="64k" drivesPerSpan="2" spanDepth="1" accessPolicy="read-write"
    cachePolicy="direct-io" readPolicy="no-read-ahead"
    requestedWriteCachePolicy="write-through" currentWriteCachePolicy="write-through"
    diskCachePolicy="unchanged" allowBackgroundInit="true" autoSnapshot="false"
    autoDeleteOldest="true" driveState="Optimal" fdeCapable="no" fdeEnabled="no"
    adminAction="no-op" hotspareAction="no-op" targetId="0"
    physicalDrivesList="Physical drives to be used for virtual drive reconstruction.
    pd_id1,pd_id2,...pd_idN" dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/vd-0"
    status="modified">
    <storageLocalDiskUsage startingBlock="0" numberOfBlocks="1951170560" virtualDrive="0"
     physicalDrive="1" state="online" span="0" rn="pd-1" status="modified"/>
    <storageLocalDiskUsage startingBlock="0" numberOfBlocks="1951170560" virtualDrive="0"
     physicalDrive="2" state="online" span="0" rn="pd-2" status="modified"/>
    <storageOperationVD rn="storage-operation" lropInProgress="false"
     currentLrop="No operation in progress" progressPercent="0" elapsedSeconds="0"
     status="modified"/>
    </storageVirtualDrive>
   </outConfig>
</configConfMo>
```

Setting Up an SNMP Engine ID

Request:

```
<configConfMo cookie="1468979398/1fd17a6c-3808-1808-8002-ac988322e470"
 inHierarchical="false" dn="sys/svc-ext/snmp-svc">
  <inConfig>
   <commSnmp dn="sys/svc-ext/snmp-svc” adminState="enabled"
    engineIdKey="Test_Engine_Key”>
   </commSnmp>
   </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/svc-ext/snmp-svc"
 cookie="1468979398/1fd17a6c-3808-1808-8002-ac988322e470" response="yes">
   <outConfig>
    <commSnmp dn="sys/svc-ext/snmp-svc" descr="SNMP Service"
     name="snmp" adminState="enabled" port="161" proto="udp" community=""
     trapCommunity="" com2Sec="disabled" sysContact="who@where" sysLocation="unknown"
     engineId="" engineIdKey="Test_Engine_Key" status="modified” >
    </commSnmp>
   </outConfig>
</configConfMo>
```

Retrieving the Configured SNMP Engine ID

Request:

```
<configResolveClass cookie="1468979398/1fd17a6c-3808-1808-8002-ac988322e470"
   inHierarchical="false" classId="commSnmp”/>
```

Response:

```
<configResolveClass cookie="1468979398/1fd17a6c-3808-1808-8002-ac988322e470"
 response="yes" classId="commSnmp”>
  <outConfigs>
   <commSnmp dn="sys/svc-ext/snmp-svc" descr="SNMP Service"
    name="snmp" adminState="enabled" port="161" proto="udp" community=""
    trapCommunity="" com2Sec="disabled" sysContact="who@where" sysLocation="unknown"
    engineId="80 00 00 09 04 54 65 73 74 5F 45 6E 67 69 6E 65 5F 4B 65 79"
    engineIdKey="Test_Engine_Key">
   </commSnmp>
  </outConfigs>
</configResolveClass>
```

Retrieving Storage Controller Properties

Request:

```
<configResolveClass cookie='1472027101/557ad6d6-3acd-1acd-8007-95542a2fa074'
inHierarchical='false' classId='storageControllerProps'/>"
```

Response:

```
<configResolveClass cookie="1472027101/557ad6d6-3acd-1acd-8007-95542a2fa074"
 response="yes" classId="storageControllerProps">
  <outConfigs>
   <storageControllerProps dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/controller-props"

    pciSlot="SLOT-HBA" health="Good" controllerStatus="Optimal"
    batteryStatus="BBU Not Supported" raidChipTempCentigrade="50"
    backendPortCount="2" physicalDriveCount="7" criticalPhysicalDriveCount="0"
    failedPhysicalDriveCount="0" memoryCorrectableErrors="0"
    memoryUncorrectableErrors="0" bootDrive="2" bootDriveIsPhysicalDrive="true"
    flashPresent="true" sasAddress0="0000000000000001" sasAddress1="0000000000000001"
    sasAddress2="" sasAddress3="" sasAddress4="" sasAddress5=""
    sasAddress6="" sasAddress7="" serial="5142631FC3D" firmwarePackageBuild="1.58-0"
    ttyLogStatus="Not Downloaded" >
   </storageControllerProps>
 </outConfigs>
</configResolveClass>
```

Retrieving NVMe Storage Controller Details

Request:

```
 <configResolveClass cookie='1472022403/94a78a4a-3acc-1acc-8003-95542a2fa074'
  inHierarchical='true' classId='storageControllerNVMe'/>"
```

Response:

```
<configResolveClass cookie="1472022403/94a78a4a-3acc-1acc-8003-95542a2fa074"
 response="yes" classId="storageControllerNVMe">
  <outConfigs>
   <storageControllerNVMe id="SLOT-5"
    model="Cisco UCS (SN150) HHHL 3800 GB NVMe based PCIe SSD"
    vendor="HGST" serial="STM0001A7BD9" health="Good" controllerStatus="Optimal"
```

```
    controllerChipTempCelsius="39" driveLifeUsed="0" performanceLevel="100"
    ledFaultStatus="Healthy" percentageTotalPowerOnHour="6"
    dn="sys/rack-unit-1/board/storage-NVMe-SLOT-5">
    <firmwareRunning rn="fw-boot-loader"
     description="NVMe Storage controller currently running boot loader firmware version"
     deployment="boot-loader" type="storage-controller-NVMe"
     version="N/A" >
    </firmwareRunning>
   <firmwareRunning rn="fw-system"
    description="NVMe Storage controller currently running firmware version"
    deployment="system" type="storage-controller-NVMe"
    version="KMCCP105">
   </firmwareRunning>
   </storageControllerNVMe>
   <storageControllerNVMe
    id="SLOT-4" model="Cisco UCS (P3700) HHHL 800 GB NVMe based PCIe SSD"
    vendor="Intel"
    serial="CVFT6024002U800CGN" health="Good" controllerStatus="Optimal"
    controllerChipTempCelsius="24" driveLifeUsed="0" performanceLevel="100"
    ledFaultStatus="Healthy" percentageTotalPowerOnHour="5"
    dn="sys/rack-unit-1/board/storage-NVMe-SLOT-4" >
   <firmwareRunning rn="fw-boot-loader"
    description="NVMe Storage controller currently running boot loader firmware version"
    deployment="boot-loader" type="storage-controller-NVMe"
    version="N/A" >
   </firmwareRunning>
    <firmwareRunning
     rn="fw-system"
     description="NVMe Storage controller currently running firmware version"
     deployment="system" type="storage-controller-NVMe"
     version="8DV1CP01" >
    </firmwareRunning>
    </storageControllerNVMe>
    <storageControllerNVMe
     id="SLOT-2" model="Cisco UCS (P3700) HHHL 1600 GB NVMe based PCIe SSD"
     vendor="Intel" serial="CVFT5433007S1P6DGN" health="Good"
     controllerStatus="Optimal" controllerChipTempCelsius="27"
     driveLifeUsed="0" performanceLevel="100"
     ledFaultStatus="Healthy" percentageTotalPowerOnHour="3"
     dn="sys/rack-unit-1/board/storage-NVMe-SLOT-2">
    <firmwareRunning
     rn="fw-boot-loader"
     description="NVMe Storage controller currently running boot loader firmware version"
     deployment="boot-loader" type="storage-controller-NVMe" version="N/A">
    </firmwareRunning>
    <firmwareRunning
     rn="fw-system"
     description="NVMe Storage controller currently running firmware version"
     deployment="system" type="storage-controller-NVMe" version="8DV1CP01">
    </firmwareRunning>
    </storageControllerNVMe>
 </outConfigs>
</configResolveClass>
```

Retrieving Firmware Version of a NVMe Controller

Request:

```
<configResolveDn cookie='1405200895/c56a2fcc-fe06-1e06-8062-f4f25b78ac58'
 inHierarchical='false' dn='sys/rack-unit-1/board/storage-NVMe-FrontPCIe1/fw-system'/>"
```

Response:

```
<configResolveDn cookie="1405200895/c56a2fcc-fe06-1e06-8062-f4f25b78ac58"
 response="yes" dn="sys/rack-unit-1/board/storage-NVMe-FrontPCIe1/fw-system">
  <outConfig>
  <firmwareRunning dn="sys/rack-unit-1/board/storage-NVMe-FrontPCIe1/fw-system"
   description="NVMe Storage controller currently running firmware version"
   deployment="system" type="storage-controller-NVMe"
   version="KMCCP105">
 </firmwareRunning>
</outConfig>
</configResolveDn>
```

Enabling Secure Adapter Firmware Update

Request:

```
<configConfMo inHierarchical="false" cookie="1472686105/f4cebeba-3b66-1b66-8003-fad0998bc800"

 dn="sys/rack-unit-1">
  <inConfig>
    <computeRackUnit adaptorSecureUpdate="enabled" dn="sys/rack-unit-1"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1" cookie="1472686105/f4cebeba-3b66-1b66-8003-fad0998bc800"
response="yes">
 <outConfig>
  <computeRackUnit dn="sys/rack-unit-1" adminPower="policy" availableMemory="131072"
   model="UCSC-Cxxx-MxS" memorySpeed="1866" name="UCS Cxxx MxS" numOfAdaptors="1"
   numOfCores="16" numOfCoresEnabled="16" numOfCpus="2"
   numOfEthHostIfs="2" numOfFcHostIfs="2" numOfThreads="32" operPower="on"
   originalUuid="E320FC46-31AC-4D93-BA64-C7FE5A139628" presence="equipped"
   serverId="1" serial="FCH2005V1E4" totalMemory="131072" usrLbl=""
   uuid="E320FC46-31AC-4D93-BA64-C7FE5A139628"
   vendor="Cisco Systems Inc" cimcResetReason="graceful-reboot "
   adaptorSecureUpdate="Enabled" status="modified"/>
 </outConfig>
</configConfMo>
```

Viewing the Status of Enabling Secure Firmware Update for Adapters

Request:

```
<configResolveDn cookie="1472686105/f4cebeba-3b66-1b66-8003-fad0998bc800"
 inHierarchical="false" dn="sys/rack-unit-1"/>
```

Response:

```
<configResolveDn cookie="1472686105/f4cebeba-3b66-1b66-8003-fad0998bc800"
 response="yes" dn="sys/rack-unit-1">
   <computeRackUnit dn="sys/rack-unit-1" adminPower="policy" availableMemory="131072"
    model="UCSC-Cxxx-MxS" memorySpeed="1866" name="UCS Cxxx MxS" numOfAdaptors="1"
    numOfCores="16" numOfCoresEnabled="16" numOfCpus="2" numOfEthHostIfs="2"
    numOfFcHostIfs="2" numOfThreads="32" operPower="on"
    originalUuid="E320FC46-31AC-4D93-BA64-C7FE5A139628" presence="equipped"
    serverId="1" serial="FCH2005V1E4" totalMemory="131072" usrLbl=""
    uuid="E320FC46-31AC-4D93-BA64-C7FE5A139628" vendor="Cisco Systems Inc"
```

```
    cimcResetReason="graceful-reboot " adaptorSecureUpdate="Enabled" />
  </outConfig>
</configConfMo>
```

Uploading BIOS Profile

Request:

```
<configConfMo cookie="1456439239/b9c2ed1f-2c9f-1c9f-8008-40da39fc1d88"
dn="sys/rack-unit-1/bios/profile-mgmt/upload-bios-profile" inHierarchical="false">
  <inConfig>
    <uploadBiosProfile protocol="scp" user="user" remoteServer="10.10.10.10"
    remoteFile="/tmp/performance" pwd="cisco123"
    dn="sys/rack-unit-1/bios/profile-mgmt/upload-bios-profile"/>
  </inConfig>
</configConfMo>
```

Retrieving List of Downloaded BIOS Profiles

Request:

```
<configResolveClass cookie="1464957311/f56dfe52-345e-145e-800e-4e0916608cc0"
inHierarchical="false" classId="biosProfile"/>
```

Response:

```
<configResolveClass cookie="1464957311/f56dfe52-345e-145e-800e-4e0916608cc0"
response="yes" classId="biosProfile">
  <outConfigs>
     <biosProfile name="Performance" isActive="yes" adminAction="no-op"
       dn="sys/rack-unit-1/bios/profile-mgmt/bios-profile-Performance"  />
    <biosProfile name="Virtualization" isActive="no" adminAction="no-op"
       dn="sys/rack-unit-1/bios/profile-mgmt/bios-profile-Virtualization" />
    <biosProfile name="Lowpower" isActive="no" adminAction="no-op"
       dn="sys/rack-unit-1/bios/profile-mgmt/bios-profile-Lowpower" />
    <biosProfile name="Cisco_backup" isActive="no" adminAction="no-op"
       dn="sys/rack-unit-1/bios/profile-mgmt/bios-profile-Cisco_backup" />
  </outConfigs>
</configResolveClass>
```

Activating a Specific BIOS Profile

Request:

```
<configConfMo cookie="1456439239/b9c2ed1f-2c9f-1c9f-8008-40da39fc1d88"
  dn="sys/rack-unit-1/bios/profile-mgmt/bios-profile-Virtualization" inHierarchical="false">

    <inConfig>
        <biosProfile dn="sys/rack-unit-1/bios/profile-mgmt/
        bios-profile-Virtualization" adminAction="activate"/>
    </inConfig>
</configConfMo>
```

Deleting a BIOS Profile

Request:

```
<configConfMo cookie="1456439239/b9c2ed1f-2c9f-1c9f-8008-40da39fc1d88"
```

```
   dn="sys/rack-unit-1/bios/profile-mgmt/bios-profile-Virtualization" inHierarchical="false">
      <inConfig>
         <biosProfile dn="sys/rack-unit-1/bios/profile-mgmt/bios-profile-Virtualization"
         adminAction="delete"/>
      </inConfig>
</configConfMo>
```

Taking Backup of the Current BIOS Settings

Request:

