



# Creating Bulk Import/Export Configuration Files

This appendix describes the Bulk Import/Export Configuration feature and consists of the following topics:

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- [Creating Stream Destination Bulk Import/Export Configuration Files, page B-15](#)
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## Introduction

Bulk Import/Export Configuration provides a method of configuring common parameters for all the VDS servers at one time by using an XML file to import or restore system-level or server-level configuration settings.



### Note

To enable the optional Bulk Import/Export Configuration feature with the Backup and Restore capabilities, see the [“Bulk Import/Export Configuration” section on page F-5](#).

The Bulk Import/Export Configuration option provides the following features:

- [Server-Level Configuration Backup and Restore](#)
- [System Level Configuration Backup and Restore](#)

## Server-Level Configuration Backup and Restore

The Server-Level Configuration Backup and Restore feature provides exportation of the server-level VDS server configuration parameters, as well as comprehensive import of all server-level configuration settings.

Through the Server-Level Configuration Backup and Restore feature, it is possible to backup (export) the server-level configuration for a VDS server or all VDS servers in a system, modify the parameters as appropriate, and restore (import) the configuration to a new VDS server or all the VDS servers in a new system.

The Server-Level Configuration Backup and Restore feature provides backup and restore functions of all server-level configuration parameters for the following groups:

- All VDS servers
- VDS servers of a certain type (Streamers, Vaults, Caching Nodes, or ISVs)
- Individual VDS servers
- Subset of all VDS servers or VDS servers of a certain type

In addition to complete backup and restore functionality for all server-level configurations for the specified VDS servers, this feature also offers export and import on each server-level configuration page for all VDS servers managed by the CDSM (or VVIM).

**Note**

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The restore and import function do not overwrite any pre-existing server-level configuration settings (only new settings are imported or restored) on the following pages:

- Route Table
- Server DNS
- NTP Server

The restore and import function overwrite all pre-existing settings on the following server-level configuration pages:

- Server Setup (and Interface Setup)
- SNMP Agent
- Logging
- Syslog

**Note**

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The following System-Level configuration pages that are included in the Server-Level XML schema are obsolete and replaced in the System-Level XML schema:

- QAM Gateway
  - Headend Setup (For gigabit Ethernet streaming mode. ASI streaming headend configuration is imported as part of the QAM Gateway page configuration importing.)
  - Stream Destination
-

## Adding a New VDS Server into an Existing System

Previously, when adding a new VDS server into an existing system, after running the **VDSinstall** script to install the software, and the **VDSconfig** script to initially configure some basic settings, the user needed to log in to the CDSM GUI and manually enter the configuration on each server-level page.

With the addition of the Server-Level Configuration Backup and Restore feature, after running the **VDSinstall** and **VDSconfig** scripts, the user can back up the server-level configuration on a VDS server that has similar configuration, modify the values for the new VDS server, and restore the configuration on the new VDS server. After which, only the System-Level and Array-Level configuration needs to be completed for the new VDS server.

## Replacing a VDS Server and Complete Backup and Restore

The Server-Level Configuration Backup and Restore feature can be used in combination with the existing procedures for a complete backup and restore of a VDS server. For a complete backup and restore of the configuration files and database files for a VDS server, continue to use the procedure documented in the *Cisco TV VDS 3.4 Installation, Upgrade, and Maintenance Guide*, which uses the **preupgrade** script to back up the entire VDS server and the **upgrade** script to restore the entire VDS server. These procedures are used to perform a complete backup and restore of the same VDS server, and to replace a VDS server. As a preparation to the backup procedures, you need to write down the following settings:

- Management IP address
- Gateway IP address network mask
- Network mask
- Stream and cache interface IP address
- Streamer ID
- Stream Group ID
- QAM Gateways (System Level configuration)
- Route tables
- Name Service IP address (ISA only) (System and Array Level configuration)
- Ingest IP address
- Service Groups (System Level configuration)

Now, with the Server-Level Configuration Backup and Restore feature and the System-Level Configuration Backup and Restore feature, you can back up all the server-level and system-level configuration settings for the VDS server, and just write down the Array Level settings.

## Using the Server-Level Configuration Backup and Restore Feature

Using the Backup and Restore feature involves the following tasks:

- [Backup or Restore Specific VDS Servers](#)
- [Export or Import Specific Server-Level Configurations](#)

## Backup or Restore Specific VDS Servers

The Backup & Restore page offers the ability to backup all the server-level configuration parameters of specific VDS servers, modify the configuration parameters as appropriate, and restore all the server-level configuration parameters to new VDS servers.

After the backup XML configuration file has been created, you can edit the values of the configuration parameters as appropriate for the new VDS server or all VDS servers in the new system.

To backup specific VDS servers, do the following:

- 
- Step 1** Choose **Maintain > Software > Backup & Restore**. The Backup and Restore page is displayed.
- Step 2** From the **Select Server type to backup** drop-down list, select one of the following:
- **All**
  - **SSV** (known as ISV)
  - **Vault**
  - **Streamer**
  - **Cache** (known as Caching Node)
- All servers of the type selected are listed in the Servers to backup field.
- Step 3** To remove individual servers from the Servers to backup field to the Server List field, do the following:
- a. Select the servers by clicking each one while holding down the **Ctrl** key, or use the **Shift** key to select a contiguous group of servers, or if only one server needs to be selected, simply click the server,
  - b. Click the left arrow (<) and all the selected servers are moved to the Server list field.
- To move servers from the Server List field to the Servers to backup field, use the same methods to select the servers and click the right arrow (>).
- To move all the servers to the Server List field, use the double-left arrow (<<). To move all the servers to the Servers to backup field, use the double-right arrow (>>).
- Step 4** After all the servers to be backed up are in the Servers to backup field, click **Backup**.
- The File Download dialog box is displayed offering you the options to **Save**, **Open**, or **Cancel** the action. **Save** presents a Save As dialog box, which allows you to select the location and filename used to save the XML file. **Open** opens the XML file.
- 

To restore a backup, do the following:

- 
- Step 1** Choose **Maintain > Software > Backup & Restore**. The Backup and Restore page is displayed.
- Step 2** In the Restore Server Configurations section at the bottom of the page, click **Browse** to navigate to the XML configuration file to restore. The Choose File to Upload dialog box is displayed.
- The last location that was accessed to either save a backup or restore a configuration file is remembered.
- Step 3** Navigate to the location where the XML configuration file was saved, select it, and click **Open**.
- The file location and filename are displayed in the Configuration File Location text box.
- Step 4** Click **Restore**.

The backup configuration XML file is restored to all servers specified in the backup.

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## Export or Import Specific Server-Level Configurations

The Import/Export Server Configuration option offers the ability to export or import the specific server-level configuration for all the VDS servers. The following Server Level configuration pages have the export and import feature:

- Server Setup (includes the Interface Setup configurations)
- Route Table
- SNMP Agent
- Server DNS
- NTP Server
- Logging
- Syslog
- FSI Setup (RTSP environments)
- RTSP Setup (RTSP environments)

After the export XML configuration file has been created, you can edit the values of the configuration parameters as appropriate for the new VDS server or all VDS servers in the new system.

To export or import the configuration of a specific Server Level page for all VDS servers, do the following:

- 
- Step 1** Display the Server Level configuration page by choosing **Configure > Server Level** and one of the following:
- **Server Setup**
  - **Route Table**
  - **SNMP Agent**
  - **Server DNS**
  - **NTP Server**
  - **Logging**
  - **Syslog**
  - **FSI Setup** (RTSP environments only)
  - **RTSP Setup** (RTSP environments only)
- Step 2** To export the configuration to an XML file, click **Export**.
- The File Download dialog box is displayed offering you the options to **Save**, **Open**, or **Cancel** the action. **Save** presents a Save As dialog box, which allows you to select the location and filename used to save the XML file. **Open** opens the XML file.
- Step 3** To import a configuration XML file, do the following:
- a. Click **Browse** to navigate to the XML configuration file to restore. The Choose File to Upload dialog box is displayed.

The last location that was accessed to either save a backup or restore a configuration file is remembered.

- b. Navigate to the location where the XML configuration file was saved, select it, and click **Open**.

The file location and filename are displayed in the Configuration File Location text box.

- c. Click **Import**.

The backup configuration XML file is restored to all servers specified in the XML configuration file.

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## System Level Configuration Backup and Restore

All system-level configuration pages are supported, except Error Repair, Billing Service, and Shared Recorder Setting.

Through the System-Level Configuration Backup and Restore feature, it is possible to backup (export) the system-level configuration for all VDS servers in a system, modify the parameters as appropriate, and restore (import) the configuration to all VDS servers in the existing system or all VDS servers in a new system.

In addition to complete backup and restore functionality for all system-level configurations for the specified VDS servers, this feature also offers export and import on each system-level configuration page for all VDS servers managed by the CDSM (or VVIM).



### Note

The restore and import function does not overwrite the following pre-existing system-level configuration settings:

- System DNS
- System NTP
- Host Service
- QAM Gateway
- Stream Destination
- Parent/Child Service Groups
- Input Channels
- Output Channels
- Source Output Port

All other supported pre-existing system-level configuration settings are overwritten.

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## Using the System-Level Configuration Backup and Restore Feature

Using the Backup and Restore feature involves the following tasks:

- [Backup or Restore Specific VDS Servers](#)
- [Export or Import Specific Server-Level Configurations](#)

## Backup or Restore the System-Level Configuration

The Backup & Restore page offers the ability to backup all the system-level configuration parameters of the VDS, modify the configuration parameters as appropriate, and restore all the system-level configuration parameters to a new VDS or the existing VDS.

To backup the system-level configuration, do the following:

- 
- Step 1** Choose **Maintain > Software > Backup & Restore**. The Backup and Restore page is displayed.
  - Step 2** From the **Configuration Level** drop-down list, select **System Level**.
  - Step 3** Click **Backup**.

The File Download dialog box is displayed offering you the options to **Save**, **Open**, or **Cancel** the action. **Save** presents a Save As dialog box, which allows you to select the location and filename used to save the XML file. **Open** opens the XML file.

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To restore a backup, do the following:

- 
- Step 1** Choose **Maintain > Software > Backup & Restore**. The Backup and Restore page is displayed.
  - Step 2** Click **Browse** to navigate to the XML configuration file to restore. The Choose File to Upload dialog box is displayed.  
The last location that was accessed to either save a backup or restore a configuration file is remembered.
  - Step 3** Navigate to the location where the XML configuration file was saved, select it, and click **Open**.  
The file location and filename are displayed in the Configuration File Location text box.
  - Step 4** Click **Restore**.

The backup configuration XML file is restored to all servers specified in the backup.

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## Export or Import Specific System-Level Configurations

The Import/Export System Configuration option offers the ability to export or import the specific system-level configuration for all the VDS servers. All system-level configuration pages are supported, except Error Repair, Billing Service, and Shared Recorder Setting.

After the export XML configuration file has been created, you can edit the values of the configuration parameters as appropriate for the existing VDS or a new VDS.

To export or import the configuration of a specific System Level configuration page for all VDS servers, do the following:

- 
- Step 1** Display the System Level configuration page by choosing **Configure > System Level** and one of the supported system-level configuration pages.
  - Step 2** To export the configuration to an XML file, click **Export**.

The File Download dialog box is displayed offering you the options to **Save**, **Open**, or **Cancel** the action. **Save** presents a Save As dialog box, which allows you to select the location and filename used to save the XML file. **Open** opens the XML file.

- Step 3** To import a configuration XML file, do the following:
- a. Click **Browse** to navigate to the XML configuration file to restore. The Choose File to Upload dialog box is displayed.  
The last location that was accessed to either save a backup or restore a configuration file is remembered.
  - b. Navigate to the location where the XML configuration file was saved, select it, and click **Open**.  
The file location and filename are displayed in the Configuration File Location text box.
  - c. Click **Import**.  
The backup configuration XML file is restored to all servers specified in the XML configuration file.
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## Creating QAM Gateway and Headend Setup Bulk Import/Export Configuration Files

The QAM Gateway Bulk Import/Export Configuration files differ depending on the type of streaming mode and the type of QAM. The required elements correspond to the fields on the associated CDSM GUI page.



### Note

Before you can use the Bulk Import/Export Configuration feature to configure QAM gateways and the headend setup, all Streamers must be associated with a Stream Group and the Streaming Mode must be configured. For more information on Stream Groups, see the [“Configuring Stream Groups”](#) section on page 4-65 or the [“Grouping Stream Groups into VHOs”](#) section on page 4-60 for VVIs. For more information on the Streaming Mode, see the [“Configuring the Streamer for BMS Connectivity”](#) section on page 4-49 or the [“Configuring VHO ISA Settings”](#) section on page 4-61 for VVI.

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## QAM Gateway and Headend Setup Bulk Import/Export Configuration for Gigabit Ethernet Streaming

If the streaming mode is set to gigabit Ethernet, the QAM Gateway page is used to identify the QAM device (IP address), and to configure the preference settings for the Stream Groups. For Layer 2 networks, there is an option to specify the MAC address of the next hop for each Stream Group and Streamer.



## QAM Gateway with Gigabit Ethernet Streaming Bulk Import/Export Configuration

Table B-1 describes the Bulk Import/Export Configuration file elements for QAM gateways for gigabit Ethernet streaming.

**Table B-1** Bulk Configuration File Elements for Gigabit Ethernet QAM Gateways

Tag	Elements	Attributes	Description
QAMList	QAM	—	Marks beginning and end of QAM devices for gigabit Ethernet streaming.
QAM	QAMStreamGroupPreference	IP	Defines a QAM device.
QAMStreamGroupPreference	Server	StreamGroupName QAMMAC Preference	Maps Stream Groups to the QAM device. The QAMMAC attribute is optional and is only used for Layer 2 networks.
Server	—	ServerID GroupID QAMMAC	Optional. Maps the MAC address of the QAM device to a Streamer. Only used in Layer 2 networks.

For information about the values of the attributes, see the “Configuring QAM Gateways” section on page 4-5. The ServerID and GroupID attributes are assigned during the initial configuration of the server and are displayed as server ID and group ID on the Server Setup page. For more information, see the “Configuring the Servers” section on page 4-119.



### Note

The ServerID and GroupID attributes can have the value **ALL** if the configuration applies to all servers in the VDS. The **ALL** value is case sensitive.

The Preference attribute can have a value of **High** or **None**. These values are case sensitive.

Following is an example of the Bulk Configuration file used to populate the QAM Gateway page when gigabit Ethernet is configured as the streaming mode. The example is for a Layer 2 network and uses the optional QAMMAC attribute for the QAMStreamGroupPreference and the optional Server element to specify the next hop MAC address.

```
<QAMList xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs" >
  <QAM IP="1.1.1.1">
    <QAMStreamGroupPreference StreamGroupName="SG1" QAMMAC="00:00:00:00:00:01" Preference="High">
      <Server ServerID="50" GroupID="1" QAMMAC="00:00:00:00:00:11" />
    </QAMStreamGroupPreference>
    <QAMStreamGroupPreference StreamGroupName="SG2" QAMMAC="00:00:00:00:00:02" Preference="None">
      <Server ServerID="55" GroupID="1" QAMMAC="00:00:00:00:00:11" />
    </QAMStreamGroupPreference >
    <QAMStreamGroupPreference StreamGroupName="SG3" QAMMAC="00:00:00:00:00:03" Preference="None" />
  </QAM>
  <QAM IP="1.1.1.2">
    <QAMStreamGroupPreference StreamGroupName="SG1" QAMMAC="00:00:00:00:00:01" Preference="None" />
    <QAMStreamGroupPreference StreamGroupName="SG2" QAMMAC="00:00:00:00:00:02" Preference="High" />
  </QAM>
</QAMList>
```

## Headend Setup with Gigabit Ethernet Streaming Bulk Import/Export Configuration

The Bulk Import/Export Configuration file for the Headend Setup page consist of service groups to Stream Groups mappings. [Table B-2](#) defines the Bulk Configuration file elements for headend setup for gigabit Ethernet streaming.

**Table B-2** Bulk Configuration File Elements for Gigabit Ethernet Streaming Headend Setup

Tag	Elements	Attributes	Description
Headend	ServiceGroupToStreamGroup	—	Marks beginning and end of mapping of service groups to Stream Groups
ServiceGroupToStreamGroup	—	ServiceGroup StreamGroup	Maps service groups to Stream Groups

For information about the values of the attributes, see the “[Configuring the Headend Setup](#)” section on [page 4-11](#). Following is an example of the Bulk Configuration file used to populate the Headend Setup page when gigabit Ethernet is configured as the streaming mode:

```
<?xml version="1.0" encoding="UTF-8"?>
<Headend
  xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs" >
  <ServiceGroupToStreamGroup ServiceGroup="4666669" StreamGroup="NEWTTEST" />
  <ServiceGroupToStreamGroup ServiceGroup="4666668" StreamGroup="s234" />
  <ServiceGroupToStreamGroup ServiceGroup="4666664" StreamGroup="NEWTTEST" />
  <ServiceGroupToStreamGroup ServiceGroup="4666663" StreamGroup="s234" />
  <ServiceGroupToStreamGroup ServiceGroup="1666669" StreamGroup="NEWTTEST123" />
  <ServiceGroupToStreamGroup ServiceGroup="1666668" StreamGroup="s234" />
  <ServiceGroupToStreamGroup ServiceGroup="1666664" StreamGroup="NEWTTEST" />
  <ServiceGroupToStreamGroup ServiceGroup="1666663" StreamGroup="s234" />
</Headend>
```

## QAM Gateway and Headend Setup Bulk Import/Export Configuration for ASI Streaming

If the streaming mode is set to ASI, the QAM Gateway page is used to identify the QAM device by the IP address and the QAM type, and configure the preference settings for the Stream Groups. For Layer 2 networks, there is an option to specify the MAC address of the next hop for each Stream Group and Streamer.

[Table B-3](#) defines the Bulk Configuration file elements for QAM gateways and headend setup for ASI streaming.