```
<configResolveClass cookie="1464957311/f56dfe52-345e-145e-800e-4e0916608cc0"
inHierarchical="false" classId="biosProfile"/>
<configConfMo cookie="1456439239/b9c2ed1f-2c9f-1c9f-8008-40da39fc1d88"
  dn="sys/rack-unit-1/bios/profile-mgmt" inHierarchical="false">
      <inConfig>
         <biosProfileManagement dn="sys/rack-unit-1/bios/profile-mgmt"
         adminAction="backup"/>
      </inConfig>
</configConfMo>
```

Retrieving a List of Tokens for the BIOS Profiles

Request:

```
<configResolveClass cookie="1464957311/f56dfe52-345e-145e-800e-4e0916608cc0"
inHierarchical="false" classId="BIOSprofileToken"/>
```

Response:

```
<configResolveClass cookie="1464957311/f56dfe52-345e-145e-800e-4e0916608cc0"
response="yes" classId="BIOSprofileToken">
  <outConfigs>
     <BIOSprofileToken name="TPMAdminCtrl" configuredValue="disabled"
     actualValue="disabled" dn="sys/rack-unit-1/bios/profile-mgmt/
     bios-profile-Performance/token-TPMAdminCtrl"  />
  </outConfigs>
</configResolveClass>
```

Retrieving the Currently Configured User Search Precedence

Request:

```
<configResolveClass cookie="1474080970/a8ae85db-ab3c-1cab-8006-be18652a6ca4"
inHierarchical="false" classId="aaaLdap"/>
```

Response:

```
<configResolveClass cookie="1474080970/a8ae85db-ab3c-1cab-8006-be18652a6ca4"
response="yes" classId="aaaLdap">
  <outConfigs>
    <aaaLdap dn="sys/ldap-ext" adminState="enabled" basedn="DC=new,DC=com"
    domain="new.com" filter="sAMAccountName" attribute="CiscoAvPair" timeout="60"
    encryption="enabled" locateDirectoryUsingDNS="no" dnsDomainSource="extracted-domain"
    dnsSearchDomain="" dnsSearchForest="" ldapServer1="test.com"
    ldapServerPort1="389" ldapServer2="10.10.10.61" ldapServerPort2="389"
    ldapServer3="" ldapServerPort3="389" ldapServer4="" ldapServerPort4="3268"
    ldapServer5="" ldapServerPort5="3268" ldapServer6="" ldapServerPort6="3268"
```

```
    bindMethod="login-credentials" bindDn="" password="" groupAuth="enabled"
    groupAttribute="memberOf" userSearchPrecedence="ldap-user-db"/>
  </outConfigs>
</configResolveClass>
```

Configuring User Search Precedence from Local User Database

Request:

```
<configConfMo cookie="1474080970/a8ae85db-ab3c-1cab-8006-be18652a6ca4"
inHierarchical="false" dn="sys/ldap-ext" >
   <inConfig>
      <aaaLdap userSearchPrecedence="local-user-db" dn="sys/ldap-ext" />
   </inConfig>
</configConfMo>
```

Response:

```
<configResolveClass cookie="1474080970/a8ae85db-ab3c-1cab-8006-be18652a6ca4"
response="yes" classId="aaaLdap">
   <outConfigs>
      <aaaLdap dn="sys/ldap-ext" adminState="enabled" basedn="DC=new,DC=com"
      domain="new.com" filter="sAMAccountName" attribute="CiscoAvPair" timeout="60"
      encryption="enabled" locateDirectoryUsingDNS="no" dnsDomainSource="extracted-domain"

      dnsSearchDomain="" dnsSearchForest="" ldapServer1="test.com" ldapServerPort1="389"
      ldapServer2="10.10.10.61" ldapServerPort2="389" ldapServer3=""
      ldapServerPort3="389" ldapServer4="" ldapServerPort4="3268" ldapServer5=""
      ldapServerPort5="3268" ldapServer6="" ldapServerPort6="3268"
      bindMethod="login-credentials" bindDn="" password="" groupAuth="enabled"
      groupAttribute="memberOf" userSearchPrecedence="local-user-db"/>
   </outConfigs>
</configResolveClass>
```

Configuring User Search Precedence from LDAP User Database

Request:

```
<configConfMo cookie="1474080970/a8ae85db-ab3c-1cab-8006-be18652a6ca4"
inHierarchical="false" dn="sys/ldap-ext" >
   <inConfig>
      <aaaLdap userSearchPrecedence="ldap-user-db" dn="sys/ldap-ext" />
   </inConfig>
</configConfMo>
```

Response:

```
<configResolveClass cookie="1474080970/a8ae85db-ab3c-1cab-8006-be18652a6ca4"
response="yes" classId="aaaLdap">
   <outConfigs>
      <aaaLdap dn="sys/ldap-ext" adminState="enabled" basedn="DC=new,DC=com"
      domain="new.com" filter="sAMAccountName" attribute="CiscoAvPair" timeout="60"
      encryption="enabled" locateDirectoryUsingDNS="no" dnsDomainSource="extracted-domain"

      dnsSearchDomain="" dnsSearchForest="" ldapServer1="test.com" ldapServerPort1="389"
      ldapServer2="10.10.10.61" ldapServerPort2="389" ldapServer3=""
      ldapServerPort3="389" ldapServer4="" ldapServerPort4="3268"
      ldapServer5="" ldapServerPort5="3268" ldapServer6="" ldapServerPort6="3268"
      bindMethod="login-credentials" bindDn="" password="" groupAuth="enabled"
```

```
      groupAttribute="memberOf" userSearchPrecedence="ldap-user-db"/>
   </outConfigs>
</configResolveClass>
```

Viewing the Cisco IMC vMedia Saved Mapping

Request:

```
<configResolveClass cookie="0000012218/d9022327-0002-1002-8007-0c0bcf506dd4"
inHierarchical="false" classId="commSavedVMediaMap"/>
```

Response:

```
<outConfigs>
<commSavedVMediaMap volumeName="huu" map="www"
  remoteShare="https://10.10.10.10/Browse/ISO-Images/"
  remoteFile="8GB_HDD.img" mountOptions="noauto" mappingStatus=""
  password="" adminAction="no-op"
  dn="sys/svc-ext/vmedia-svc/saved-vmmap-huu" >
</commSavedVMediaMap>
</outConfigs>
```

Configuring Cisco IMC vMedia Mapping

Request:

```
<configConfMo cookie="$COOKIE$ " dn="sys/svc-ext/vmedia-svc/vmmap-HUU">
      <inConfig>
            <commVMediaMap dn="sys/svc-ext/vmedia-svc/vmmap-HUU"
            volumeName="HUU" map="nfs" remoteShare="10.10.196.156:/home/hprabhu/bmc"
            remoteFile="huu/huu-3.0-23.iso" mountOptions="nolock," status="created" />
      </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="$COOKIE$ " dn="sys/svc-ext/vmedia-svc/vmmap-RHEL">
      <inConfig>
            <commVMediaMap dn="sys/svc-ext/vmedia-svc/vmmap-RHEL"
            volumeName="HUU" map="cifs" remoteShare="//10.10.196.156/home/hprabhu/bmc"
            remoteFile=”rhel.iso" mountOptions="username=xyz,password=123" status="created"
 />
      </inConfig>
</configConfMo>
```

Unmapping Cisco IMC vMedia Mapping

Request:

```
<configConfMo cookie="$COOKIE$ " dn="sys/svc-ext/vmedia-svc/vmmap-HUU">
      <inConfig>
            <commVMediaMap dn="sys/svc-ext/vmedia-svc/vmmap-HUU"
            volumeName="HUU" map="nfs" status="deleted" />
      </inConfig>
</configConfMo>
```

To provide secure access to BMC, you can now set a filter to allow only a selected set of IPs to access it. This option provides four slots for storing IP addresses. You can either assign a single IP address or a range of IP

addresses while setting the IP filters. Access to BMC or CMC is not secure if IP Filtering is not enabled (or it is enabled but you have not set filters) and can be accessed by anyone.

The following examples show how to enable and set the IP filtering for a single IP address and a range of IP addresses:

Enabling and Setting IP Filtering for Secure BMC Access

Request:

```
<configConfMo cookie="1452215343/72eabb72-28c8-18c8-8002-9a6ae7925a88"
inHierarchical="false" dn="sys/rack-unit-1/mgmt/if-1/ip-filter">
  <inConfig>
    <ipFiltering dn="sys/rack-unit-1/mgmt/if-1/ip-filter" enable="yes"
     filter1="10.10.10.160-10.10.10.170"
     filter2="10.10.10.33-10.10.150.32"
     filter3="10.10.10.161-10.10.10.163"
     filter4="2001:db8::-2001:db8::0001"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/mgmt/if-1/ip-filter"
cookie="1452215343/72eabb72-28c8-18c8-8002-9a6ae7925a88" response="yes">
<outConfig>
  <ipFiltering dn="sys/rack-unit-1/mgmt/if-1/ip-filter" enable="yes"
   filter1="10.10.10.10-10.10.10.20"
   filter2="10.10.10.33-10.10.10.40"
   filter3="10.10.10.161-10.10.10.163"
   filter4="2001:db8::- 2001:db8::0001" adminAction="no-op"
  status="modified"/>
  </outConfig>
</configConfMo>
```

Disabling IP Filtering

Request:

```
<configConfMo cookie="1452215343/72eabb72-28c8-18c8-8002-9a6ae7925a88"
 inHierarchical="false" dn="sys/rack-unit-1/mgmt/if-1/ip-filter">
 <inConfig>
  <ipFiltering dn="sys/rack-unit-1/mgmt/if-1/ip-filter" enable="no"/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/mgmt/if-1/ip-filter"
 cookie="1452215343/72eabb72-28c8-18c8-8002-9a6ae7925a88" response="yes">
<outConfig>
 <ipFiltering dn="sys/rack-unit-1/mgmt/if-1/ip-filter"
   enable="no" filter1="10.10.10.160-10.10.10.170"
   filter2="10.10.10.33-10.10.150.32" filter3="10.10.10.161-10.10.10.163"
   filter4="2001:db8::-2001:db8::0001" adminAction="no-op"
   status="modified"/>
  </outConfig>
</configConfMo>
```

Clearing a Specific IP Filter

Request:

```
<configConfMo cookie="1452215343/72eabb72-28c8-18c8-8002-9a6ae7925a88"
inHierarchical="false" dn="sys/rack-unit-1/mgmt/if-1/ip-filter">
<inConfig>
  <ipFiltering dn="sys/rack-unit-1/mgmt/if-1/ip-filter" adminAction="clearFilter1"/>
</inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/mgmt/if-1/ip-filter"
cookie="1452215343/72eabb72-28c8-18c8-8002-9a6ae7925a88" response="yes">
<outConfig>
 <ipFiltering dn="sys/rack-unit-1/mgmt/if-1/ip-filter" enable="no"
  filter1="" filter2="10.10.10.33-10.10.10.32"
  filter3="10.10.10.10-10.10.10.10" filter4="2001:db8::-2001:db8::0001"
  adminAction="no-op" status="modified"/>
 </outConfig>
</configConfMo>
```

Clearing all IP Filters

Request:

```
<configConfMo cookie="1452215343/72eabb72-28c8-18c8-8002-9a6ae7925a88"
  inHierarchical="false" dn="sys/rack-unit-1/mgmt/if-1/ip-filter">
<inConfig>
  <ipFiltering dn="sys/rack-unit-1/mgmt/if-1/ip-filter" adminAction="clearAll"/>
 </inConfig>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/mgmt/if-1/ip-filter"
cookie="1452215343/72eabb72-28c8-18c8-8002-9a6ae7925a88" response="yes">
 <outConfig>
  <ipFiltering dn="sys/rack-unit-1/mgmt/if-1/ip-filter"
   enable="no" filter1="" filter2="" filter3="" filter4=""
   adminAction="no-op" status="modified"/>
  </outConfig>
</configConfMo>
```

The following example shows how to generate and save the hardware inventory. The example uses the SCP protocol, you can also use the HTTP, FTP, SFTP, and TFTP protocols while performing this task.

Generating and Exporting Hardware Inventory to Remote Server

Request:

```
<configConfMo cookie="1453259331/c15fc890-29bb-19bb-8003-a2fa28e6a274"
inHierarchical="true" dn="sys/inventory">
<inConfig>
 <mgmtInventory pwd="cisco123" user="user" adminState="trigger"
   hostname="10.10.10.10" remoteFile="/home/user/pynj/FP_XMLAPI_SCP.txt"
   proto="scp" dn="sys/inventory" >
  </mgmtInventory>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo cookie="1453259331/c15fc890-29bb-19bb-8003-a2fa28e6a274"
dn="sys/inventory" response="yes" >
 <outConfig>
  <mgmtInventory dn="sys/inventory" adminState="triggered" proto="none"
   hostname="" remoteFile="" user="" pwd="" fsmStatus="IN-PROGRESS"
   progress="5%" status="modified" >
 </mgmtInventory>
 </outConfig>
</configConfMo>
```

Viewing SSD Smart Information

Request:

```
<configResolveDn cookie="1474028533/2aff24a6-3c9f-1c9f-8004-1aa09e4965e8"
inHierarchical="false" dn="sys/rack-unit-1/board/storage-SAS-SAS/pd-10/general-props"/>
```

Response:

```
<outConfig>
<storageLocalDiskProps dn="sys/rack-unit-1/board/storage-SAS-SAS/pd-10/general-props"
  physicalDrive="10" pdStatus="Online" health="Good" enclosureDeviceId="13" deviceId="30"
  sequenceNumber="2" mediaErrorCount="0" otherErrorCount="0" predictiveFailureCount="0"
  linkSpeed="6.0 Gb/s" interfaceType="SATA" mediaType="SSD" blockSize="512"
  blockCount="1875385008" bootDrive="false" rawSize="915715 MB" nonCoercedSize="915203 MB"

  coercedSize="914573 MB" powerState="active" sasAddress0="500fec85874ad189"
  sasAddress1="0x0" physicalBlockSize="512" powerCycleCount="41" powerOnHours="1006"
  percentageLifeLeft="80" wearStatusInDays="130" operatingTemperature="70"
  copybackOperationStatus="Unknown" copybackPercentComplete="0%"
  percentageReservedCapConsumed="Not Available" timeOfLastRefresh=""
  capacityConsumed="Not Available" >
 </storageLocalDiskProps>
</outConfig>
</configResolveDn>
```

Viewing Product Asset Tag

Request:

```
<configResolveClass cookie="1455087241/daaba151-2b65-1b65-8003-0d0bcf506dd4"
   response="yes" classId="computeRackUnit">
<outConfigs>
```

Response:

```
<configResolveClass cookie="1455087241/daaba151-2b65-1b65-8003-0d0bcf506dd4"
response="yes" classId="computeRackUnit">
<outConfigs>
<computeRackUnit dn="sys/rack-unit-1" adminPower="policy"
   availableMemory="393216" model="UCSC-Cxxx-MxS" memorySpeed="1866" name="UCS Cxxx MxS"
   numOfAdaptors="2" numOfCores="20" numOfCoresEnabled="20" numOfCpus="2"
   numOfEthHostIfs="4" numOfFcHostIfs="4" numOfThreads="40" operPower="on"
   originalUuid="62FC0EEC-69AF-4CCD-9B1B-02280115EC80" presence="equipped"
   serverId="1" serial="FCH1848V11Y" totalMemory="393216" usrLbl="adsadsa"
   uuid="62FC0EEC-69AF-4CCD-9B1B-02280115EC80" vendor="Cisco Systems Inc"
   cimcResetReason="graceful-reboot " assetTag="CIMC-QA"/>
 </outConfigs>
</configResolveClass>
```

Changing Asset Tag

Request:

```
<configConfMo cookie="1455093669/2cddda0b-2b67-1b67-8004-0d0bcf506dd4"
inHierarchical="false" dn="sys/rack-unit-1">
<inConfig>
<computeRackUnit dn="sys/rack-unit-1" assetTag="AssetTag%#1234567890 " >
</computeRackUnit>
</inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1" cookie="1455093669/2cddda0b-2b67-1b67-8004-0d0bcf506dd4"

response="yes">
<outConfig>
<computeRackUnit dn="sys/rack-unit-1" adminPower="policy" availableMemory="393216"
 model="UCSC-Cxxx-MxS" memorySpeed="1866" name="UCS Cxxx MxS" numOfAdaptors="2"
 numOfCores="20" numOfCoresEnabled="20" numOfCpus="2" numOfEthHostIfs="4"
 numOfFcHostIfs="4" numOfThreads="40" operPower="on"
 originalUuid="62FC0EEC-69AF-4CCD-9B1B-02280115EC80" presence="equipped"
 serverId="1" serial="FCH1848V11Y" totalMemory="393216" usrLbl="adsadsa"
 uuid="62FC0EEC-69AF-4CCD-9B1B-02280115EC80" vendor="Cisco Systems Inc"
 cimcResetReason="graceful-reboot " assetTag="AssetTag%#1234567890 ""
 status="modified"/>
 </outConfig>
</configConfMo>
```

Unmapping and Saving vMedia Mapping

Request:

```
<configConfMo cookie="0000013783/da92cfae-0003-1003-800a-0c0bcf506dd4"
 dn="sys/svc-ext/vmedia-svc/vmmap-huu" inHierarchical="false">
<inConfig>
 <commVMediaMap dn="sys/svc-ext/vmedia-svc/vmmap-huu"
  adminAction="save-unmapped-volume"/>
</inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/svc-ext/vmedia-svc/vmmap-huu"
  cookie="0000013783/da92cfae-0003-1003-800a-0c0bcf506dd4" response="yes">
<outConfig>
</outConfig>
</configConfMo>
```

Deleting a Saved vMedia Mapping

Request:

```
<configConfMo cookie="0000017389/42642893-0004-1004-800d-0c0bcf506dd4"
dn="sys/svc-ext/vmedia-svc" inHierarchical="false">
<inConfig>
```

```
 <commVMedia dn="sys/svc-ext/vmedia-svc"
  adminAction="delete-all-saved-mappings"/>
</inConfig>
</configConfMo>
```

Response:

```
<outConfig>
<commVMedia dn="sys/svc-ext/vmedia-svc" adminState="enabled" activeSessions="0"
 encryptionState="disabled" lowPowerUsbState="enabled" adminAction="no-op" status="modified"
 >
 </commVMedia>
</outConfig>
</configConfMo>
```

Remapping the Saved vMedia Mapping

Request:

```
<configConfMo cookie="0000017389/42642893-0004-1004-800d-0c0bcf506dd4"
dn="sys/svc-ext/vmedia-svc/saved-vmmap-huu" inHierarchical="false">
<inConfig>
 <commSavedVMediaMap dn="sys/svc-ext/vmedia-svc/saved-vmmap-huu"
  adminAction="remap-volume"/>
</inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/svc-ext/vmedia-svc/saved-vmmap-huu"
    cookie="0000017389/42642893-0004-1004-800d-0c0bcf506dd4" response="yes">
  <outConfig>
     <commSavedVMediaMap volumeName="huu" map="www"
        remoteShare="https://10.10.10.10/Browse/ISO-Images/"
        remoteFile="8GB_HDD.img" mountOptions="noauto"
        mappingStatus="" password="" adminAction="no-op"
        n="sys/svc-ext/vmedia-svc/saved-vmmap-huu" status="modified" >
    </commSavedVMediaMap>
  </outConfig>
```

Viewing Password Expiry Details

Request:

```
<configResolveClass cookie="1475331315/175db596-3dcf-1dcf-8002-3ae500da0ee0"
inHierarchical="false"
classId="aaaUserPasswordExpiration"/>'
```

Response:

```
<outConfigs>
 <aaaUserPasswordExpiration dn="sys/user-ext/password-expiration" passwordExpiryDuration="249"

  passwordHistory="4" passwordNotificationPeriod="13" passwordGracePeriod="4"
  adminAction="no-op" >
 </aaaUserPasswordExpiration>
```

```
 </outConfigs>
</configResolveClass>
```

Configuring Password Expiry for Users

Request:

```
<configConfMo cookie="1475835380/85150ac1-3e44-1e44-8004-e5de29114ca4" inHierarchical="false"

dn="sys/user-ext/password-expiration">
<inConfig>
  <aaaUserPasswordExpiration dn="sys/user-ext/password-expiration" passwordExpiryDuration="55"

  passwordHistory="3" passwordNotificationPeriod="3" passwordGracePeriod="3">
 </aaaUserPasswordExpiration>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/user-ext/password-expiration"
cookie="1475835380/85150ac1-3e44-1e44-8004-e5de29114ca4" response="yes">
<outConfig>
<aaaUserPasswordExpiration dn="sys/user-ext/password-expiration"
 passwordExpiryDuration="55" passwordHistory="3" passwordNotificationPeriod="3"
 passwordGracePeriod="3" adminAction="no-op" status="modified" >
</aaaUserPasswordExpiration>
 </outConfig>
</configConfMo>
```

Restoring Password Expiry Parameters to Defaults

Request:

```
<configConfMo cookie="1476020227/fccbae5a-3e6e-1e6e-8007-e5de29114ca4"
 inHierarchical="false" dn="sys/user-ext/password-expiration">
 <inConfig>
  <aaaUserPasswordExpiration dn="sys/user-ext/password-expiration"
   adminAction="restore-default" >
 </aaaUserPasswordExpiration>
</inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/user-ext/password-expiration"
cookie="1476020227/fccbae5a-3e6e-1e6e-8007-e5de29114ca4" response="yes">
<outConfig>
 <aaaUserPasswordExpiration dn="sys/user-ext/password-expiration"
  passwordExpiryDuration="0" passwordHistory="0" passwordNotificationPeriod="15"
  passwordGracePeriod="0" adminAction="no-op" status="modified" >
 </aaaUserPasswordExpiration>
</outConfig>
</configConfMo>
```

Examples of Common Server Management Tasks Contd.

The examples in this section show how to use the Cisco IMC XML API to perform common server management tasks. Each example shows the XML API request followed by the response from Cisco IMC.

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Configuring SMTP Server For Receiving Email Alerts

Get Request

```
<configResolveClass cookie="d55a90fac7/82dcfd65-f21e-7fd5-98b8-c31fdd7c988e"
inHierarchical="false" classId="mailRecipient"/>
```

Response

```
<configResolveClass cookie="d55a90fac7/82dcfd65-f21e-7fd5-98b8-c31fdd7c988e"
response="yes" classId="mailRecipient">
  <outConfigs>
    <mailRecipient id="1" email="xxxxx@cisco.com" severity="minor" adminAction="no-op"
testMailStatus="na" dn="sys/svc-ext/mail-alert-svc/mail-recipient-1"/>
    <mailRecipient id="2" email="xxxxx@cisco.com" severity="major" adminAction="no-op"
testMailStatus="na" dn="sys/svc-ext/mail-alert-svc/mail-recipient-2"/>
    <mailRecipient id="3" email="test@cisco.com" severity="informational"
adminAction="no-op" testMailStatus="na" dn="sys/svc-ext/mail-alert-svc/mail-recipient-3"/>
    <mailRecipient id="4" email="user@cisco.com" severity="informational"
adminAction="no-op"  testMailStatus="na" dn="sys/svc-ext/mail-alert-svc/mail-recipient-4"/>

  </outConfigs>
</configResolveClass>
```

Set Request

Configure SMTP Properties along with mail recipients

```
<configConfMo cookie="1531920597/067cf5f8-7147-1147-8003-1a4c5a74a254"
inHierarchical="false" dn="sys/svc-ext/mail-alert-svc">
    <inConfig>
        <commMailAlert dn="sys/svc-ext/mail-alert-svc"  adminState="enabled"
ipAddress="1.1.1.1"  port="25" fromAddress="abc@cisco.com" >
            <mailRecipient dn="sys/svc-ext/mail-alert-svc/mail-recipient-1"
email="test@cisco.com" severity="informational"/>
            <mailRecipient dn="sys/svc-ext/mail-alert-svc/mail-recipient-2"
email="user@cisco.com" severity="major"/>
       </commMailAlert>
    </inConfig>
</configConfMo>
```

Request Configure SMTP Properties Along with Mail Recipients without Individual Severity

```
<configConfMo cookie="1531920597/067cf5f8-7147-1147-8003-1a4c5a74a254"
inHierarchical="false" dn="sys/svc-ext/mail-alert-svc">
    <inConfig>
        <commMailAlert dn="sys/svc-ext/mail-alert-svc"  adminState="enabled"
ipAddress="1.1.1.1"  port="25" fromAddress="abc@cisco.com" >
            <mailRecipient dn="sys/svc-ext/mail-alert-svc/mail-recipient-1"
 email="test@cisco.com"/>
            <mailRecipient dn="sys/svc-ext/mail-alert-svc/mail-recipient-2"
 email="user@cisco.com"/>
       </commMailAlert>
    </inConfig>
</configConfMo>
```

Request Configure only Mail Recipient

```
<configConfMo cookie="1531920597/067cf5f8-7147-1147-8003-1a4c5a74a254"
inHierarchical="false" dn="sys/svc-ext/mail-alert-svc/mail-recipient-3">
     <inConfig>
          <mailRecipient dn="sys/svc-ext/mail-alert-svc/mail-recipient-3"
email="user@cisco.com"  severity="major"/>
     </inConfig>
</configConfMo>
```

Request Configure only Mail Recipient without Severity

```
<configConfMo cookie="1531920597/067cf5f8-7147-1147-8003-1a4c5a74a254"
inHierarchical="false" dn="sys/svc-ext/mail-alert-svc/mail-recipient-3">
     <inConfig>
          <mailRecipient dn="sys/svc-ext/mail-alert-svc/mail-recipient-3"
email="user@cisco.com"/>
     </inConfig>
</configConfMo>
```

Resetting All Components to Factory Defaults

Request:

```
<configConfMo dn='sys/rack-unit-1'
cookie="1484920480/dd879b5e-8746-1687-8003-be18652a6ca4" inHierarchical="true">
 <inConfig>
   <computeRackUnit dn='sys/rack-unit-1' resetComponents='all'>
   </computeRackUnit>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn='sys/rack-unit-1'
cookie="1484920480/dd879b5e-8746-1687-8003-be18652a6ca4" response="yes">
  <outConfig>
   <computeRackUnit dn="sys/rack-unit-1" adminPower="policy"
   availableMemory="40960" model="UCSC-Cxxx-MxS" memorySpeed="2133"
   name="UCS Cxxx MxS" numOfAdaptors="1" numOfCores="14" numOfCoresEnabled="14"
   numOfCpus="1" numOfEthHostIfs="2" numOfFcHostIfs="2"  numOfThreads="28"
   operPower="on" originalUuid="414949AC-22D6-4D0D-B0C0-F7950E9217C1"
   presence="equipped" serverId="1" serial="FCH1834V23X" totalMemory="40960"
   usrLbl="" uuid="414949AC-22D6-4D0D-B0C0-F7950E9217C1" vendor="Cisco Systems Inc"
   cimcResetReason="graceful-reboot " assetTag="Unknown" adaptorSecureUpdate="Enabled"
   resetComponents="components" storageResetStatus="Completed" vicResetStatus="Completed"
   bmcResetStatus="Completed" status="modified"/>
 </outConfig>
</configConfMo>
```

Resetting Storage, VIC, and BMC Components to Factory Defaults

Request:

```
<configConfMo dn='sys/rack-unit-1'
cookie="1484920480/dd879b5e-8746-1687-8003-be18652a6ca4" inHierarchical="true">
 <inConfig>
   <computeRackUnit dn='sys/rack-unit-1' resetComponents='storage,vic,bmc'>
   </computeRackUnit>
 </inConfig>
```

```
</configConfMo>
```

Response:

```
<configConfMo dn='sys/rack-unit-1'
cookie="1484920480/dd879b5e-8746-1687-8003-be18652a6ca4" response="yes">
  <outConfig>
   <computeRackUnit dn="sys/rack-unit-1" adminPower="policy"
   availableMemory="40960" model="UCSC-Cxxx-MxS" memorySpeed="2133"
   name="UCS Cxxx MxS" numOfAdaptors="1" numOfCores="14" numOfCoresEnabled="14"
   numOfCpus="1" numOfEthHostIfs="2" numOfFcHostIfs="2"  numOfThreads="28"
   operPower="on" originalUuid="414949AC-22D6-4D0D-B0C0-F7950E9217C1"
   presence="equipped" serverId="1" serial="FCH1834V23X" totalMemory="40960"
   usrLbl="" uuid="414949AC-22D6-4D0D-B0C0-F7950E9217C1" vendor="Cisco Systems Inc"
   cimcResetReason="graceful-reboot " assetTag="Unknown" adaptorSecureUpdate="Enabled"
   resetComponents="components" storageResetStatus="Completed" vicResetStatus="Completed"
   bmcResetStatus="Completed" status="modified"/>
 </outConfig>
</configConfMo>
```

Enabling or Disabling the 6G or 12G Mixed Mode Speed on SAS Expander

Request:

```
<configConfMo dn='sys/rack-unit-1/sas-expander-1'
cookie="1484806041/908bffd4-6c46-166c-807c-67f2642a6ca4" inHierarchical="false" >
 <inConfig>
 <storageSasExpander dn='sys/rack-unit-1/sas-expander-1' mixed6G12GDriveSupport='Enabled'/>

 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn='sys/rack-unit-1/sas-expander-1'
 cookie='1484806041/908bffd4-6c46-166c-807c-67f2642a6ca4' response="yes"
 <outConfig>
  <storageSasExpander id="1" name="SASEXP1" currentFwVersion="04.08.01_B075"
  sasAddress="N/A" description="Storage controller - SAS Expander"
  mixed6G12GDriveSupport="Pending" status="modified" >
  </storageSasExpander>
 </outConfig>
</configConfMo>
```

Note To disable the 6G or 12G Mixed Mode Speed, use the "mixed6G12GDriveSupport=disabled" attribute in the command.

Clearing All Configurations of a Storage Controller

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA'
cookie='1488466281/3ee53bc7-49c1-19c1-8004-505545067ff0' inHierarchical='true'>
```

```
 <inConfig>
  <storageController dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA'
  adminAction='clear-all-config' />
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA'
cookie='1488466281/3ee53bc7-49c1-19c1-8004-505545067ff0' response="yes">
  <outConfig>
    <storageController id="SLOT-HBA" model="Cisco 12G SAS Modular Raid Controller"
     ...
     adminAction="no-op"
    dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA" status="modified">
    <storageControllerProps rn="controller-props" pciSlot="SLOT-HBA" health="Good"
    ...
    serial="" firmwarePackageBuild="24.12.1-0107"
    ttyLogStatus="Not Downloaded" status="modified"/>
    <storageControllerHealth rn="controller-health" id="SLOT-HBA"
    health="Good" status="modified"/>
    <generatedStorageControllerKeyId rn="gen-key-id"
    generatedKeyId="UCSC-MRAID12G__204aeea1" status="modified"/>
    <suggestedStorageControllerSecurityKey rn="suggested-sec-key"
    suggestedSecurityKey="4m5szE8z6@ELQ3Jlb3UkxbPI4m5szE8z" status="modified"/>
    <selfEncryptStorageController rn="ctr-self-encrypt" keyId="x" securityKey="Security
key"
    existingSecurityKey="Existing security key"
    keyManagement="" adminAction="no-op" status="modified"/>
    <storageRaidBattery rn="raid-battery" batteryType="No Battery" health="N/A"
    batteryStatus="BBU Not Present" batteryPresent="false" adminAction="no-op"
status="modified"/>
    <storageVirtualDriveCreatorUsingUnusedPhysicalDrive rn="virtual-drive-create"
    ...
    createdVirtualDriveDn="" operStatus="" adminAction="no-op"
    adminState="triggered" status="modified">
    <storageUnusedLocalDisk id="1" pdStatus="Unconfigured Good" coercedSize="475883 MB"
    health="Good" mediaType="HDD" status="modified"/>
    <storageLocalDisk id="1" pdStatus="Unconfigured Good" health="Good"
    ...
    foreignLocked="no" adminAction="no-op" rn="pd-1" status="modified">
   <storageLocalDiskProps rn="general-props" physicalDrive="1" pdStatus="Unconfigured Good"

    ...
    timeOfLastRefresh="" status="modified"/>
    <storageOperation rn="storage-operation" lropInProgress="false"
    currentLrop="No operation in progress" progressPercent="0"
    elapsedSeconds="0" status="modified"/>
    </storageLocalDisk>
    <firmwareRunning rn="fw-boot-loader"
    description="LSI Storage controller currently running boot loader firmware version"
    ...
    status="modified"/>
    <firmwareRunning rn="fw-system"
    description="LSI Storage controller currently running firmware version"
    ...
    status="modified"/>
    <firmwareBootDefinition rn="fw-boot-def"
    type="storage-controller" status="modified">
    <firmwareBootUnit rn="bootunit-combined"
    description="LSI Storage controller startup BIOS firmware version"
    ...
```

```
    status="modified"/>
    </firmwareBootDefinition>
    <storageControllerSettings rn="controller-settings" pciSlot="SLOT-HBA"
    ...
    autoEnhancedImport="true" status="modified"/>
   </storageController>
 </outConfig>
</configConfMo>
```

Resetting Storage Controller to Factory Defaults

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA'
cookie='1488466281/3ee53bc7-49c1-19c1-8004-505545067ff0' inHierarchical='true'>
 <inConfig>
  <storageController dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA'
  adminAction='reset-default-config' />
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA'
cookie='1488466281/3ee53bc7-49c1-19c1-8004-505545067ff0' response="yes">
  <outConfig>
    <storageController id="SLOT-HBA" model="Cisco 12G SAS Modular Raid Controller"
     ...
     adminAction="no-op"
    dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA" status="modified">
    <storageControllerProps rn="controller-props" pciSlot="SLOT-HBA" health="Good"
    ...
    serial="" firmwarePackageBuild="24.12.1-0107"
    ttyLogStatus="Not Downloaded" status="modified"/>
    <storageControllerHealth rn="controller-health" id="SLOT-HBA"
    health="Good" status="modified"/>
    <generatedStorageControllerKeyId rn="gen-key-id"
    generatedKeyId="UCSC-MRAID12G__204aeea1" status="modified"/>
    <suggestedStorageControllerSecurityKey rn="suggested-sec-key"
    suggestedSecurityKey="4m5szE8z6@ELQ3Jlb3UkxbPI4m5szE8z" status="modified"/>
    <selfEncryptStorageController rn="ctr-self-encrypt" keyId="x" securityKey="Security
key"
    existingSecurityKey="Existing security key"
    keyManagement="" adminAction="no-op" status="modified"/>
    <storageRaidBattery rn="raid-battery" batteryType="No Battery" health="N/A"
    batteryStatus="BBU Not Present" batteryPresent="false" adminAction="no-op"
status="modified"/>
    <storageVirtualDriveCreatorUsingUnusedPhysicalDrive rn="virtual-drive-create"
    ...
    createdVirtualDriveDn="" operStatus="" adminAction="no-op"
    adminState="triggered" status="modified">
    <storageUnusedLocalDisk id="1" pdStatus="Unconfigured Good" coercedSize="475883 MB"
    health="Good" mediaType="HDD" status="modified"/>
    <storageLocalDisk id="1" pdStatus="Unconfigured Good" health="Good"
    ...
    foreignLocked="no" adminAction="no-op" rn="pd-1" status="modified">
   <storageLocalDiskProps rn="general-props" physicalDrive="1" pdStatus="Unconfigured Good"

    ...
    timeOfLastRefresh="" status="modified"/>
```

```
    <storageOperation rn="storage-operation" lropInProgress="false"
    currentLrop="No operation in progress" progressPercent="0"
    elapsedSeconds="0" status="modified"/>
    </storageLocalDisk>
    <firmwareRunning rn="fw-boot-loader"
    description="LSI Storage controller currently running boot loader firmware version"
    ...
    status="modified"/>
    <firmwareRunning rn="fw-system"
    description="LSI Storage controller currently running firmware version"
    ...
    status="modified"/>
    <firmwareBootDefinition rn="fw-boot-def"
    type="storage-controller" status="modified">
    <firmwareBootUnit rn="bootunit-combined"
    description="LSI Storage controller startup BIOS firmware version"
    ...
    status="modified"/>
    </firmwareBootDefinition>
    <storageControllerSettings rn="controller-settings" pciSlot="SLOT-HBA"
    ...
    autoEnhancedImport="true" status="modified"/>
   </storageController>
 </outConfig>
</configConfMo>
```

Hiding a Storage Virtual Drive

Request:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-2/vd-1"
cookie="1490290813/f5921ed8-4b69-1b69-8006-e5de29114ca4" inHierarchical='true'>
 <inConfig>
  <storageVirtualDrive dn="sys/rack-unit-1/board/storage-SAS-SLOT-2/vd-1"
  adminAction="hide-virtual-drive" />
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-2/vd-1"
cookie="1490290813/f5921ed8-4b69-1b69-8006-e5de29114ca4" response="yes">
 <outConfig>
 <storageVirtualDrive id="1" name="test1" raidLevel="RAID 0"
 size="285148 MB" vdStatus="Optimal" health="Good"
 bootDrive="false" stripSize="64k" drivesPerSpan="1"
 spanDepth="1" accessPolicy="hidden" cachePolicy="direct-io"
 readPolicy="no-read-ahead" requestedWriteCachePolicy="write-through"
 currentWriteCachePolicy="write-through" diskCachePolicy="unchanged"
 allowBackgroundInit="true" autoSnapshot="false" autoDeleteOldest="true"
 driveState="Optimal" fdeCapable="no" fdeEnabled="no" adminAction="no-op"
 hotspareAction="no-op" targetId="1"
 physicalDrivesList="Physical drives to be used for virtual drive reconstruction.
 pd_id1,pd_id2,...pd_idN" status="modified" >
 </storageVirtualDrive>
 </outConfig>
</configConfMo>
```

Note To unhide a storage virtual drive, use adminAction="unhide-virtual-drive" in the command.

Enabling or Disabling Secure Key Management

Request:

```
<configConfMo dn="sys/kmip-mgmt"
cookie="1486744606/2436e891-3048-1830-8002-be18652a6ca4" inHierarchical="false" >
 <inConfig>
  <kmipManagement dn="sys/kmip-mgmt" secureKeyManagement="enabled">
  </kmipManagement>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt"
cookie="1486744606/2436e891-3048-1830-8002-be18652a6ca4" response="yes">
 <outConfig>
  <kmipManagement dn="sys/kmip-mgmt"
  description="Key Management Interoperability Protocol"
  secureKeyManagement="enabled" serverRootCACertificate="Available"
  clientCertificate="Available" clientPrivateKey="Available"
  adminAction="no-op" status="modified"/>
 </outConfig>
</configConfMo>
```

Note To disable Secure Key Management, use secureKeyManagement="disabled" in the command.

Configuring KMIP Server

Request:

```
<configConfMo dn="sys/kmip-mgmt/kmip-server"
cookie="1478249230/3d18c6f9-4076-1076-8002-e8374190b1d8" inHierarchical="false">
 <inConfig>
    <kmipServer dn="sys/kmip-mgmt/kmip-server"
    ipAddress="10.10.10.10" port="6000" timeout="25">
    </kmipServer>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt/kmip-server"
cookie="1478249230/3d18c6f9-4076-1076-8002-e8374190b1d8" response="yes">
 <outConfig>
   <kmipServer id="1" ipAddress="10.10.10.10" port="6000" timeout="25"
   testConnectionStatus="Unavailable" adminAction="no-op"
   dn="sys/kmip-mgmt/kmip-server" status="modified"/>
```

```
 </outConfig>
</configConfMo>
```

Deleting KMIP Server

Request:

```
<configConfMo dn="sys/kmip-mgmt/kmip-server"
cookie="1478249230/3d18c6f9-4076-1076-8002-e8374190b1d8" inHierarchical="false">
  <inConfig>
    <kmipServer dn="sys/kmip-mgmt/kmip-server" adminAction="delete" >
    </kmipServer>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt/kmip-server"
cookie="1478249230/3d18c6f9-4076-1076-8002-e8374190b1d8" response="yes">
  <outConfig>
    <kmipServer id="1" ipAddress="" port="5696" timeout="5"
    adminAction="no-op" dn="sys/kmip-mgmt/kmip-server" status="modified"/>
  </outConfig>
</configConfMo>
```

Viewing Secure Key Management Settings

Request:

```
< <configResolveClass dn="sys/kmip-mgmt"
cookie="1478234140/28bb863a-4073-1073-8002-e8374190b1d8" inHierarchical="false"
classId="kmipManagement">
```

Response:

```
<configResolveClass dn="sys/kmip-mgmt/"
cookie="1478235085/94b63d5a-4072-1072-8002-e8374190b1d8" response="yes" >
 <outConfig>
  <kmipManagement dn="sys/kmip-mgmt" description="Key Management Interoperability Protocol"

  secureKeyManagement="enabled" serverRootCACertificate="Available"
  clientCertificate="Not Available" clientPrivateKey="Available"
  adminAction="no-op"/>
 </outConfig>
</configResolveClass>
```

Downloading Root CA Certificate (tftp)

Request:

```
<configConfMo dn="sys/kmip-mgmt/kmip-ca-cert-download"
cookie="1478184218/cf931a62-4066-1066-8003-e8374190b1d8" inHierarchical="false">
 <inConfig>
   <downloadRootCACertificate dn="sys/kmip-mgmt/kmip-ca-cert-download"
```

```
   protocol="tftp" remoteServer="10.10.10.10"
   remoteFile="/home/ss/cert/RootCA.pem">
   </downloadRootCACertificate>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt/kmip-ca-cert-download"
cookie="1478184218/cf931a62-4066-1066-8003-e8374190b1d8" response="yes">
 <outConfig>
  <downloadRootCACertificate dn="sys/kmip-mgmt/kmip-ca-cert-download"
  protocol="none" remoteServer="" remoteFile="" user="" pwd=""
 downloadStatus="COMPLETED" downloadProgress="100%" status="modified"/>
 </outConfig>
</configConfMo>
```

Exporting Root CA Certificate (scp)

Request:

```
<configConfMo dn="sys/kmip-mgmt/kmip-ca-cert-export"
cookie="1478189648/3db712b5-4068-1068-8004-e8374190b1d8" inHierarchical="false" >
  <inConfig>
    <exportRootCACertificate dn="sys/kmip-mgmt/kmip-ca-cert-export"
    protocol="scp" remoteServer="10.10.10.10" user="jsmith" pwd="johnpwd1980"
    remoteFile="/home/jsmith/cert/RootCA.pem">
    </exportRootCACertificate>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt/kmip-ca-cert-export"
cookie="1478189648/3db712b5-4068-1068-8004-e8374190b1d8" response="yes">
  <outConfig>
    <exportRootCACertificate dn="sys/kmip-mgmt/kmip-ca-cert-export"
    protocol="none" remoteServer="" remoteFile="" user="" pwd=""
    exportStatus="COMPLETED" exportProgress="100%" status="modified"/>
  </outConfig>
</configConfMo>
```