**Table B-3** Bulk Configuration File Elements for ASI QAM Gateways

Tag	Elements	Attributes	Description
Headend	QAM	—	Marks beginning and end of ASI QAM devices and the headend setup configuration

**Table B-3** Bulk Configuration File Elements for ASI QAM Gateways (continued)

Tag	Elements	Attributes	Description
QAM	QAMStreamGroupPreference QAMLink QAMASILink GQAMLink	IP Type GQAMPort	Defines an ASI QAM device. The Type attribute must be one of the types listed for the associated element (QAMLink, QAMASILink, or GQAMLink). The GQAMPort attribute is only used for QAM Type GQAM.
QAMStreamGroupPreference	Server	StreamGroupName QAMMAC Preference	Maps Stream Groups to the QAM device. The QAMMAC attribute is optional and is only used for Layer 2 networks.
Server	—	ServerID GroupID QAMMAC	Optional. Maps the MAC address of a QAM device to a Streamer. Only used in Layer 2 networks.
QAMLink	—	Status ServiceGroup RFNumber	Used for the following ASI QAM devices: <ul style="list-style-type: none"> <li>• NSG-8108</li> <li>• NSG-9000</li> <li>• NSG-9116</li> <li>• GQAM Shared</li> <li>• SA xDQA</li> <li>• MOTO Sem8</li> <li>• MOTO Sem12</li> <li>• GigE Gen (with up to 24 service groups and RF ports)</li> </ul> The Type attribute value of the QAM element must be one of the above values.
QAMASILink	TSIDOutLink	Number TSIDIn TSIDInLinkStatus	Used for the following ASI QAM device types: <ul style="list-style-type: none"> <li>• NSG-8204</li> <li>• Prisma-seq</li> <li>• Prisma-even</li> <li>• Prisma-odd</li> <li>• Path1-CX810</li> </ul> The Type attribute value of the QAM element must be one of the above values
GQAMLink	TSIDOutLink	ServiceGroup RFNumber	Used for the GQAM ASI QAM device. The Type attribute value of the QAM element must be GQAM.

Table B-3 Bulk Configuration File Elements for ASI QAM Gateways (continued)

Tag	Elements	Attributes	Description
TSIDOutLink	—	Index TSIDOut TSIDOutLinkStatus ServiceGroup RFNumber	Maps TSID In to TSID Outs for applicable ASI QAM devices.

For information about the values of the attributes, see the “Configuring QAM Gateways” section on page 4-5 and the “Configuring the Headend Setup” section on page 4-11. The ServerID and GroupID attributes are assigned during the initial configuration of the server and are displayed as server ID and group ID on the Server Setup page. For more information, see the “Configuring the Servers” section on page 4-119.

**Note**

The ServerID and GroupID attributes can have the value **ALL** if the configuration applies to all servers in the VDS. The **ALL** value is case sensitive.

The TSIDInLinkStatus, TSIDOutLinkStatus, and Status attributes have either the **Enable** value or the **Disable** value. The **Enable** and **Disable** values are case sensitive.

The ASI#, RFNumber, and Index attributes have specific numbers that correspond to the Headend Setup page for the QAM Type, They are as follows:

- ASI#—Possible value range is 1–4
- RFNumber—For QAMLink, the possible value range is 1–18. For GQAMLink, the possible value range for the RFNumber and associated Index attribute are the following:
  - RFNumber 1—Index attribute values of 0–3
  - RFNumber 2—Index 4–7
  - RFNumber 3—Index 8–11
  - RFNumber 4—Index 12–15

The Preference attribute can have a value of **High** or **None** for single-site steering, and a value of **High Medium**, **Low**, or **None** for multi-site steering. These values are case sensitive.

Following is an example of the Bulk Configuration file used to populate the QAM Gateway page and Headend Setup page when ASI is configured as the streaming mode:

```
<?xml version="1.0" encoding="UTF-8"?>
<Headend
  xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs" >

  <QAM IP="191.191.191.191" Type="NSG-8204">
    <QAMStreamGroupPreference StreamGroupName="NEWTEST" QAMMAC="00:00:00:00:00:01" Preference="High"/>

    <QAMASILink Number="1" TSIDIn="771" TSIDInLinkStatus="Enable">
      <TSIDOutLink TSIDOut="91" TSIDOutLinkStatus="Enable" ServiceGroup="1"/>
      <TSIDOutLink TSIDOut="92" TSIDOutLinkStatus="Enable" ServiceGroup="2"/>
      <TSIDOutLink TSIDOut="93" TSIDOutLinkStatus="Enable" ServiceGroup="3"/>
      <TSIDOutLink TSIDOut="94" TSIDOutLinkStatus="Enable" ServiceGroup="4"/>
    </QAMASILink>

    <QAMASILink Number="2" TSIDIn="7721" TSIDInLinkStatus="Enable">
      <TSIDOutLink TSIDOut="9111" TSIDOutLinkStatus="Enable" ServiceGroup="11"/>

```

```

    <TSIDOutLink TSIDOut="9211" TSIDOutLinkStatus="Enable" ServiceGroup="21" />
    <TSIDOutLink TSIDOut="9311" TSIDOutLinkStatus="Enable" ServiceGroup="31" />
    <TSIDOutLink TSIDOut="9411" TSIDOutLinkStatus="Enable" ServiceGroup="41" />
  </QAMASILink>

  <QAMASILink Number="3" TSIDIn="7731" TSIDInLinkStatus="Enable">
    <TSIDOutLink TSIDOut="9131" TSIDOutLinkStatus="Enable" ServiceGroup="113" />
    <TSIDOutLink TSIDOut="9231" TSIDOutLinkStatus="Enable" ServiceGroup="213" />
    <TSIDOutLink TSIDOut="9331" TSIDOutLinkStatus="Enable" ServiceGroup="313" />
    <TSIDOutLink TSIDOut="9431" TSIDOutLinkStatus="Enable" ServiceGroup="413" />
  </QAMASILink>

  <QAMASILink Number="4" TSIDIn="7741" TSIDInLinkStatus="Enable">
    <TSIDOutLink TSIDOut="9141" TSIDOutLinkStatus="Enable" ServiceGroup="1134" />
    <TSIDOutLink TSIDOut="9241" TSIDOutLinkStatus="Enable" ServiceGroup="2134" />
    <TSIDOutLink TSIDOut="9341" TSIDOutLinkStatus="Enable" ServiceGroup="3134" />
    <TSIDOutLink TSIDOut="9441" TSIDOutLinkStatus="Enable" ServiceGroup="4134" />
  </QAMASILink>

</QAM>

<QAM IP="191.191.191.192" Type="NSG-8204">
  <QAMStreamGroupPreference StreamGroupName="NEWTEST" QAMMAC="00:00:00:00:00:02" Preference="Low" />
  <QAMStreamGroupPreference StreamGroupName="s234" QAMMAC="00:00:00:00:00:02" Preference="High" />

  <QAMASILink Number="1" TSIDIn="772" TSIDInLinkStatus="Enable">
    <TSIDOutLink TSIDOut="911" TSIDOutLinkStatus="Enable" ServiceGroup="1" />
    <TSIDOutLink TSIDOut="921" TSIDOutLinkStatus="Enable" ServiceGroup="2" />
    <TSIDOutLink TSIDOut="931" TSIDOutLinkStatus="Enable" ServiceGroup="3" />
    <TSIDOutLink TSIDOut="941" TSIDOutLinkStatus="Enable" ServiceGroup="4" />
  </QAMASILink>

</QAM>

<QAM IP="201.191.191.193" Type="NSG-9000">
  <QAMStreamGroupPreference StreamGroupName="NEWTEST" QAMMAC="00:00:00:00:00:03" Preference="None" />
  <QAMStreamGroupPreference StreamGroupName="s234" QAMMAC="00:00:00:00:00:03" Preference="High" />

  <QAMLink Status="Enable" ServiceGroup="11" RFNumber="1" />
  <QAMLink Status="Enable" ServiceGroup="22" RFNumber="2" />
  <QAMLink Status="Enable" ServiceGroup="33" RFNumber="3" />
  <QAMLink Status="Enable" ServiceGroup="44" RFNumber="4" />
  <QAMLink Status="Enable" ServiceGroup="55" RFNumber="5" />
  <QAMLink Status="Enable" ServiceGroup="66" RFNumber="6" />
  <QAMLink Status="Enable" ServiceGroup="77" RFNumber="7" />
  <QAMLink Status="Enable" ServiceGroup="88" RFNumber="8" />
  <QAMLink Status="Enable" ServiceGroup="99" RFNumber="9" />
  <QAMLink Status="Enable" ServiceGroup="101" RFNumber="10" />
  <QAMLink Status="Enable" ServiceGroup="102" RFNumber="11" />
  <QAMLink Status="Enable" ServiceGroup="103" RFNumber="12" />
  <QAMLink Status="Enable" ServiceGroup="104" RFNumber="13" />
  <QAMLink Status="Enable" ServiceGroup="105" RFNumber="14" />
  <QAMLink Status="Enable" ServiceGroup="106" RFNumber="15" />
  <QAMLink Status="Enable" ServiceGroup="107" RFNumber="16" />
  <QAMLink Status="Enable" ServiceGroup="108" RFNumber="17" />
  <QAMLink Status="Enable" ServiceGroup="109" RFNumber="18" />
</QAM>

<QAM IP="129.12.12.29" Type="GQAM" GQAMPort="1000">

  <QAMStreamGroupPreference StreamGroupName="NEWTEST" QAMMAC="00:00:00:00:00:03" Preference="None" />
  <QAMStreamGroupPreference StreamGroupName="s234" QAMMAC="00:00:00:00:00:03" Preference="High" />

```

```

<QAMLink ServiceGroup="111" RFNumber="1">
  <TSIDOutLink Index="0" TSIDOut="88" TSIDOutLinkStatus="Enable" />
  <TSIDOutLink Index="1" TSIDOut="881" TSIDOutLinkStatus="Enable" />
  <TSIDOutLink Index="2" TSIDOut="882" TSIDOutLinkStatus="Enable" />
  <TSIDOutLink Index="3" TSIDOut="883" TSIDOutLinkStatus="Enable" />
</QAMLink>
<QAMLink ServiceGroup="222" RFNumber="2">
  <TSIDOutLink Index="4" TSIDOut="5543" TSIDOutLinkStatus="Enable" />
  <TSIDOutLink Index="5" TSIDOut="5542" TSIDOutLinkStatus="Enable" />
  <TSIDOutLink Index="6" TSIDOut="5567" TSIDOutLinkStatus="Enable" />
  <TSIDOutLink Index="7" TSIDOut="6688" TSIDOutLinkStatus="Enable" />
</QAMLink>
<QAMLink ServiceGroup="333" RFNumber="3">
  <TSIDOutLink Index="8" TSIDOut="3313" TSIDOutLinkStatus="Enable" />
  <TSIDOutLink Index="9" TSIDOut="3315" TSIDOutLinkStatus="Enable" />
  <TSIDOutLink Index="10" TSIDOut="3316" TSIDOutLinkStatus="Enable" />
  <TSIDOutLink Index="11" TSIDOut="3353" TSIDOutLinkStatus="Enable" />
</QAMLink>
<QAMLink ServiceGroup="444" RFNumber="4">
  <TSIDOutLink Index="12" TSIDOut="887" TSIDOutLinkStatus="Enable" />
  <TSIDOutLink Index="13" TSIDOut="8883" TSIDOutLinkStatus="Enable" />
  <TSIDOutLink Index="14" TSIDOut="8866" TSIDOutLinkStatus="Enable" />
  <TSIDOutLink Index="15" TSIDOut="7765" TSIDOutLinkStatus="Enable" />
</QAMLink>
</QAM>
<QAM IP="191.191.191.191" Type="NSG-8204">
  <QAMStreamGroupPreference StreamGroupName="NEWTEST" QAMMAC="00:00:00:00:00:01" Preference="High" />

  <QAMASILink Number="1" TSIDIn="771" TSIDInLinkStatus="Enable">
    <TSIDOutLink TSIDOut="91" TSIDOutLinkStatus="Enable" ServiceGroup="1" />
    <TSIDOutLink TSIDOut="92" TSIDOutLinkStatus="Enable" ServiceGroup="2" />
    <TSIDOutLink TSIDOut="93" TSIDOutLinkStatus="Enable" ServiceGroup="3" />
    <TSIDOutLink TSIDOut="94" TSIDOutLinkStatus="Enable" ServiceGroup="4" />
  </QAMASILink>

  <QAMASILink Number="2" TSIDIn="7721" TSIDInLinkStatus="Enable">
    <TSIDOutLink TSIDOut="9111" TSIDOutLinkStatus="Enable" ServiceGroup="11" />
    <TSIDOutLink TSIDOut="9211" TSIDOutLinkStatus="Enable" ServiceGroup="21" />
    <TSIDOutLink TSIDOut="9311" TSIDOutLinkStatus="Enable" ServiceGroup="31" />
    <TSIDOutLink TSIDOut="9411" TSIDOutLinkStatus="Enable" ServiceGroup="41" />
  </QAMASILink>

  <QAMASILink Number="3" TSIDIn="7731" TSIDInLinkStatus="Enable">
    <TSIDOutLink TSIDOut="9131" TSIDOutLinkStatus="Enable" ServiceGroup="113" />
    <TSIDOutLink TSIDOut="9231" TSIDOutLinkStatus="Enable" ServiceGroup="213" />
    <TSIDOutLink TSIDOut="9331" TSIDOutLinkStatus="Enable" ServiceGroup="313" />
    <TSIDOutLink TSIDOut="9431" TSIDOutLinkStatus="Enable" ServiceGroup="413" />
  </QAMASILink>

  <QAMASILink Number="4" TSIDIn="7741" TSIDInLinkStatus="Enable">
    <TSIDOutLink TSIDOut="9141" TSIDOutLinkStatus="Enable" ServiceGroup="1134" />
    <TSIDOutLink TSIDOut="9241" TSIDOutLinkStatus="Enable" ServiceGroup="2134" />
    <TSIDOutLink TSIDOut="9341" TSIDOutLinkStatus="Enable" ServiceGroup="3134" />
    <TSIDOutLink TSIDOut="9441" TSIDOutLinkStatus="Enable" ServiceGroup="4134" />
  </QAMASILink>
</QAM>
<QAM IP="191.191.191.200" Type="NSG-8204">
  <QAMStreamGroupPreference StreamGroupName="NEWTEST" QAMMAC="00:00:00:00:00:01" Preference="High" />
  <QAMStreamGroupPreference StreamGroupName="s234" QAMMAC="00:00:00:00:00:03" Preference="Low" />
</QAM>
</Headend>

```

# Creating Stream Destination Bulk Import/Export Configuration Files

If the Stream Destination is set to IPTV, the Stream Destination page is displayed instead of the QAM Gateway and Headend Setup pages. The Stream Destination feature is available only for single-site steering and in ISA environments that use gigabit Ethernet streaming as the streaming mode. For more information, see the “[Stream Destination](#)” section on page F-4. The Stream Destination page provides a way to associate subnetworks with Stream Groups.

Table B-4 defines the Bulk Configuration file elements for Stream Destination.

**Table B-4** Bulk Configuration File Elements for Stream Destination

Tag	Elements	Attributes	Description
StreamDestinationList	StreamDestination	—	Marks beginning and end of subnets defined for IPTV.
StreamDestination	StreamGroupPreference	SubnetAddress SubnetMask	Defines a subnet.
StreamGroupPreference	—	StreamGroupName Preference	Maps Stream Groups to the subnet address.

For information about the values of the attributes, see the “[Configuring Stream Destinations](#)” section on page 4-19.



#### Note

The Preference attribute can have a value of **High** or **None**. These values are case sensitive.

Following is an example of the Bulk Configuration file used to populate the Stream Destination page:

```
<?xml version="1.0" encoding="UTF-8"?>
<StreamDestinationList
  xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
  <StreamDestination SubnetAddress="132.2.2.0" SubnetMask="255.255.255.0" >
    <StreamGroupPreference StreamGroupName="NEWTTEST" Preference="High" />
    <StreamGroupPreference StreamGroupName="s234" Preference="None" />
  </StreamDestination>
  <StreamDestination SubnetAddress="130.10.10.0" SubnetMask="255.255.255.0" >
    <StreamGroupPreference StreamGroupName="s234" Preference="High" />
    <StreamGroupPreference StreamGroupName="NEWTTEST" Preference="None" />
  </StreamDestination>
</StreamDestinationList>
```

# Creating Route Table XML Configuration Files

The Route Table page allows you to define multiple subnets on a server. For more information, see the [“Configuring the Recorder”](#) section on page 4-125.

Table B-5 defines the XML Configuration file elements for the Route Table page.

**Table B-5 XML Configuration File Elements for Route Tables**

Tag	Elements	Attributes	Description
RouteTableList	RouteTable	—	Marks beginning and end of defined routes.
RouteTable	Server Route	—	Defines a route table.
Server	—	ServerID GroupID	Identifies the VDS server.
Route	—	Network SubnetMask Gateway RouteType VIP	Defines a route.

For information about the values of the attributes, see the [“Configuring the Recorder”](#) section on page 4-125. The ServerID and GroupID attributes are assigned during the initial configuration of the server and are displayed as server ID and group ID on the Server Setup page. For more information, see the [“Configuring the Servers”](#) section on page 4-119.



## Note

The ServerID and GroupID attributes can have the value **ALL** if the configuration applies to all servers in the VDS. The **ALL** value is case sensitive.

The RouteType attributes possible values are: **cServer Source**, **cServer Destination**, or **Stream Control**. These values are case sensitive.

Following is an example of the XML Configuration file used to populate the Route Table page (VIP is not configured in this example):

```
<?xml version="1.0" encoding="UTF-8"?>
<RouteTableList xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs" >
  <RouteTable>
    <Server ServerID="ALL" GroupID="ALL"/>
    <Route Network="3.4.3.0" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
    <Route Network="3.4.5.0" SubnetMask="255.255.255.0" Gateway="1.1.1.1" RouteType="cServer Source" />
    <Route Network="3.4.6.0" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source"/>
    <Route Network="4.2.7.0" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
    <Route Network="5.2.8.0" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
    <Route Network="2.2.9.0" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
    <Route Network="6.2.10.0" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
    <Route Network="7.2.21.0" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
  </RouteTable>
  <RouteTable>
    <Server ServerID="50" GroupID="1111"/>
  </RouteTable>
</RouteTableList>
```



```

<Server ServerID="51" GroupID="1111"/>
<Server ServerID="52" GroupID="1111"/>
<Server ServerID="53" GroupID="1111"/>
<Route Network="120.2.3.0" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
<Route Network="120.2.4.0" SubnetMask="255.255.255.0" Gateway="1.1.1.11" RouteType="cServer Source" />
<Route Network="120.2.5.0" SubnetMask="255.255.255.0" Gateway="1.1.1.1" RouteType="cServer Source" />
<Route Network="120.120.2.6" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
<Route Network="120.2.7.0" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
<Route Network="120.2.8.0" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
<Route Network="120.2.9.0" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
<Route Network="120.2.10.0" SubnetMask="255.255.255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
<Route Network="120.2.21.0" SubnetMask="255.255.d255.0" Gateway="1.1.1.10" RouteType="cServer Source" />
</RouteTable>

</RouteTableList>

```

## Creating SNMP Agent XML Configuration Files

The SNMP Agent page is used to configure SNMP communication. [Table B-6](#) defines the XML Configuration file elements for the SNMP Agent page.