Deleting Root CA Certificate

Request:

```
<configConfMo dn="sys/kmip-mgmt"
cookie="1478237721/12423b5d-4073-1073-8002-e8374190b1d8" inHierarchical="false">
 <inConfig>
    <kmipManagement dn="sys/kmip-mgmt"
    adminAction="delete-root-ca-certificate" >
    </kmipManagement>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt"
cookie="1478237721/12423b5d-4073-1073-8002-e8374190b1d8" response="yes">
  <outConfig>
     <kmipManagement dn="sys/kmip-mgmt"
     description="Key Management Interoperability Protocol"
     secureKeyManagement="enabled" serverRootCACertificate="Not Available"
     clientCertificate="Not Available" clientPrivateKey="Not Available"
     adminAction="no-op" status="modified"/>
  </outConfig>
</configConfMo>
```

Testing Connection with KMIP Server

Request:

```
<configConfMo dn="sys/kmip-mgmt/kmip-server"
cookie="1478249230/3d18c6f9-4076-1076-8002-e8374190b1d8" inHierarchical="false">
 <inConfig>
  <kmipServer dn="sys/kmip-mgmt/kmip-server" adminAction="test-connection" >
  </kmipServer>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt/kmip-server"
cookie="1478249230/3d18c6f9-4076-1076-8002-e8374190b1d8" response="yes">
 <outConfig>
  <kmipServer id="1" ipAddress="10.10.10.10" port="5696"
  timeout="5"  adminAction="no-op" dn="sys/kmip-mgmt/kmip-server"
  status="modified"/>
 </outConfig>
</configConfMo>
```

Downloading a Client Private Key

Request:

```
<configConfMo dn="sys/kmip-mgmt/kmip-private-key-download"
cookie="1478184218/cf931a62-4066-1066-8003-e8374190b1d8" inHierarchical="false">
 <inConfig>
  <downloadClientPrivateKey dn="sys/kmip-mgmt/kmip-private-key-download"
   protocol="scp" remoteServer="10.10.10.10" user="jsmith" pwd="pwd1234"
   remoteFile="/home/ss/cert/client_private.pem">
  </downloadClientPrivateKey>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt/kmip-private-key-download"
cookie="1478184218/cf931a62-4066-1066-8003-e8374190b1d8" response="yes">
 <outConfig>
```

```
  <downloadClientPrivateKey dn="sys/kmip-mgmt/kmip-private-key-download"
  protocol="none" remoteServer="" remoteFile="" user="" pwd=""
  downloadStatus="COMPLETED" downloadProgress="100%" status="modified"/>
 </outConfig>
</configConfMo>
```

Exporting a Client Private Key

Request:

```
<configConfMo dn="sys/kmip-mgmt/kmip-private-key-export"
cookie="1478247863/eb2fa9cd-4075-1075-8002-e8374190b1d8" inHierarchical="false" >
 <inConfig>
  <exportClientPrivateKey dn="sys/kmip-mgmt/kmip-private-key-export"
  protocol="scp" remoteServer="10.10.10.10" user="jsmith" pwd="Johnpwd1982"
  remoteFile="/home/ss/cert/KMIP/Client-Pvt-Key.pem">
  </exportClientPrivateKey>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt/kmip-private-key-export"
cookie="1478247863/eb2fa9cd-4075-1075-8002-e8374190b1d8" response="yes">
 <outConfig>
  <exportClientPrivateKey dn="sys/kmip-mgmt/kmip-private-key-export"
  protocol="none" remoteServer="" remoteFile="" user="" pwd=""
  exportStatus="COMPLETED" exportProgress="100%" status="modified"/>
 </outConfig>
</configConfMo>
```

Deleting a Client Private Key

Request:

```
<configConfMo dn="sys/kmip-mgmt"
cookie="1478236687/46db1685-4073-1073-8003-e8374190b1d8" inHierarchical="false" >
 <inConfig>
  <kmipManagement dn="sys/kmip-mgmt" adminAction="delete-client-private-key" >
  </kmipManagement>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt"
cookie="1478236687/46db1685-4073-1073-8003-e8374190b1d8" response="yes">
 <outConfig>
   <kmipManagement dn="sys/kmip-mgmt"
   description="Key Management Interoperability Protocol"
   secureKeyManagement="enabled" serverRootCACertificate="Not Available"
   clientCertificate="Not Available" clientPrivateKey="Not Available"
   adminAction="no-op" status="modified"/>
 </outConfig>
</configConfMo>
```

Downloading a Client Certificate

Request:

```
<configConfMo dn="sys/kmip-mgmt/kmip-client-cert-download"
cookie="1478184218/cf931a62-4066-1066-8003-e8374190b1d8" inHierarchical="false" >
  <inConfig>
   <downloadClientCertificate dn="sys/kmip-mgmt/kmip-client-cert-download"
   protocol="scp" remoteServer="10.10.10.10" user="jsmith" pwd="Johnpwd1982"
   remoteFile="/home/ss/cert/Client_cert.pem">
   </downloadClientCertificate>
  </inConfig>
</configConfMo>
```

```
<configConfMo dn="sys/kmip-mgmt/kmip-client-cert-download"
cookie="1478184218/cf931a62-4066-1066-8003-e8374190b1d8" response="yes">
  <outConfig>
    <downloadClientCertificate dn="sys/kmip-mgmt/kmip-client-cert-download"
    protocol="none" remoteServer="" remoteFile="" user="" pwd=""
    downloadStatus="COMPLETED" downloadProgress="100%" status="modified"/>
  </outConfig>
</configConfMo>
```

Exporting a Client Certificate

Request:

```
<configConfMo dn="sys/kmip-mgmt/kmip-client-cert-export"
cookie="1478187971/13b8e805-4068-1068-8003-e8374190b1d8" inHierarchical="false">
  <inConfig>
    <exportClientCertificate dn="sys//rack-unit-1/kmip-mgmt/kmip-client-cert-export"
    protocol="scp" remoteServer="10.10.10.10" user="jsmith" pwd="Johnpwd1982"
    remoteFile="/home/ss/cert/KMIP/ClientCert.pem”>
   </exportClientCertificate>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt/kmip-client-cert-export"
cookie="1478247863/eb2fa9cd-4075-1075-8002-e8374190b1d8" response="yes">
  <outConfig>
    <exportClientCertificate dn="sys/kmip-mgmt/kmip-client-cert-export"
    protocol="none" remoteServer="" remoteFile="" user="" pwd=""
    exportStatus="COMPLETED" exportProgress="100%" status="modified"/>
  </outConfig>
</configConfMo>
```

Deleting a Client Certificate

Request:

```
<configConfMo dn="sys/kmip-mgmt"
cookie="1478237721/12423b5d-4073-1073-8002-e8374190b1d8" inHierarchical="false">
  <inConfig>
```

```
    <kmipManagement dn="sys/kmip-mgmt" adminAction="delete-client-certificate" >
    </kmipManagement>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt"
cookie="1478237721/12423b5d-4073-1073-8002-e8374190b1d8" response="yes">
  <outConfig>
   <kmipManagement dn="sys/kmip-mgmt" description="Key Management Interoperability Protocol"

    secureKeyManagement="enabled" serverRootCACertificate="Not Available"
    clientCertificate="Not Available" clientPrivateKey="Not Available" adminAction="no-op"
 status="modified"/>
  </outConfig>
</configConfMo>
```

Deleting KMIP Server Login Details

Request:

```
<configConfMo dn="sys/kmip-mgmt/kmip-login"
cookie="1478254180/02b1c8b1-4077-1077-8003-e8374190b1d8" inHierarchical="false" >
  <inConfig>
   <kmipServerLogin dn="sys/kmip-mgmt/kmip-login" adminAction="clear">
   </kmipServerLogin>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/kmip-mgmt/kmip-login"
cookie="1478254180/02b1c8b1-4077-1077-8003-e8374190b1d8" response="yes">
  <outConfig>
   <kmipServerLogin dn="sys/kmip-mgmt/kmip-login"
   accountStatus="disabled" name="" pwd="" adminAction="no-op" status="modified"/>
 </outConfig>
</configConfMo>
```

Unlocking Foreign Configuration on a Self Encrypted Drive

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt'
cookie='1480557066/0583da3f-4290-1290-8021-127a1e1b0ff4' inHierarchical='false'>
 <inConfig>
  <selfEncryptStorageController
dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt'
  adminAction='unlock-secured-drives'/>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
cookie="1480557066/0583da3f-4290-1290-8021-127a1e1b0ff4" response="yes">
 <outConfig>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
  keyId="UCSC-MRAID12G_SV53647770_1fd23aac" securityKey="Security key"
  existingSecurityKey="Existing security key" keyManagement=""
  adminAction="no-op" status="modified" >
  </selfEncryptStorageController>
 </outConfig>
</configConfMo>
```

Importing Foreign Configuration to a Self Encrypted Drive

Request:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA'
cookie='1480557066/0583da3f-4290-1290-8021-127a1e1b0ff4' inHierarchical='false'>
  <inConfig>
   <storageController dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA'
   adminAction='import-foreign-config'/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn='sys/rack-unit-1/board/storage-SAS-SLOT-HBA'
cookie="1480557500/2d74a062-428f-128f-8022-127a1e1b0ff4" response="yes" >
 <outConfig>
  <storageController id="SLOT-HBA" model="Cisco 12G SAS Modular Raid Controller"
  pciSlot="SLOT-HBA" presence="equipped" raidSupport="yes" serial="SV53647770"
  type="SAS" vendor="LSI Logic" selfEncryptEnabled="yes" adminAction="no-op"
  dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA" >
  </storageController>
 </outConfig>
</configConfMo>
```

Enabling Self Encrypted Drive with Key Management as Local and KMIP Disabled

Request:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
cookie="1478342437/3c993fcb-408c-108c-8002-e8374190b1d8" inHierarchical="false" >
 <inConfig>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
  keyId="test123" securityKey="test123" adminAction="enable-self-encrypt"
keyManagement="local">
  </selfEncryptStorageController>
 </inConfig>
</configConfMo>
```

Response:

As the configuration takes time, you see an empty response.

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
cookie="1478342437/3c993fcb-408c-108c-8002-e8374190b1d8" response="yes">
  <outConfig>
  </outConfig>
</configConfMo>
```

After the configuration is completed, send the following request:

```
<configResolveClass
cookie="1490834627/de1ed316-4be8-1be8-92d4-20be7d8bf200" inHierarchical="false"
classId="selfEncryptStorageController"/>
```

You see the following response:

```
<configResolveClass
cookie="1490834627/de1ed316-4be8-1be8-92d4-20be7d8bf200" response="yes"
classId="selfEncryptStorageController">
 <outConfig>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
  keyId="testkeyid" securityKey="Security key" existingSecurityKey="Existing security key"

  keyManagement="" adminAction="no-op" >
  </selfEncryptStorageController>
 </outConfig>
</configResolveClass>
```

Enabling Self Encrypted Drive with Key Management as Remote and KMIP Enabled

Request:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
cookie="1478340466/cde62027-408b-108b-8002-e8374190b1d8" inHierarchical="false">
 <inConfig>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
  adminAction="enable-self-encrypt" keyManagement="remote">
  </selfEncryptStorageController>
 </inConfig>
</configConfMo>
```

Response:

As the configuration takes time, you see an empty response.

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
cookie="1478340466/cde62027-408b-108b-8002-e8374190b1d8" response="yes">
  <outConfig>
  </outConfig>
</configConfMo>
```

After the configuration is completed, send the following request:

```
<configResolveClass
cookie="1490834627/de1ed316-4be8-1be8-92d4-20be7d8bf200" inHierarchical="false"
```

```
classId="selfEncryptStorageController"/>
```

You see the following response:

```
<configResolveClass
cookie="1490834627/de1ed316-4be8-1be8-92d4-20be7d8bf200" response="yes"
classId="selfEncryptStorageController">
 <outConfig>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
  keyId="testkeyid" securityKey="Security key" existingSecurityKey="Existing security key"

  keyManagement="" adminAction="no-op" >
  </selfEncryptStorageController>
 </outConfig>
</configResolveClass>
```

Switching Key Management From Local to Remote with Existing Security Key

Request:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
cookie="1478343933/7da81dea-408c-108c-8002-e8374190b1d8" inHierarchical="false">
 <inConfig>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
  adminAction="switch-local-to-remote" keyManagement="remote"
  existingSecurityKey="test123">
  </selfEncryptStorageController>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
cookie="1478343933/7da81dea-408c-108c-8002-e8374190b1d8" response="yes">
 <outConfig>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
  keyId="UCSC-MRAID12G_SV52731947_1fb07b15" securityKey="Security key"
  existingSecurityKey="Existing security key" keyManagement=""
  adminAction="no-op" status="modified"/>
 </outConfig>
</configConfMo>
```

Switching Key Management From Remote to Local with Key ID and Security Key

Request:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
cookie="1478343933/7da81dea-408c-108c-8002-e8374190b1d8" inHierarchical="false">
 <inConfig>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
  adminAction="switch-remote-to-local" keyManagement="local"
  keyId="test1234" securityKey="test1234">
```

```
  </selfEncryptStorageController>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
cookie="1478343933/7da81dea-408c-108c-8002-e8374190b1d8" response="yes">
 <outConfig>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
  keyId="test1234" securityKey="Security key" existingSecurityKey="Existing security key"
  keyManagement="" adminAction="no-op" status="modified"/>
 </outConfig>
</configConfMo>
```

Disabling Security Enabled Drive when Key Management is Local

Request:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
cookie="1478342437/3c993fcb-408c-108c-8002-e8374190b1d8" inHierarchical="false">
 <inConfig>
  <selfEncryptStorageController
dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
  adminAction="disable-self-encrypt" >
  </selfEncryptStorageController>
 </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/storage-SAS-SLOT-HBA/ctr-self-encrypt"
cookie="1478342437/3c993fcb-408c-108c-8002-e8374190b1d8" response="yes">
 <outConfig>
 </outConfig>
</configConfMo>
```

Examples of Common Server Management Tasks Contd.

The examples in this section show how to use the Cisco IMC XML API to perform common server management tasks. Each example shows the XML API request followed by the response from Cisco IMC.

This section includes the following examples:

- Configuring Fast Boot Tokens, on page 248
- Configuring MultiQueue on 14xx VIC Adapters, on page 248
- Configuring EFI Shell Options, on page 249
- Updating the Device Connector (DC), on page 249
- Configuring Single IP Properties and Starting Port, on page 252

Configuring Fast Boot Tokens

Request:

```
curl -k -N -d "<configConfMo cookie='1538744526/72a14829-777b-177b-8003-c8571c735d00'
inHierarchical='false' dn='sys/rack-unit-1/bios/bios-settings/Cisco-Opromlaunch-Optimize'>
<inConfig><biosVfCiscoOpromLaunchOptimization
dn='sys/rack-unit-1/bios/bios-settings/Cisco-Opromlaunch-Optimize'
vpCiscoOpromLaunchOptimization='enabled'/></inConfig></configConfMo>"
https://10.10.10.10/nuova | xmllint -schema RACK-OUT.xsd -
```

Response:

```
<configConfMo dn="sys/rack-unit-1/bios/bios-settings/Cisco-Opromlaunch-Optimize"
cookie="1538744526/72a14829-777b-177b-8003-c8571c735d00"
response="yes">
<outConfig>
<biosVfCiscoOpromLaunchOptimization
dn="sys/rack-unit-1/bios/bios-settings/Cisco-Opromlaunch-Optimize"
vpCiscoOpromLaunchOptimization="Enabled" status="modified"/></outConfig>
</configConfMo>
```

Configuring MultiQueue on 14xx VIC Adapters

For S-series

Request:

```
curl -k -d "<configConfMo cookie='1538482028/a18ec421-3e77-173e-8003-6ca87fa59038'
dn='sys/chassis-1/server-1/adaptor-SIOC1/host-eth-eth1/general'>
<inConfig> <adaptorEthGenProfile
dn='sys/chassis-1/server-1/adaptor-SIOC1/host-eth-eth1/general'
vmq='enabled' multiQueue='enabled'> </adaptorEthGenProfile> </inConfig> </configConfMo>"
https://10.10.10.10/nuova
```

Response:

```
<configConfMo dn="sys/chassis-1/server-1/adaptor-SIOC1/host-eth-eth1/general"
cookie="1538482028/a18ec421-3e77-173e-8003-6ca87fa59038"
response="yes">
<outConfig>
<adaptorEthGenProfile dn="sys/chassis-1/server-1/adaptor-SIOC1/host-eth-eth1/general"
vmq="enabled" multiQueue="enabled" arfs="disabled" uplinkFailover="N/A"
uplinkFailbackTimeout="N/A"
order="1" trustedClassOfService="disabled" rateLimit="OFF" vlan="NONE" vlanMode="TRUNK"
pciLink="0" nvgre="disabled" vxlan="disabled"
status="modified" ></adaptorEthGenProfile></outConfig>
</configConfMo>
```

For C-series

Request:

```
curl -k -d "<configConfMo cookie='1538547165/c90fced7-774d-174d-8002-ce1460e81a02'
dn='sys/rack-unit-1/adaptor-2/host-eth-eth1/general'> <inConfig> <adaptorEthGenProfile
dn='sys/rack-unit-1/adaptor-2/host-eth-eth1/general' vmq='enabled' multiQueue='enabled'>
</adaptorEthGenProfile>
</inConfig> </configConfMo>"
https://10.10.10.10/nuova | xmllint -schema RACK-OUT-janus.xsd -
```

Response:

```
<?xml version="1.0"?>
<configConfMo dn="sys/rack-unit-1/adaptor-2/host-eth-eth1/general"
cookie="1538547165/c90fced7-774d-174d-8002-ce1460e81a02" response="yes">
<outConfig>
<adaptorEthGenProfile dn="sys/rack-unit-1/adaptor-2/host-eth-eth1/general"
vmq="enabled" multiQueue="enabled" arfs="disabled" uplinkFailover="N/A"
uplinkFailbackTimeout="N/A"
order="1" trustedClassOfService="disabled" rateLimit="OFF" vlan="NONE" vlanMode="TRUNK"
pciLink="0" nvgre="disabled" vxlan="disabled"
status="modified"/></outConfig>
</configConfMo>
- validates
```

Configuring EFI Shell Options

Request:

```
<configConfMo cookie='1535509137/a97fdef4-7489-1489-814d-e29a5b735d00'
inHierarchical='false' dn='sys/rack-unit-1/boot-precision/hdd-xmltest1'><inConfig><lsbootHdd

dn='sys/rack-unit-1/boot-precision/hdd-xmltest1' type='LOCALHDD' slot='RAID' name='xmltest1'
 state='Enabled'
boot-loader-name='BOOTX64.EFI' boot-loader-path='\EFI\BOOT\'
boot-loader-descr='EFIBOOT'/></inConfig></configConfMo>"
https://10.10.10.10/nuova
```

Response:

```
<configConfMo dn="sys/rack-unit-1/boot-precision/hdd-xmltest1"
cookie="1535509137/a97fdef4-7489-1489-814d-e29a5b735d00"
response="yes"><outConfig><lsbootHdd name="xmltest1" type="LOCALHDD" slot="RAID"
order="1" state="Enabled" boot-loader-name="BOOTX64.EFI" boot-loader-path="\EFI\BOOT\"
boot-loader-descr="EFIBOOT"
dn="sys/rack-unit-1/boot-precision/hdd-xmltest1"
status="modified" ></lsbootHdd> </outConfig></configConfMo>
```

Updating the Device Connector (DC)

XML API query to update DC image

Request:

```
<configConfMo cookie="1536659363/827d72d2-7595-1595-8002-6253e2caa600"
dn="sys/device-connector/mgmt/fw-updatable">
  <inConfig>
    <firmwareUpdatable adminState="trigger"
dn="sys/cloud-mgmt/device-connector/mgmt/fw-updatable" protocol="scp"
remoteServer="10.10.10.10"
     remotePath="/tftpboot/ucsc-m5-cimc-cloud-connector-1.0.9-328.bin" user="" pwd=""
type="device-connector"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/device-connector/mgmt/fw-updatable"
cookie="1536659363/827d72d2-7595-1595-8002-6253e2caa600"
response="yes">
  <outConfig>
    <firmwareUpdatable dn="sys/cloud-mgmt/device-connector/mgmt/fw-updatable"
```

```
description="Cisco Device Connector firmware"
     adminState="triggered" deployment="primary" operState="updating" version=""
protocol="none" remoteServer="" remotePath="" user=""
     pwd="" progress="5" type="device-connector" status="modified"/>
  </outConfig>
</configConfMo>
```

Device Connector Upgrade

Request

```
curl -k -d "<configConfMo cookie='1542698731/9bbf476b-7b13-1b13-8003-a256cbf9ba78'
dn='sys/cloud-mgmt/device-connector/mgmt/fw-updatable'
inHierarchical='true'><inConfig><firmwareUpdatable adminState='trigger'
dn='sys/cloud-mgmt/device-connector/mgmt/fw-updatable' protocol='tftp'
remoteServer='10.10.10.10' remotePath='c240-m4-cimc.4.0.2S14-cloud-connector.bin'
user='' pwd='' type='device-connector' /> </inConfig></configConfMo>"
https://10.10.10.10/nuova
```

Response

```
<configConfMo dn="sys/cloud-mgmt/device-connector/mgmt/fw-updatable"
cookie="1542698731/9bbf476b-7b13-1b13-8003-a256cbf9ba78" response="yes">
<outConfig>
<firmwareUpdatable dn="sys/cloud-mgmt/device-connector/mgmt/fw-updatable" description="Cisco
 Device Connector firmware"
adminState="triggered" deployment="primary" operState="updating" version="NA" protocol="none"

remoteServer="" remotePath="" user="" pwd="" progress="5" type="device-connector"
status="modified" ></firmwareUpdatable></outConfig>
</configConfMo>
```

Device Connector Downgrade

Request

```
curl -k -d "<configConfMo cookie='1542695757/1a8febb6-7b13-1b13-8004-9102c05a6970'
dn='sys/cloud-mgmt/device-connector/mgmt/fw-updatable'
inHierarchical='true'><inConfig><firmwareUpdatable adminState='trigger'
dn='sys/cloud-mgmt/device-connector/mgmt/fw-updatable' protocol='tftp'
remoteServer='10.10.10.10' remotePath='c240-m5-cimc.4.0.2S12-cloud-connector.bin'
user='' pwd='' type='device-connector' /> </inConfig></configConfMo>"
https://10.10.10.10/nuova
```

Response

```
<configConfMo dn="sys/cloud-mgmt/device-connector/mgmt/fw-updatable"
cookie="1542695757/1a8febb6-7b13-1b13-8004-9102c05a6970" response="yes">
<outConfig>
<firmwareUpdatable dn="sys/cloud-mgmt/device-connector/mgmt/fw-updatable"
description="Cisco Device Connector firmware" adminState="triggered" deployment="primary"
operState="ready" version="NA" protocol="none" remoteServer="" remotePath="" user="" pwd=""

progress="Success" type="device-connector" status="modified" ></firmwareUpdatable></outConfig>
</configConfMo>
```

Using tftp Protocol

This section provides XML API example for using tftp protocol. The same example is valid for scp, sftp, ftp, and http protocols.

Request:

```
<configConfMo cookie="1536659363/827d72d2-7595-1595-8002-6253e2caa600"
dn="sys/device-connector/mgmt/fw-updatable">
  <inConfig>
    <firmwareUpdatable adminState="trigger"
dn="sys/cloud-mgmt/device-connector/mgmt/fw-updatable" protocol="tftp"
     remoteServer="10.10.10.10" remotePath="ucsc-m5-cimc-cloud-connector-1.0.9-321.bin"
type="device-connector"/>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/device-connector/mgmt/fw-updatable"
cookie="1536659363/827d72d2-7595-1595-8002-6253e2caa600" response="yes">
  <outConfig>
    <firmwareUpdatable dn="sys/cloud-mgmt/device-connector/mgmt/fw-updatable"
description="Cisco Device Connector firmware" adminState="triggered"
     deployment="primary" operState="updating" version="" protocol="none" remoteServer=""
remotePath="" user="" pwd="" progress="5"
     type="device-connector" status="modified"/>
  </outConfig></configConfMo>
```

Getting the Status of Update

Request:

```
<configResolveDn cookie="1536659363/827d72d2-7595-1595-8002-6253e2caa600"
inHierarchical="true" dn="sys/cloud-mgmt/device-connector/mgmt/fw-updatable"/>
```

Response:

```
<configResolveDn cookie="1536659363/827d72d2-7595-1595-8002-6253e2caa600"
response="yes" dn="sys/cloud-mgmt/device-connector/mgmt/fw-updatable">
  <outConfig>
    <firmwareUpdatable dn="sys/device-connector/mgmt/fw-updatable" description="Cisco Device
 Connector firmware"
    adminState="triggered" deployment="primary" operState="ready" version="" protocol="none"
 remoteServer="" remotePath="" user=""
     pwd="" progress="Success" type="device-connector"/>
  </outConfig>
</configResolveDn>
```

Getting the DC Version

Request:

```
<configResolveDn cookie="1536659363/827d72d2-7595-1595-8002-6253e2caa600"
inHierarchical="true" dn="sys/cloud-mgmt/device-connector/mgmt/fw-system"/>
```

Response:

```
<configResolveDn cookie="1536659363/827d72d2-7595-1595-8002-6253e2caa600" response="yes"
dn="sys/device-connector/mgmt/fw-system">
  <outConfig>
    <firmwareRunning dn="sys/cloud-mgmt/device-connector/mgmt/fw-system"
    description="Cisco Device Connector currently running firmware version"
deployment="system"
    type="device-connector" version="1.0.9-321"/>
  </outConfig>
</configResolveDn>
```

Configuring Single IP Properties and Starting Port

Request:

```
<configConfMo cookie="1531872275/fb411afd-3a71-113a-8002-3f9f77e2cff4" dn="sys/chassis-1/if-1"
 inHierarchical="false">
    <inConfig>
            <mgmtIf dn="sys/chassis-1/if-1" singleIPEnable="yes" startingPort="10000" />
    </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/chassis-1/if-1" cookie="1531872275/fb411afd-3a71-113a-8002-3f9f77e2cff4"
 response="yes">
<outConfig>
<mgmtIf dn="sys/chassis-1/if-1" description="Virtual Management Interface Network Settings"

id="1" extEnabled="yes" extIp="10.10.10.10" v4IPAddrCmc1="" v4IPAddrCmc2="" v4IPAddrBmc1=""
 v4IPAddrBmc2=""
extMask="255.255.255.0" extGw="10.10.10.10" ifType="virtual" mac="F4:CF:E2:77:9F:3F"
vHostname="colusa8-single-ip"
dhcpEnable="yes" dnsUsingDhcp="no" ddnsEnable="no" ddnsDomain="" ddnsRefreshInterval="0"
dnsPreferred="10.10.10.10"
dnsAlternate="10.10.10.10" nicMode="dedicated" vicSlot="1" nicRedundancy="none"
vlanEnable="no" vlanId="1"
vlanPriority="0" portProfile="" v6extEnabled="no" v6extIp="::" v6extGw="::" v6prefix="64"
v6linkLocal="::" v6SlaacIp="::" v6dhcpEnable="no" v6dnsUsingDhcp="no"
v6dnsPreferred="::" v6dnsAlternate="::" v6IPAddrCmc1="::" v6IPAddrCmc2="::" v6IPAddrBmc1="::"
 v6IPAddrBmc2="::"
autoNeg="enabled" adminNetSpeed="auto" adminDuplex="auto" operNetSpeed="1Gbps"
operDuplex="full" subject="virtual"
singleIPEnable="yes" startingPort="10000" status="modified"/></outConfig>
</configConfMo>
```

Persistent Memory Module XML API Examples

The examples in this section show how to use the Cisco IMC XML API to perform Persistent Memory Module tasks. Each example shows the XML API request followed by the response from Cisco IMC.

This section includes the following examples:

- Viewing Persistent Memory Unit Inventory Details, on page 253
- Viewing Persistent Memory Configuration Details, on page 254
- Viewing Persistent Memory Region Details, on page 254
- Viewing Persistent Memory Namespace Details, on page 255
- Viewing Persistent Memory ConfigResult, on page 255
- Viewing Persistent Memory Namespace ConfigResult, on page 255
- Viewing Persistent Memory Logical Configuration, on page 256
- Viewing Persistent Memory Goal, on page 256
- Viewing Persistent Memory Logical Namespace, on page 256

- Configuring Persistent Memory Goal, on page 256
- Modifying Pending Goal, on page 257
- Deleting a Goal, on page 257
- Configuring a Namespace, on page 258
- Modifying Pending Namespace, on page 258
- Deleting a Namespace, on page 259
- Configuring Goal and Namespace, on page 259
- Configuring Enable Security, on page 260
- Configuring Disable Security, on page 260
- Modifying Secure Passphrase, on page 261
- Unlocking DIMM(s), on page 261
- Configuring Secure Erase, on page 262
- Resetting Persistent Memory to Factory Default Settings, on page 262
- Exporting of Persistent Memory Configuration, on page 263
- Importing of Persistent Memory Configuration, on page 263
- Configuring Host Managed Mode, on page 264
- Configuring Cisco IMC Managed Mode, on page 264

Viewing Persistent Memory Unit Inventory Details

Request:

```
<configResolveClass cookie="1553603882/d1f622a3-84fe-14fe-8002-943e485a6970"
inHierarchical="false" classId="memoryPersistentMemoryUnit"/>
```

Response:

```
<configResolveClass cookie="1553603882/d1f622a3-84fe-14fe-8002-943e485a6970" response="yes"

classId="memoryPersistentMemoryUnit">
  <outConfigs>
    <memoryPersistentMemoryUnit array="1" location="DIMM_A2" capacity="128704" clock="2666"
 formFactor="DIMM"
id="2" model="8089A2174700000C66 " operState="operable" operability="operable"
presence="equipped"
serial="00000C66" type="Logical non-volatile device" vendor="0x8900" visibility="yes"
width="64"
memoryTypeDetail="Synchronous Non-volatile " bankLocator="NODE 0 CHANNEL 0 DIMM 1"
socketId="1"
uid="8089-A2-1747-00000C66" totalCapacity="126" persistentMemoryCapacity="96"
memoryCapacity="29"
appDirectCapacity="96" reservedCapacity="0" firmwareVersion="1.0.0.4351" healthState="Healthy"

socketLocalDimmNumber="2" securityStatus=" Enabled, UnLocked, Frozen, Count not expired "
lastSecurityOperStatus="No Error" dn="sys/rack-unit-1/board/memarray-1/pmem-2"/>
    <memoryPersistentMemoryUnit array="1" location="DIMM_D2" capacity="128704" clock="2666"
 formFactor="DIMM"
```

```
id="8" model="8089A2174700000A63 " operState="operable" operability="operable"
presence="equipped"
serial="00000A63" type="Logical non-volatile device" vendor="0x8900" visibility="yes"
width="64"
memoryTypeDetail="Synchronous Non-volatile " bankLocator="NODE 0 CHANNEL 3 DIMM 1"
socketId="1"
uid="8089-A2-1747-00000A63" totalCapacity="126" persistentMemoryCapacity="96"
memoryCapacity="29" appDirectCapacity="96" reservedCapacity="0" firmwareVersion="1.0.0.4351"

healthState="Healthy" socketLocalDimmNumber="8"
securityStatus=" Enabled, UnLocked, Frozen, Count not expired " lastSecurityOperStatus="No
 Error"
dn="sys/rack-unit-1/board/memarray-1/pmem-8"/>
  </outConfigs>
</configResolveClass>
```

Viewing Persistent Memory Configuration Details

Request:

```
<configResolveClass cookie="1553603882/d1f622a3-84fe-14fe-8002-943e485a6970"
inHierarchical="false" classId="memoryPersistentMemoryConfiguration"/>
```

Response:

```
<configResolveClass cookie="1553603882/d1f622a3-84fe-14fe-8002-943e485a6970"
response="yes" classId="memoryPersistentMemoryConfiguration">
  <outConfigs>
    <memoryPersistentMemoryConfiguration dn="sys/rack-unit-1/board/pmemory-config"
configState="Configured"
totalCapacity="503" persistentMemoryCapacity="384" memoryCapacity="116" reservedCapacity="0"
 numOfRegions="4"
numOfDimms="4" securityState="Unlocked-Frozen"/>
  </outConfigs>
</configResolveClass>
```

Viewing Persistent Memory Region Details

Request:

```
<configResolveClass cookie="1553603882/d1f622a3-84fe-14fe-8002-943e485a6970"
inHierarchical="false" classId="memoryPersistentMemoryRegion"/>
```

Response:

```
<configResolveClass cookie="1553603882/d1f622a3-84fe-14fe-8002-943e485a6970" response="yes"

classId="memoryPersistentMemoryRegion">
  <outConfigs>
    <memoryPersistentMemoryRegion id="1" socketLocalDimmNumber="2" socketId="1"
interleavedSetId="7c4bda90ad238a22"
persistentMemoryType="AppDirectNonInterleaved" healthState="Healthy" totalCapacity="96"
freeCapacity="86"
dimmLocatorIds="DIMM_A2" dn="sys/rack-unit-1/board/pmemory-config/region-1"/>
    <memoryPersistentMemoryRegion id="2" socketLocalDimmNumber="8" socketId="1"
interleavedSetId="5e37da90aa218a22" persistentMemoryType="AppDirectNonInterleaved"
healthState="Healthy"
totalCapacity="96" freeCapacity="96" dimmLocatorIds="DIMM_D2"
dn="sys/rack-unit-1/board/pmemory-config/region-2"/>
    <memoryPersistentMemoryRegion id="3" socketLocalDimmNumber="2" socketId="2"
interleavedSetId="8105da90941c8a22" persistentMemoryType="AppDirectNonInterleaved"
healthState="Healthy" totalCapacity="96" freeCapacity="96" dimmLocatorIds="DIMM_G2"
dn="sys/rack-unit-1/board/pmemory-config/region-3"/>
    <memoryPersistentMemoryRegion id="4" socketLocalDimmNumber="8"
socketId="2" interleavedSetId="d641da9036228a22"
```

```
persistentMemoryType="AppDirectNonInterleaved"
healthState="Healthy" totalCapacity="96" freeCapacity="96" dimmLocatorIds="DIMM_K2"
dn="sys/rack-unit-1/board/pmemory-config/region-4"/>
  </outConfigs>
</configResolveClass>
```

Viewing Persistent Memory Namespace Details

Request:

```
<configResolveClass cookie="1553603882/d1f622a3-84fe-14fe-8002-943e485a6970"
inHierarchical="false" classId="memoryPersistentMemoryNamespace"/>
```

Response:

```
<configResolveClass cookie="1553603882/d1f622a3-84fe-14fe-8002-943e485a6970"
response="yes" classId="memoryPersistentMemoryNamespace">
  <outConfigs>
    <memoryPersistentMemoryNamespace name="TEST-91" operMode="raw"
capacity="10" labelVersion="1.2" uuid="894806e0-ecab-468d-8da4-5f74e6d2a7cb"
healthState="Healthy"
dn="sys/rack-unit-1/board/pmemory-config/region-1/ns-894806e0-ecab-468d-8da4-5f74e6d2a7cb"/>

  </outConfigs>
</configResolveClass>
```

Viewing Persistent Memory ConfigResult

Request:

```
<configResolveClass cookie="1551864178/d8c72c79-8369-1369-8002-943e485a6970"
inHierarchical="false" classId="memoryPersistentMemoryConfigResult"/>
```

Response:

```
<configResolveClass cookie="1551864178/d8c72c79-8369-1369-8002-943e485a6970"
response="yes" classId="memoryPersistentMemoryConfigResult">
  <outConfigs>
    <memoryPersistentMemoryConfigResult dn="sys/rack-unit-1/board/pmemory-config/cfg-result"

configState="Configured" configResult="NotApplicable" configError="Success"/>
  </outConfigs>
</configResolveClass>
```

Viewing Persistent Memory Namespace ConfigResult

Request:

```
<configResolveClass cookie="1551335940/65142995-82ef-12ef-8002-d8e6ed6a0f70"
inHierarchical="false" classId="memoryPersistentMemoryNamespaceConfigResult"/>
```

Response:

```
<configResolveClass cookie="1551335940/65142995-82ef-12ef-8002-d8e6ed6a0f70"
response="yes" classId="memoryPersistentMemoryNamespaceConfigResult">
  <outConfigs>
    <memoryPersistentMemoryNamespaceConfigResult name=" TEST-91" socketId="1"
socketLocalDimmNumber="4" configStatus="Success"
dn="sys/rack-unit-1/board/pmemory-config/cfg-result/nscr-NSS-1"/>
  </outConfigs>
</configResolveClass>
```

Viewing Persistent Memory Logical Configuration

Request:

```
<configResolveClass cookie="1553603882/d1f622a3-84fe-14fe-8002-943e485a6970"
inHierarchical="false" classId="memoryPersistentMemoryLogicalConfiguration"/>
```

Response:

```
<configResolveClass cookie="1553603882/d1f622a3-84fe-14fe-8002-943e485a6970" response="yes"

classId="memoryPersistentMemoryLogicalConfiguration">
  <outConfigs>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"/>
  </outConfigs>
</configResolveClass>
```

Viewing Persistent Memory Goal

Request:

```
<configResolveClass cookie="1551867321/750375cb-836a-136a-8002-943e485a6970"
inHierarchical="false" classId="memoryPersistentMemoryGoal"/>
```

Response:

```
<configResolveClass cookie="1551867321/750375cb-836a-136a-8002-943e485a6970"
response="yes" classId="memoryPersistentMemoryGoal">
  <outConfigs>
    <memoryPersistentMemoryGoal socketId="ALL" memoryModePercentage="70"
persistentMemoryType="app-direct-non-interleaved"
dn="sys/rack-unit-1/board/pmemory-lconfig/goal-ALL"/>
  </outConfigs>
</configResolveClass>
```

Viewing Persistent Memory Logical Namespace

Request:

```
<configResolveClass cookie="1553667047/a46f89ac-850d-150d-8004-943e485a6970"
inHierarchical="false" classId="memoryPersistentMemoryLogicalNamespace"/>
```

Response:

```
<configResolveClass cookie="1553667047/a46f89ac-850d-150d-8004-943e485a6970" response="yes"

classId="memoryPersistentMemoryLogicalNamespace">
  <outConfigs>
    <memoryPersistentMemoryLogicalNamespace socketId="1" socketLocalDimmNumber="2" name="ns2"
 capacity="5"
mode="raw" dn="sys/rack-unit-1/board/pmemory-lconfig/lns-ns2"/>
    <memoryPersistentMemoryLogicalNamespace socketId="1" socketLocalDimmNumber="2" name="ns1"
 capacity="5"
mode="raw" dn="sys/rack-unit-1/board/pmemory-lconfig/lns-ns1"/>
  </outConfigs>
</configResolveClass>
```

Configuring Persistent Memory Goal

Request:

```
<configConfMo cookie="1553659537/970809a2-850b-150b-8002-943e485a6970"
dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"
 rebootOnUpdate="no" forceConfig="yes">
      <memoryPersistentMemoryGoal dn="sys/rack-unit-1/board/pmemory-lconfig/goal-ALL"
rn="goal-ALL" socketId="ALL" memoryModePercentage="50"
persistentMemoryType="app-direct"/>
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553659537/970809a2-850b-150b-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"
 rebootOnUpdate="no" forceConfig="no"
adminAction="no-op" mgmtMode="imc-managed" status="modified"/>
  </outConfig>
</configConfMo>
```

Modifying Pending Goal

Request:

```
<configConfMo cookie="1553664656/92a5bb89-850d-150d-8003-943e485a6970"
dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="yes" mgmtMode="imc-managed">
      <memoryPersistentMemoryGoal dn="sys/rack-unit-1/board/pmemory-lconfig/goal-ALL"
memoryModePercentage="70" persistentMemoryType="app-direct" status="modified"/>
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```

Deleting a Goal

Request:

```
<configConfMo cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970"
dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="yes">
      <memoryPersistentMemoryGoal dn="sys/rack-unit-1/board/pmemory-lconfig/goal-ALL"
socketId="ALL"
status="deleted"/>
```

```
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```

Configuring a Namespace

Request:

```
<configConfMo cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970"
dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"
 rebootOnUpdate="no" forceConfig="yes">
      <memoryPersistentMemoryLogicalNamespace
dn="sys/rack-unit-1/board/pmemory-lconfig/lns-ns1" rn="lns-ns1" name="ns1" socketId="1"
socketLocalDimmNumber="2" mode="raw" capacity="25"/>
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"
 rebootOnUpdate="no" forceConfig="no"
adminAction="no-op" mgmtMode="imc-managed" status="modified"/>
  </outConfig>
</configConfMo>
```

Modifying Pending Namespace

Request:

```
<configConfMo cookie="1553664656/92a5bb89-850d-150d-8003-943e485a6970"
dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="yes" mgmtMode="imc-managed">
      <memoryPersistentMemoryLogicalNamespace
dn="sys/rack-unit-1/board/pmemory-lconfig/lns-ns1" rn="lns-ns1"
socketId="1" socketLocalDimmNumber="2" mode="raw" capacity="5" status="modified"/>
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
```

```
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```

Deleting a Namespace

Request:

```
<configConfMo cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970"
dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="yes">
      <memoryPersistentMemoryLogicalNamespace name="ns1" status="deleted"/>
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```

Configuring Goal and Namespace

Request:

```
<configConfMo cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970"
dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="yes" mgmtMode="imc-managed">
      <memoryPersistentMemoryGoal dn="sys/rack-unit-1/board/pmemory-lconfig/goal-ALL"
memoryModePercentage="70"
persistentMemoryType="app-direct-non-interleaved"/>
      <memoryPersistentMemoryLogicalNamespace
dn="sys/rack-unit-1/board/pmemory-lconfig/lns-ns2" rn="lns-ns2"
socketId="1" socketLocalDimmNumber="2" mode="raw" capacity="5"/>
      <memoryPersistentMemoryLogicalNamespace
dn="sys/rack-unit-1/board/pmemory-lconfig/lns-ns1" rn="lns-ns1"
socketId="1" socketLocalDimmNumber="2" mode="raw" capacity="5"/>
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"
```

```
rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```

Configuring Enable Security

Request:

```
<configConfMo cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970"
inHierarchical="false" dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

adminAction="enable-security" forceConfig="yes" rebootOnUpdate="yes">
      <memoryPersistentMemorySecurity
dn="sys/rack-unit-1/board/pmemory-lconfig/pmemory-security"
rn="pmemory-security">
        <memoryPersistentMemoryLocalSecurity
dn="sys/rack-unit-1/board/pmemory-lconfig/pmemory-security/local"
rn="local" securePassphrase="password"/>
      </memoryPersistentMemorySecurity>
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```

Configuring Disable Security

Request:

```
<configConfMo cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970"
inHierarchical="false" dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

adminAction="disable-security" forceConfig="yes" rebootOnUpdate="yes">
      <memoryPersistentMemorySecurity
dn="sys/rack-unit-1/board/pmemory-lconfig/pmemory-security"
rn="pmemory-security">
        <memoryPersistentMemoryLocalSecurity
dn="sys/rack-unit-1/board/pmemory-lconfig/pmemory-security/local"
rn="local" deployedSecurePassphrase=”password"/>
      </memoryPersistentMemorySecurity>
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
```

```
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```

Modifying Secure Passphrase

Request:

```
<configConfMo cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" inHierarchical="false"

dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

adminAction="modify-passphrase" forceConfig="yes" rebootOnUpdate="yes">
      <memoryPersistentMemorySecurity
dn="sys/rack-unit-1/board/pmemory-lconfig/pmemory-security"
rn="pmemory-security">
        <memoryPersistentMemoryLocalSecurity
dn="sys/rack-unit-1/board/pmemory-lconfig/pmemory-security/local"
rn="local" securePassphrase="newpassword" deployedSecurePassphrase="password"/>
      </memoryPersistentMemorySecurity>
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```

Unlocking DIMM(s)

Request:

```
<configConfMo cookie="1553519711/f92b8b8f-84eb-14eb-8002-d8e6ed6a0f70"
inHierarchical="false" dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

adminAction="unlock-dimms" rebootOnUpdate="yes">
      <memoryPersistentMemorySecurity
dn="sys/rack-unit-1/board/pmemory-lconfig/pmemory-security"
rn="pmemory-security">
        <memoryPersistentMemoryLocalSecurity
dn="sys/rack-unit-1/board/pmemory-lconfig/pmemory-security/local"
rn="local" deployedSecurePassphrase="password"/>
      </memoryPersistentMemorySecurity>
      <memoryPersistentMemoryDimms rn="pmemory-dimms-1" socketId="1"
socketLocalDimmNumbers="2"/>
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```

Configuring Secure Erase

Request:

```
<configConfMo cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970"
inHierarchical="false" dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

adminAction="secure-erase" forceConfig="yes" rebootOnUpdate="yes">
      <memoryPersistentMemorySecurity
dn="sys/rack-unit-1/board/pmemory-lconfig/pmemory-security"
rn="pmemory-security">
        <memoryPersistentMemoryLocalSecurity
dn="sys/rack-unit-1/board/pmemory-lconfig/pmemory-security/local"
rn="local" deployedSecurePassphrase="password"/>
      </memoryPersistentMemorySecurity>
      <memoryPersistentMemoryDimms rn="pmemory-dimms-1" socketId="1"
socketLocalDimmNumbers="2"/>
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```

Resetting Persistent Memory to Factory Default Settings

Request:

```
<configConfMo cookie="1553669878/b263ca00-850e-150e-8002-943e485a6970"
inHierarchical="false" dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

adminAction="reset-factory-default" forceConfig="yes" rebootOnUpdate="yes">
      <memoryPersistentMemorySecurity
dn="sys/rack-unit-1/board/pmemory-lconfig/pmemory-security"
rn="pmemory-security">
        <memoryPersistentMemoryLocalSecurity
dn="sys/rack-unit-1/board/pmemory-lconfig/pmemory-security/local"
rn="local" deployedSecurePassphrase="password"/>
      </memoryPersistentMemorySecurity>
```

```
    </memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```

Exporting of Persistent Memory Configuration

Request:

```
<configConfMo cookie="1553668752/ca5726fe-850d-150d-8002-943e485a6970"
dn="sys/rack-unit-1/board/pmemory-config/export-config">
  <inConfig>
    <memoryPersistentMemoryBackup dn="sys/rack-unit-1/board/pmemory-config/export-config"
proto="sftp" hostname="10.10.10.10" remoteFile="FilePath" user="xxx"
pwd="password"> </memoryPersistentMemoryBackup>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-config/export-config"
cookie="1553668752/ca5726fe-850d-150d-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryBackup dn="sys/rack-unit-1/board/pmemory-config/export-config"
fsmDescr="export-config" proto="none" hostname="" remoteFile="" user="" pwd=""
fsmStatus="success"
status="modified"/>
  </outConfig>
</configConfMo>
```

Importing of Persistent Memory Configuration

Request:

```
<configConfMo cookie="1553668752/ca5726fe-850d-150d-8002-943e485a6970"
dn="sys/rack-unit-1/board/pmemory-config/import-config">
  <inConfig>
    <memoryPersistentMemoryImporter dn="sys/rack-unit-1/board/pmemory-config/import-config"

rebootOnUpdate="no" proto="sftp" hostname="10.10.10.10" remoteFile="FilePath"
user="xxx" pwd="password"> </memoryPersistentMemoryImporter>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-config/import-config"
cookie="1553668752/ca5726fe-850d-150d-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryImporter dn="sys/rack-unit-1/board/pmemory-config/import-config"

fsmDescr="import-config" proto="none" hostname="" remoteFile="" user="" pwd=""
fsmStatus="success"
rebootOnUpdate="yes" status="modified"/>
```

```
  </outConfig>
</configConfMo>
```

Configuring Host Managed Mode

Request:

```
<configConfMo cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970"
inHierarchical="false" dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

mgmtMode="host-managed" forceConfig="no" rebootOnUpdate="no">
</memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="host-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```

Configuring Cisco IMC Managed Mode

Request:

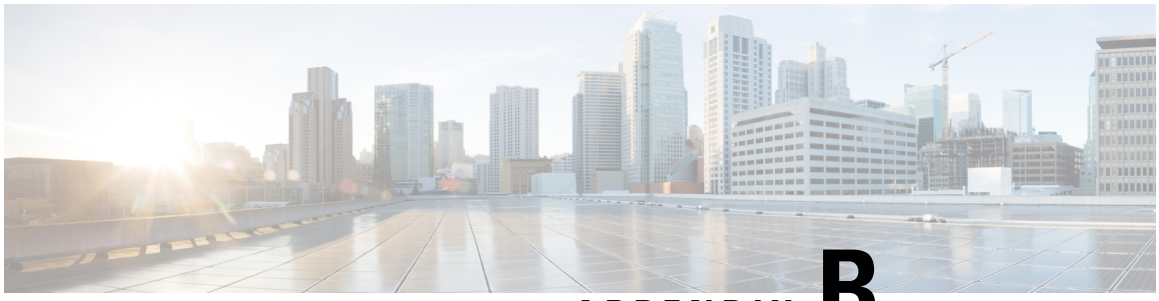
```
<configConfMo cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970"
inHierarchical="false" dn="sys/rack-unit-1/board/pmemory-lconfig">
  <inConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

mgmtMode="imc-managed" forceConfig="no" rebootOnUpdate="no">
</memoryPersistentMemoryLogicalConfiguration>
  </inConfig>
</configConfMo>
```

Response:

```
<configConfMo dn="sys/rack-unit-1/board/pmemory-lconfig"
cookie="1553660570/86d0435c-850c-150c-8002-943e485a6970" response="yes">
  <outConfig>
    <memoryPersistentMemoryLogicalConfiguration dn="sys/rack-unit-1/board/pmemory-lconfig"

rebootOnUpdate="no" forceConfig="no" adminAction="no-op" mgmtMode="imc-managed"
status="modified"/>
  </outConfig>
</configConfMo>
```



APPENDIX B

Notes on Using the configConfMo Method

This appendix includes the following topics:

- Defining a Distinguished Name using the configConfMo Method, on page 265
- Using the Optional inHierarchical Attribute, on page 266
- Configuring a Single Managed Object, on page 267

Defining a Distinguished Name using the configConfMo Method

The **configConfMo** method is used to configure one or more properties in a Managed Object (MO). The MO to be configured is uniquely identified by a Distinguished Name (DN). This chapter shows two ways to provide a DN using the **configConfMo** method.

At the Managed Object Level

You can provide a DN at the Managed Object level. In the following example, the DN "sys/rack-unit-1/locator-led" is defined within the "equipmentLocatorLed" MO.

```
<configConfMo
    cookie="<real_cookie>">
    <inConfig>
        <equipmentLocatorLed
            adminState='on'
            dn='sys/rack-unit-1/locator-led'>                    <== MO level
        </equipmentLocatorLed>
    </inConfig>
</configConfMo>
```

At the Method and Managed Object Level

You can provide a DN at the Method and Managed Object level. In the following example, the DN "sys/rack-unit-1/locator-led" is defined at the **configConfMo** method level and within the "equipmentLocatorLed" MO.

```
<configConfMo
    cookie="<real_cookie>"
    dn='sys/rack-unit-1/locator-led'>                    <== Method level
    <inConfig>
        <equipmentLocatorLed
            adminState='on'
```

```
            dn='sys/rack-unit-1/locator-led'>                    <== MO Level
        </equipmentLocatorLed>
    </inConfig>
</configConfMo>
```

Note Specifying a DN at the Method level is optional, and is supported in the Cisco IMC XML API implementation to be consistent with the Cisco UCS Manager XML API implementation.

Using the Optional inHierarchical Attribute

When a **configConfMo** request is sent to Cisco IMC, the response contains only the immediate properties of the MO being configured.

When the optional inHierarchical attribute is included in the **configConfMo** request, the response will be similar to that of the **configResolveDn** request with the inHierarchical attribute set to true. The response contains the properties for the MO being configured along with the properties of any children MOs.

Request:

```
<configConfMo
    cookie="<real_cookie>"
    inHierarchical="true"
    dn='sys/rack-unit-1/locator-led'>
    <inConfig>
        <equipmentLocatorLed
            adminState='on'
            dn='sys/rack-unit-1/locator-led'>
        </equipmentLocatorLed>
    </inConfig>
</configConfMo>
```

Response:

```
<configConfMo
    dn="sys/rack-unit-1/locator-led"
    cookie="<real_cookie>"
    response="yes">
    <outConfig>
        <equipmentLocatorLed
            dn="sys/rack-unit-1/locator-led"
            adminState="inactive"
            color="unknown"
            id="1"
            name=""
            operState="on">
        </equipmentLocatorLed>
    </outConfig>
</configConfMo>
```

Configuring a Single Managed Object

The Cisco IMC XML API implementation accepts only **configConfMo** methods that operate on a single Managed Object (MO). It is invalid to specify a **configConfMo** method that contains multiple MOs even if they are defined in a containment relationship in the Cisco IMC management information model.

The following example shows a valid **configConfMo** method to configure a single MO, "lsbootLan." In this example, the host is configured to use PXE Boot as the first boot option:

```
<configConfMo
    cookie="<real_cookie>">
    <inConfig>
        <lsbootLan                                              <== Single MO
            order="1"
            status="modified"
            dn="sys/rack-unit-1/boot-policy/lan" >
        </lsbootLan>
    </inConfig>
</configConfMo>
```

The **configConfMo** method in the following example is invalid because a Parent and Child MOs are specified at the same time. The "equipmentLocatorLed" and "solIf" MOs are child objects of the "computeRackUnit" MO in the management information tree. The Cisco IMC XML API implementation does not allow a **configConfMo** method to perform subtree configurations.

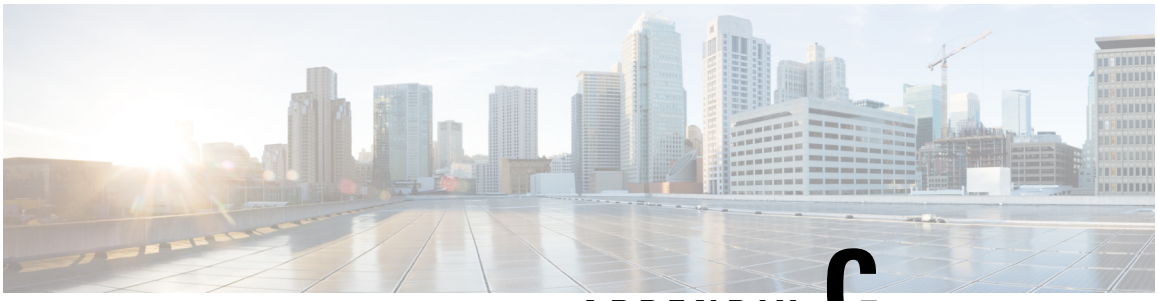
Request:

```
<configConfMo
    cookie="1313084260/40ea8058-aa3e-1a3e-8004-5e61c2e14388"
    dn="sys/rack-unit-1" inHierarchical="false">
     <inConfig>
         <computeRackUnit                                        <== Parent MO
             adminPower="cycle-immediate"
             usrLbl="Cisco C210 Server"
             dn="sys/rack-unit-1">
                  <equipmentLocatorLed                          <== Child MO
                      adminState="on"
                      dn="sys/rack-unit-1/locator-led"/>
                  <solIf                                        <== Child MO
                      dn="sys/rack-unit-1/solif"
                      adminState="enable"
                      speed="9600"/>
         </computeRackUnit>
      </inConfig>
</configConfMo>
```

Response:

```
XML PARSING ERROR: Element 'equipmentLocatorLed': This element is not expected.
```

Note This method is valid in the Cisco UCS Manager XML API implementation but is not supported in the Cisco IMC XML API implementation.



APPENDIX C

The Cisco IMC Visore Utility

Visore is a utility built into Cisco IMC that allows a user to easily browse Managed Objects (MOs) using an HTML browser. The Visore utility uses the Cisco IMC XML API query methods to browse the MOs active in Cisco IMC. The Visore utility cannot be used to perform configuration operations.

Accessing Visore

To access Visore, open a browser and enter one of the following URLs:

- http://<Cisco IMC IP Address>/visore.html
- https://<Cisco IMC IP Address>/visore.html

When prompted, log in using the same credentials you would use to log in to the Cisco IMC CLI or GUI user interfaces.

Note In Cisco IMC Release 1.5(1x), only the Firefox and Chrome browsers are supported for Visore access.

Using Visore to Query a Class

To query for a particular class, enter the class name in the **Class or DN** field and click **Run Query**. Visore sends a **configResolveClass** method to Cisco IMC and the requested MO is displayed in a tabular format..

Use the < and > buttons to retrieve the Parent and Child class of the displayed MO. For example, clicking > sends a **configResolveChildren** method to Cisco IMC to query for the child of the MO. Clicking < sends a **configResolveParent** method to Cisco IMC to query for the parent of the MO.

Using Visore to Query a Distinguished Name(DN)

To query for a particular DN, enter the DN in the **Class or DN** field and click **Run Query**. Visore sends a **configResolveDn** method to Cisco IMC.

The Cisco IMC Visore Utility