**Table B-6** XML Configuration File Elements for SNMP Agent

Tag	Elements	Attributes	Description
SNMPAgentList	SNMPAgent	—	Marks beginning and end of defined SNMP agents.
SNMPAgent	Server SNMPCommunity SNMPTrapStation SNMPVACM SNMPUSM	Contact Location DefaultTrapCommunity	Defines an SNMP agent .
Server	—	ServerID GroupID	Identifies the VDS server.
SNMPCommunity	—	Name Permissions	Defines the community for the SNMP agent.
SNMPTrapStation	—	TrapStation Version TrapCommunity	Defines the trap station for the SNMP agent.
SNMPVACM	—	User Access Authentication OID	Defines a View-Based Access Control Model (VACM) user.
SNMPUSM	—	—	Defines a User-Based Security Model (USM) user.

For information about the values of the attributes, see the “[Configuring the SNMP Agent](#)” section on page 4-130. The ServerID and GroupID attributes are assigned during the initial configuration of the server and are displayed as server ID and group ID on the Server Setup page. For more information, see the “[Configuring the Servers](#)” section on page 4-119.

**Note**

The ServerID and GroupID attributes can have the value **ALL** if the configuration applies to all servers in the VDS. The **ALL** value is case sensitive. The Permission attribute can have the value of **Read-Only** or **Read-Write**.

Following is an example of the XML Configuration file used to populate the SNMP Agent page (only SNMPv2c is configured in the example):

```
<?xml version="1.0" encoding="UTF-8"?>
<SNMPAgentList
  xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs" >

  <SNMPAgent Contact="TestContact" Location="TestLocation">
    <Server ServerID="ALL" GroupID="ALL"/>
    <SNMPCommunity Name="public" Permissions="Read-Only" />
    <SNMPCommunity Name="public2" Permissions="Read-Only" />
    <SNMPTrapStation TrapStation="77.77.77.77" Version="v1"/>
    <SNMPTrapStation TrapStation="177.77.77.77" Version="v2"/>
  </SNMPAgent>

  <SNMPAgent Contact="XXXX" Location="YYYY">
    <Server ServerID="71" GroupID="1111"/>
    <Server ServerID="72" GroupID="1111"/>
    <Server ServerID="73" GroupID="1111"/>
    <Server ServerID="74" GroupID="1111"/>
    <Server ServerID="75" GroupID="1111"/>
    <SNMPCommunity Name="XXXX" Permissions="Read-Only" />
    <SNMPCommunity Name="YYYY" Permissions="Read-Only" />
    <SNMPTrapStation TrapStation="5.99.99.9" Version="v1"/>
    <SNMPTrapStation TrapStation="55.77.77.77" Version="v2"/>
  </SNMPAgent>
</SNMPAgentList>
```

## Creating DNS Server XML Configuration Files

The Server DNS page is used to configure the DNS servers. [Table B-7](#) defines the XML Configuration file elements for the Server DNS page.

**Table B-7** XML Configuration File Elements for DNS Server

Tag	Elements	Attributes	Description
DNSList	DNS	—	Marks the beginning and ending of the DNS settings.
DNS	Server DomainSuffix DNSServer	—	Defines the DNS server settings.
Server	—	ServerID GroupID	Identifies the VDS server.

**Table B-7 XML Configuration File Elements for DNS Server (continued)**

Tag	Elements	Attributes	Description
DomainSuffix	—	—	Defines the domain suffix.
DNSServer	—	—	Defines the DNS server.

For information about the values of the attributes, see the “[Configuring the Server Level DNS](#)” section on page 4-134. The ServerID and GroupID attributes are assigned during the initial configuration of the server and are displayed as server ID and group ID on the Server Setup page. For more information, see the “[Configuring the Servers](#)” section on page 4-119.

**Note**

The ServerID and GroupID attributes can have the value **ALL** if the configuration applies to all servers in the VDS. The **ALL** value is case sensitive.

Following is an example of the XML Configuration file used to populate the Server DNS page:

```
<<?xml version="1.0" encoding="UTF-8"?>

<DNSList
  xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs" >
  <DNS>
    <Server ServerID="ALL" GroupID="ALL" />
    <DomainSuffix>first.sp.com</DomainSuffix>
    <DomainSuffix>second.abc.com</DomainSuffix>
    <DomainSuffix>third.xyz.com</DomainSuffix>
    <DNSServer>152.1.1.10</DNSServer>
    <DNSServer>222.2.2.11</DNSServer>
  </DNS>
</DNSList>
```

## Creating NTP Server XML Configuration Files

The NTP Server page is used to configure the NTP servers. [Table B-8](#) defines the XML Configuration file elements for the NTP Server page.

**Table B-8 XML Configuration File Elements for NTP Server**

Tag	Elements	Attributes	Description
NTPServerList	NTPServer	—	Marks the beginning and ending of the NTP settings.
NTPServer	Server NTPServerIP	—	Defines the NTP settings.
Server	—	ServerID GroupID	Identifies the VDS server.
NTPServerIP	—	—	Defines the NTP server.

For information about the values of the attributes, see the “[Configuring the Server Level NTP](#)” section on page 4-135. The ServerID and GroupID attributes are assigned during the initial configuration of the server and are displayed as server ID and group ID on the Server Setup page. For more information, see the “[Configuring the Servers](#)” section on page 4-119.

**Note**

The ServerID and GroupID attributes can have the value **ALL** if the configuration applies to all servers in the VDS. The **ALL** value is case sensitive.

Following is an example of the XML Configuration file used to populate the NTP Server page:

```
<<?xml version="1.0" encoding="UTF-8"?>

<NTPServerList
  xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs" >
  <NTPServer>
    <Server ServerID="ALL" GroupID="ALL" />
    <NTPServerIP>198.168.1.10</NTPServerIP>
    <NTPServerIP>172.31.2.11</NTPServerIP>
  </NTPServer>
</NTPServerList>
```

## Creating Logging XML Configuration Files

The Server-Level Logging page is used to configure the logging. [Table B-9](#) defines the XML Configuration file elements for the Server-Level Logging page.

**Table B-9** XML Configuration File Elements for Server-Level Logging

Tag	Elements	Attributes	Description
LogConfigList	LogConfig	—	Marks the beginning and ending of the logging settings.
LogConfig	Server Facility	—	Defines the logging.
Server	—	ServerID GroupID	Identifies the VDS server.
Facility	debug-flags	name local-log remote-log	Defines the logging facility.
debug-flags	—	flag	Defines the debug flags for the specified facility

For information about the values of the attributes, see the “[Configuring the Server Level Logging](#)” section on page 4-137. The ServerID and GroupID attributes are assigned during the initial configuration of the server and are displayed as server ID and group ID on the Server Setup page. For more information, see the “[Configuring the Servers](#)” section on page 4-119.

**Note**

The ServerID and GroupID attributes can have the value **ALL** if the configuration applies to all servers in the VDS. The **ALL** value is case sensitive.

Following is an example of the XML Configuration file used to populate the Server-Level Logging page:

```
<?xml version="1.0" encoding="UTF-8"?>

<?xml version="1.0" encoding="UTF-8"?>
<LogConfigList xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
  <LogConfig><Server ServerID="11" GroupID="2529"/>
    <Facility name="avs_launch" local-log="" remote-log=""></Facility>
    <Facility name="avsdb" local-log="" remote-log=""></Facility>
    <Facility name="bwm" local-log="informational" remote-log="DISABLE"></Facility>
    <Facility name="c2k" local-log="" remote-log=""></Facility>
    <Facility name="ev_auth" local-log="" remote-log=""></Facility>
    <Facility name="http" local-log="" remote-log=""></Facility>
    <Facility name="redir" local-log="" remote-log=""></Facility>
    <Facility name="rtsp" local-log="" remote-log=""></Facility>
    <Facility name="rtspmonitor" local-log="" remote-log=""></Facility>
    <Facility name="statsd" local-log="error" remote-log="DISABLE"></Facility>
    <Facility name="stream_event" local-log="" remote-log=""></Facility>
    <Facility name="stream_trace" local-log="" remote-log=""></Facility>
    <Facility name="utils" local-log="" remote-log=""></Facility>
    <Facility name="vqes_cp" local-log="informational" remote-log="DISABLE"></Facility>
    <Facility name="wmsvr" local-log="" remote-log=""></Facility>
  </LogConfig>
  <LogConfig><Server ServerID="13" GroupID="2529"/>
    <Facility name="avs_launch" local-log="" remote-log=""></Facility>
    <Facility name="avsdb" local-log="" remote-log=""></Facility>
    <Facility name="bwm" local-log="emergency" remote-log="emergency">
      <debug-flags><flag name="general"/></debug-flags>
    </Facility>
    <Facility name="c2k" local-log="" remote-log=""></Facility>
    <Facility name="ev_auth" local-log="" remote-log=""></Facility>
    <Facility name="http" local-log="" remote-log=""></Facility>
    <Facility name="redir" local-log="" remote-log=""></Facility>
    <Facility name="rtsp" local-log="" remote-log=""></Facility>
    <Facility name="rtspmonitor" local-log="" remote-log=""></Facility>
    <Facility name="statsd" local-log="" remote-log=""></Facility>
    <Facility name="stream_event" local-log="" remote-log=""></Facility>
    <Facility name="stream_trace" local-log="" remote-log=""></Facility>
    <Facility name="utils" local-log="" remote-log=""></Facility>
    <Facility name="vqes_cp" local-log="informational" remote-log="DISABLE"></Facility>
    <Facility name="wmsvr" local-log="" remote-log=""></Facility>
  </LogConfig>
</LogConfigList>
```

# Creating Syslog XML Configuration Files

The Server-Level Syslog page is used to configure the syslog settings. [Table B-10](#) defines the XML Configuration file elements for the Server-Level Syslog page.

**Table B-10** XML Configuration File Elements for Server-Level Syslog

Tag	Elements	Attributes	Description
SyslogConfigList	SyslogConfig	—	Marks the beginning and ending of the syslog settings.
SyslogConfig	Server	RemoteLogging IPAddress Port	Defines the logging.
Server	—	ServerID GroupID	Identifies the VDS server.

For information about the values of the attributes, see the “[Configuring the Server Level Syslog](#)” section on page 4-139. The ServerID and GroupID attributes are assigned during the initial configuration of the server and are displayed as server ID and group ID on the Server Setup page. For more information, see the “[Configuring the Servers](#)” section on page 4-119.



## Note

The ServerID and GroupID attributes can have the value **ALL** if the configuration applies to all servers in the VDS. The **ALL** value is case sensitive.

Following is an example of the XML Configuration file used to populate the Server-Level Syslog page:

```
<?xml version="1.0" encoding="utf-8"?>
<SyslogConfigList xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">

  <SyslogConfig RemoteLogging='Enable' IPAddress='10.74.17.82' Port='123'>
    <Server ServerID='13' GroupID='2529' />
  </SyslogConfig>
  <SyslogConfig RemoteLogging='Enable' IPAddress='10.74.17.17' Port='514'>
    <Server ServerID='27' GroupID='2529' />
  </SyslogConfig>
  <SyslogConfig RemoteLogging='Enable' IPAddress='10.74.17.28' Port='514'>
    <Server ServerID='28' GroupID='2529' />
  </SyslogConfig>
</SyslogConfigList>
```

# Creating Server Setup XML Configuration Files

The Server Setup page is used to configure the VDS server settings. The elements and attributes vary depending on the type of VDS server (Vault, Caching Node, Streamer, or ISV). The XML Configuration File for the Server Setup also includes the settings on the Interface Setup page. [Table B-11](#) defines the XML Configuration file elements for the Server Setup and Interface Setup page.

**Table B-11 XML Configuration File Elements for Server Setup and Interface Setup**

Tag	Elements	Attributes	Description
ServerConfigList	VaultServerConfig StreamerServerConfig CacheServerConfig SSVServerConfig	—	Marks the beginning and ending of the server settings.
VaultServerConfig	Server SimpleDSCPMarking CustomDSCPMarking InterfaceConfig	PartNumber DefaultGateway HostName FTPOutInterface ArrayID FTPOutBandwidth JumboCFrames FTPOutSession VaultMirrorCopies TTL VaultLocalCopies SourceIP DSCPMarkingMethod CachePort DualCAS TCPTraffic MaxNoOfInterfaces	Defines the Vault settings.
CacheServerConfig	Server SimpleDSCPMarking CustomDSCPMarking InterfaceConfig	PartNumber DefaultGateway HostName TTL ArrayID SourceIP JumboCFrames CachePort DSCPMarkingMethod TCPTraffic MaxNoOfInterfaces	Defines the Caching Node settings.
StreamerServerConfig	Server SimpleDSCPMarking CustomDSCPMarking InterfaceConfig	PartNumber TransportPortStart TTL TransportPortEnd TransportDSCP CachePort CacheDSCP TCPTraffic NullStream StreamerIsCache LivePlayback JumboSFrames StunPlayErrorDelay JumboCFrames StunPlayTimeout DSCPMarkingMethod HostName DualCAS ArrayID DefaultGateway SourceIP MaxNoOfInterfaces	Defines the Streamer settings.

Table B-11 XML Configuration File Elements for Server Setup and Interface Setup

Tag	Elements	Attributes	Description	
SSVServerConfig	Server SimpleDSCPMarking CustomDSCPMarking InterfaceConfig	PartNumber HostName ArrayID NullStream StunPlayErrorDelay StunPlayTimeout SourceIP TransportPortStart TransportPortEnd CachePort TCPTraffic StreamerIsCache	JumboSFrames JumboCFrames VaultMirrorCopies VaultLocalCopies DSCPMarkingMethod DualCAS DefaultGateway FTPOutInterface FTPOutBandwidth FTPOutSession TTL MaxNoOfInterfaces	Defines the ISV settings.
Server	—	ServerID GroupID	Identifies the VDS server.	
SimpleDSCPMarking	—	ControlDSCP DataDSCP	StreamDSCP HTTPDSCP	Defines simple DSCP marking.
CustomDSCPMarking	—	ControlTraffic StreamTraffic HTTPTraffic HighestPriorityRxTraffic CommittedRateLostPktRecovery CommittedRateTraffic MirroringLostPktRecovery MirroringLiveIngestTraffic DriveFailureRepairTraffic MirroringTraffic LowestPriorityDataSmoothingTraffic		Defines custom DSCP marking.
InterfaceConfig	—	Name Type IPAddress SubnetMask	TransportPort CachePort Number FTP	Defines interface settings on VDS server.

For information about the values of the attributes, see the “[Configuring the Servers](#)” section on page 4-119 and the “[Configuring the Interfaces](#)” section on page 4-115. The ServerID and GroupID attributes are assigned during the initial configuration of the server and are displayed as server ID and group ID on the Server Setup page. For more information, see the “[Configuring the Servers](#)” section on page 4-119.

**Note**

The ServerID and GroupID attributes can have the value **ALL** if the configuration applies to all servers in the VDS. The **ALL** value is case sensitive.

Following is an example of the XML Configuration file used to populate the Server Setup page and Interface Setup page (only Vaults and Streamers are configured in this example):

```
<?xml version="1.0" encoding="utf-8"?>
<ServerConfigList xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscoverbsvcs">

  <VaultServerConfig ArrayID="0" SourceIP="" CachePort="" VaultLocalCopies="0" VaultMirrorCopies="2" TTL="32"
```



```

FTPOutSession="" FTPOutBandwidth="" FTPOutInterface="" HostName="V1-91" PartNumber="CDE220-2A-C"
JumboCFrames="Disable"
  DSCPMarkingMethod="Simple" DualCAS="Disable" DefaultGateway="10.78.178.1" MaxNoOfInterfaces="10">
    <Server ServerID="91" GroupID="9499" />
    <SimpleDSCPMarking ControlDSCP="0" DataDSCP="0" />
    <InterfaceConfig Name="eth0" Type="Management" IPAddress="10.78.178.91" SubnetMask="255.255.255.0"
TransportPort="" Number="0" FTP="Disable" />
    <InterfaceConfig Name="eth1" Type="Ingest" IPAddress="192.168.100.91" SubnetMask="255.255.255.0"
TransportPort="" Number="1" FTP="Disable" />
    <InterfaceConfig Name="eth2" Type="Cache" IPAddress="192.169.101.2" TransportPort="" Number="2"
FTP="Disable" />
    <InterfaceConfig Name="eth3" Type="Cache" IPAddress="192.169.101.3" TransportPort="" Number="3"
FTP="Disable" />
    <InterfaceConfig Name="eth4" Type="Cache" IPAddress="192.169.101.4" TransportPort="" Number="4"
FTP="Disable" />
    <InterfaceConfig Name="eth5" Type="Cache" IPAddress="192.169.101.5" TransportPort="" Number="5"
FTP="Disable" />
    <InterfaceConfig Name="eth6" Type="Cache" IPAddress="192.169.101.6" TransportPort="" Number="6"
FTP="Disable" />
    <InterfaceConfig Name="eth7" Type="Cache" IPAddress="192.169.101.7" TransportPort="" Number="7"
FTP="Disable" />
    <InterfaceConfig Name="eth8" Type="Cache" IPAddress="192.169.101.8" TransportPort="" Number="8"
FTP="Disable" />
    <InterfaceConfig Name="eth9" Type="Cache" IPAddress="192.169.101.9" TransportPort="" Number="9"
FTP="Disable" />
  </VaultServerConfig>
  <VaultServerConfig ArrayID="0" SourceIP="192.168.207.65" CachePort="48879" VaultLocalCopies="1"
VaultMirrorCopies="2"
  TTL="32" FTPOutSession="" FTPOutBandwidth="" FTPOutInterface="" HostName="V2-92" PartNumber="CDE220-2A-C"
JumboCFrames="Disable"
  DSCPMarkingMethod="Simple" DualCAS="Disable" DefaultGateway="10.78.178.1" MaxNoOfInterfaces="10">
    <Server ServerID="92" GroupID="9499" />
    <SimpleDSCPMarking ControlDSCP="0" DataDSCP="0" />
    <InterfaceConfig Name="eth0" Type="Management" IPAddress="10.78.178.92" SubnetMask="255.255.255.0"
TransportPort="" Number="0" FTP="Disable" />
    <InterfaceConfig Name="eth1" Type="Ingest" IPAddress="192.168.100.92" SubnetMask="255.255.255.0"
TransportPort="" Number="1" FTP="Enable" />
    <InterfaceConfig Name="eth2" Type="Cache" IPAddress="192.169.101.10" TransportPort="" Number="2"
FTP="Disable" />
    <InterfaceConfig Name="eth3" Type="Cache" IPAddress="192.169.101.11" TransportPort="" Number="3"
FTP="Disable" />
    <InterfaceConfig Name="eth4" Type="Cache" IPAddress="192.169.101.12" TransportPort="" Number="4"
FTP="Disable" />
    <InterfaceConfig Name="eth5" Type="Cache" IPAddress="192.169.101.13" TransportPort="" Number="5"
FTP="Disable" />
    <InterfaceConfig Name="eth6" Type="Cache" IPAddress="192.169.101.14" TransportPort="" Number="6"
FTP="Disable" />
    <InterfaceConfig Name="eth7" Type="Cache" IPAddress="192.169.101.15" TransportPort="" Number="7"
FTP="Disable" />
    <InterfaceConfig Name="eth8" Type="Cache" IPAddress="192.169.101.16" TransportPort="" Number="8"
FTP="Disable" />
    <InterfaceConfig Name="eth9" Type="Cache" IPAddress="192.169.101.17" TransportPort="" Number="9"
FTP="Disable" />
  </VaultServerConfig>
  <StreamServerConfig TTL="32" ArrayID="1" HostName="S1-96" PartNumber="CDE220-2C2-C" NullStream="Enable"
SourceIP="192.168.207.65" TransportPortStart="48879" TransportPortEnd="48879" CachePort="48879"
StreamerIsCache="Disable" JumboSFrames="Disable" JumboCFrames="Disable" DSCPMarkingMethod="Simple"
DualCAS="Disable" DefaultGateway="10.78.178.1" MaxNoOfInterfaces="14">
    <Server ServerID="96" GroupID="9499" />
    <SimpleDSCPMarking ControlDSCP="0" DataDSCP="0" StreamDSCP="0" HTTPDSCP="0" />
    <InterfaceConfig Name="eth0" Type="Management" IPAddress="10.78.178.96" SubnetMask="255.255.255.0"
TransportPort="" CachePort="" Number="0" FTP="Enable" />
    <InterfaceConfig Name="eth2" Type="Stream/Cache" IPAddress="192.169.101.30" TransportPort="" CachePort=""
Number="2" FTP="Disable" />

```

```

    <InterfaceConfig Name="eth3" Type="Stream/Cache" IPAddress="192.169.101.31" TransportPort="" CachePort=""
Number="3" FTP="Disable" />
    <InterfaceConfig Name="eth4" Type="Stream/Cache" IPAddress="192.169.101.32" TransportPort="" CachePort=""
Number="4" FTP="Disable" />
    <InterfaceConfig Name="eth5" Type="Stream/Cache" IPAddress="192.169.101.33" TransportPort="" CachePort=""
Number="5" FTP="Disable" />
    <InterfaceConfig Name="eth6" Type="Stream/Cache" IPAddress="192.169.101.34" TransportPort="" CachePort=""
Number="6" FTP="Disable" />
    <InterfaceConfig Name="eth7" Type="Stream/Cache" IPAddress="192.169.101.35" TransportPort="" CachePort=""
Number="7" FTP="Disable" />
    <InterfaceConfig Name="eth8" Type="Stream/Cache" IPAddress="192.169.101.36" TransportPort="" CachePort=""
Number="8" FTP="Disable" />
    <InterfaceConfig Name="eth9" Type="Stream/Cache" IPAddress="192.169.101.37" TransportPort="" CachePort=""
Number="9" FTP="Disable" />
    <InterfaceConfig Name="eth10" Type="Stream/Cache" IPAddress="192.169.101.38" TransportPort=""
CachePort="" Number="10" FTP="Disable" />
    <InterfaceConfig Name="eth11" Type="Stream/Cache" IPAddress="192.169.101.39" TransportPort=""
CachePort="" Number="11" FTP="Disable" />
    <InterfaceConfig Name="eth12" Type="Stream/Cache" IPAddress="192.169.101.40" TransportPort=""
CachePort="" Number="12" FTP="Disable" />
    <InterfaceConfig Name="eth13" Type="Stream/Cache" IPAddress="192.169.101.41" TransportPort=""
CachePort="" Number="13" FTP="Disable" />
</StreamServerConfig>
<StreamServerConfig TTL="32" ArrayID="1" HostName="S2-97" PartNumber="CDE220-2S3-C" NullStream="Enable"
SourceIP="192.168.207.65" TransportPortStart="48879" TransportPortEnd="48879" CachePort="48879"
StreamerIsCache="Disable" JumboSFrames="Disable" JumboCFrames="Disable" DSCPMarkingMethod="Simple"
DualCAS="Disable" DefaultGateway="10.78.178.1" MaxNoOfInterfaces="14">
    <Server ServerID="97" GroupID="9499" />
    <SimpleDSCPMarking ControlDSCP="0" DataDSCP="0" StreamDSCP="0" HTTPDSCP="0" />
    <InterfaceConfig Name="eth0" Type="Management" IPAddress="10.78.178.97" SubnetMask="255.255.255.0"
TransportPort="" CachePort="" Number="0" FTP="Enable" />
    <InterfaceConfig Name="eth2" Type="Stream/Cache" IPAddress="192.169.101.42" TransportPort="" CachePort=""
Number="2" FTP="Disable" />
    <InterfaceConfig Name="eth3" Type="Stream/Cache" IPAddress="192.169.101.43" TransportPort="" CachePort=""
Number="3" FTP="Disable" />
    <InterfaceConfig Name="eth4" Type="Stream/Cache" IPAddress="192.169.101.44" TransportPort="" CachePort=""
Number="4" FTP="Disable" />
    <InterfaceConfig Name="eth5" Type="Stream/Cache" IPAddress="192.169.101.45" TransportPort="" CachePort=""
Number="5" FTP="Disable" />
    <InterfaceConfig Name="eth6" Type="Stream/Cache" IPAddress="192.169.101.46" TransportPort="" CachePort=""
Number="6" FTP="Disable" />
    <InterfaceConfig Name="eth7" Type="Stream/Cache" IPAddress="192.169.101.47" TransportPort="" CachePort=""
Number="7" FTP="Disable" />
    <InterfaceConfig Name="eth8" Type="Stream/Cache" IPAddress="192.169.101.48" TransportPort="" CachePort=""
Number="8" FTP="Disable" />
    <InterfaceConfig Name="eth9" Type="Stream/Cache" IPAddress="192.169.101.49" TransportPort="" CachePort=""
Number="9" FTP="Disable" />
    <InterfaceConfig Name="eth10" Type="Stream/Cache" IPAddress="192.169.101.50" TransportPort=""
CachePort="" Number="10" FTP="Disable" />
    <InterfaceConfig Name="eth11" Type="Stream/Cache" IPAddress="192.169.101.51" TransportPort=""
CachePort="" Number="11" FTP="Disable" />
    <InterfaceConfig Name="eth12" Type="Stream/Cache" IPAddress="192.169.101.52" TransportPort=""
CachePort="" Number="12" FTP="Disable" />
    <InterfaceConfig Name="eth13" Type="Stream/Cache" IPAddress="192.169.101.53" TransportPort=""
CachePort="" Number="13" FTP="Disable" />
</StreamServerConfig>
<StreamServerConfig TTL="32" ArrayID="1" HostName="S3-98" PartNumber="CDE220-2S3-C" NullStream="Enable"
SourceIP="192.168.207.65" TransportPortStart="48879" TransportPortEnd="48879" CachePort="48879"
StreamerIsCache="Disable" JumboSFrames="Disable" JumboCFrames="Disable" DSCPMarkingMethod="Simple"
DualCAS="Disable" DefaultGateway="10.78.178.1" MaxNoOfInterfaces="14">
    <Server ServerID="98" GroupID="9499" />
    <SimpleDSCPMarking ControlDSCP="0" DataDSCP="0" StreamDSCP="0" HTTPDSCP="0" />
    <InterfaceConfig Name="eth0" Type="Management" IPAddress="10.78.178.98" SubnetMask="255.255.255.0"
TransportPort="" CachePort="" Number="0" FTP="Enable" />

```

```

    <InterfaceConfig Name="eth2" Type="Stream/Cache" IPAddress="192.169.101.54" TransportPort="" CachePort=""
Number="2" FTP="Disable" />
    <InterfaceConfig Name="eth3" Type="Stream/Cache" IPAddress="192.169.101.55" TransportPort="" CachePort=""
Number="3" FTP="Disable" />
    <InterfaceConfig Name="eth4" Type="Stream/Cache" IPAddress="192.169.101.56" TransportPort="" CachePort=""
Number="4" FTP="Disable" />
    <InterfaceConfig Name="eth5" Type="Stream/Cache" IPAddress="192.169.101.57" TransportPort="" CachePort=""
Number="5" FTP="Disable" />
    <InterfaceConfig Name="eth6" Type="Stream/Cache" IPAddress="192.169.101.58" TransportPort="" CachePort=""
Number="6" FTP="Disable" />
    <InterfaceConfig Name="eth7" Type="Stream/Cache" IPAddress="192.169.101.59" TransportPort="" CachePort=""
Number="7" FTP="Disable" />
    <InterfaceConfig Name="eth8" Type="Stream/Cache" IPAddress="192.169.101.60" TransportPort="" CachePort=""
Number="8" FTP="Disable" />
    <InterfaceConfig Name="eth9" Type="Stream/Cache" IPAddress="192.169.101.61" TransportPort="" CachePort=""
Number="9" FTP="Disable" />
    <InterfaceConfig Name="eth10" Type="Stream/Cache" IPAddress="192.169.101.62" TransportPort=""
CachePort="" Number="10" FTP="Disable" />
    <InterfaceConfig Name="eth11" Type="Stream/Cache" IPAddress="192.169.101.63" TransportPort=""
CachePort="" Number="11" FTP="Disable" />
    <InterfaceConfig Name="eth12" Type="Stream/Cache" IPAddress="192.169.101.64" TransportPort=""
CachePort="" Number="12" FTP="Disable" />
    <InterfaceConfig Name="eth13" Type="Stream/Cache" IPAddress="192.169.101.65" TransportPort=""
CachePort="" Number="13" FTP="Disable" />
  </StreamServerConfig>
</ServerConfigList>

```

## Server-Level Configuration XML Schema

The Server-Level Configuration XML schema file describes and dictates the content of the Server-Level Configuration XML file. The `ciscoverbsvc_bulk_config.xsd` file contains the XML schema.



### Note

The following System-Level configuration pages that are included in the Server-Level XML schema are obsolete and replaced in the System-Level XML schema:

- QAM Gateway
- Headend Setup (For gigabit Ethernet streaming mode. ASI streaming headend configuration is imported as part of the QAM Gateway page configuration importing.)
- Stream Destination

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:ws="http://www.cisco.com/schemas/VCPBU/CDS-TV/R0/ciscoverbsvcs"
  targetNamespace="http://www.cisco.com/schemas/VCPBU/CDS-TV/R0/ciscoverbsvcs">

  <!-- Configure/Server/ elements -->

  <xs:element name="Server">
    <xs:complexType>
      <xs:attribute name="ServerID" type="xs:string" use="required" />
      <xs:attribute name="GroupID" type="xs:string" use="required" />
      <xs:attribute name="QAMMAC" type="xs:string" />
    </xs:complexType>
  </xs:element>

```

```

<!-- Configure/Server/RouteTables/ elements -->

<xs:element name="Route">
  <xs:complexType>
    <xs:attribute name="Network" type="xs:string" />
    <xs:attribute name="SubnetMask" type="xs:string" />
    <xs:attribute name="Gateway" type="xs:string" />
    <xs:attribute name="RouteType" type="xs:string" />
    <xs:attribute name="VIP" type="xs:string" />
    <xs:attribute name="VLAN" type="ws:Vlan" />
  </xs:complexType>
</xs:element>

<xs:element name="RouteTable">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:Server" minOccurs="0" maxOccurs="unbounded" />
      <xs:element ref="ws:Route" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<xs:element name="RouteTableList">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:RouteTable" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/Server/SNMP/ elements -->

<xs:element name="SNMPCommunity">
  <xs:complexType>
    <xs:attribute name="Name" type="xs:string" />
    <xs:attribute name="Permissions" type="xs:string" />
  </xs:complexType>
</xs:element>

<xs:element name="SNMPTrapStation">
  <xs:complexType>
    <xs:attribute name="TrapStation" type="xs:string" />
    <xs:attribute name="Version" type="xs:string" />
    <xs:attribute name="TrapCommunity" type="xs:string" />
  </xs:complexType>
</xs:element>

<xs:element name="SNMPVACM">
  <xs:complexType>
    <xs:attribute name="User" type="xs:string" />
    <xs:attribute name="Access" type="xs:string" />
    <xs:attribute name="Authentication" type="xs:string" />
    <xs:attribute name="OID" type="xs:string" />
  </xs:complexType>
</xs:element>

<xs:element name="SNMPUSM">
  <xs:complexType>
    <xs:attribute name="User" type="xs:string" />
    <xs:attribute name="Authentication" type="xs:string" />
    <xs:attribute name="AuthenticationPassword" type="xs:string" />
    <xs:attribute name="Encryption" type="xs:string" />
    <xs:attribute name="EncryptionPassword" type="xs:string" />
  </xs:complexType>

```

```

</xs:element>

<xs:element name="SNMPAgent">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:Server" minOccurs="0" maxOccurs="unbounded" />
      <xs:element ref="ws:SNMPCommunity" minOccurs="0"
        maxOccurs="unbounded" />
      <xs:element ref="ws:SNMPTrapStation" minOccurs="0"
        maxOccurs="unbounded" />
      <xs:element ref="ws:SNMPVACM" minOccurs="0" maxOccurs="unbounded" />
      <xs:element ref="ws:SNMPUSM" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
    <xs:attribute name="Contact" type="xs:string" />
    <xs:attribute name="Location" type="xs:string" />
    <xs:attribute name="DefaultTrapCommunity" type="xs:string" />
  </xs:complexType>
</xs:element>

<xs:element name="SNMPAgentList">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:SNMPAgent" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/Server/RTSP/ elements -->

<xs:element name="RTSPClient">
  <xs:complexType>
    <xs:attribute name="ReceivePort" type="ws:NotNullPort" />
    <xs:attribute name="SendPort" type="ws:NotNullPort" />
    <xs:attribute name="ReceiveBuffer" type="ws:EnumReceiveBuffer" />
    <xs:attribute name="Model" type="ws:EnumRTSPDeploymentType" />
    <xs:attribute name="Transport" type="ws:EnumTransport" />
  </xs:complexType>
</xs:element>

<xs:element name="RTSPSetup">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:Server" minOccurs="0" maxOccurs="unbounded" />
      <xs:element ref="ws:RTSPClient" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
    <xs:attribute name="MasterStreamingIP" type="ws:IsValidIP" />
    <xs:attribute name="LoopingSessionTimeout" type="xs:nonNegativeInteger" />
    <xs:attribute name="SessionInactivityTimeout" type="xs:nonNegativeInteger" />
    <xs:attribute name="BackofficeTimeout" type="xs:nonNegativeInteger" />
    <xs:attribute name="RTSPServerIP" type="ws:IsValidIP" />
    <xs:attribute name="RTSPServerPort" type="ws:NotNullPort" />
    <xs:attribute name="ReconnectIP" type="xs:string" />
    <xs:attribute name="ReconnectPort" type="ws:NotNullPort" />
    <xs:attribute name="MaxHistory" type="xs:nonNegativeInteger" />
    <!-- <xs:attribute name="LogLevel" type="xs:string"/> -->
    <xs:attribute name="MaintenanceMode" type="ws:EnumOnOff" />
    <xs:attribute name="LSCAddress" type="ws:IsValidIP" />
    <xs:attribute name="LSCPPort" type="ws:NotNullPort" />
    <xs:attribute name="LSCPResponsePadding" type="ws:EnumOnOff" />
    <xs:attribute name="ComponentName" type="xs:string" />
    <xs:attribute name="BandwidthManagerIP" type="xs:string" />
    <xs:attribute name="BandwidthManagerPort" type="xs:positiveInteger" />
    <xs:attribute name="AuthenticationManagerIP" type="xs:string" />
    <xs:attribute name="AuthenticationManagerPort" type="xs:positiveInteger" />
  </xs:complexType>

```

```

    <xs:attribute name="BackupBandwidthManagerIP" type="xs:string" />
    <xs:attribute name="BackupBandwidthManagerPort" type="xs:positiveInteger" />
    <xs:attribute name="CallbackServerIP" type="xs:string" />
    <xs:attribute name="CallbackServerPort" type="ws:NotNullPort" />
    <xs:attribute name="ServerIP" type="xs:string" />
    <xs:attribute name="ServerPort" type="ws:NotNullPort" />
    <xs:attribute name="StreamControlIP" type="xs:string" />
    <xs:attribute name="StreamControlPort" type="ws:NotNullPort" />
    <xs:attribute name="DBConnectSize" type="xs:positiveInteger" />
    <xs:attribute name="UDPPacketSize" type="xs:positiveInteger" />
    <xs:attribute name="ThreadpoolSize" type="xs:positiveInteger" />
    <xs:attribute name="SessionMax" type="xs:positiveInteger" />
  </xs:complexType>
</xs:element>

<xs:element name="RTSPSetupList">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:RTSPSetup" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/Server/FSI/ elements -->

<xs:element name="FSISetup">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:Server" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
    <xs:attribute name="IPAddress" type="ws:IsValidIPOrNull" />
    <xs:attribute name="ServerPort" type="ws:Port" />
    <xs:attribute name="FTPClientPort" type="ws:Port" />
    <xs:attribute name="FTPOutServerPort" type="ws:Port" />
    <xs:attribute name="FTPOutLoginTTL" type="xs:nonNegativeInteger" />
    <xs:attribute name="ContentRootPath" type="xs:string" />
    <xs:attribute name="AsyncCallbackURL" type="xs:string" />
  </xs:complexType>
</xs:element>

<xs:element name="FSISetupList">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:FSISetup" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/Server/DNS elements -->

<xs:element name="DomainSuffix" type="xs:string" />

<xs:element name="DNSServer" type="xs:string" />

<xs:element name="DNS">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:Server" minOccurs="1" maxOccurs="unbounded" />
      <xs:element ref="ws:DomainSuffix" minOccurs="0"
        maxOccurs="unbounded" />
      <xs:element ref="ws:DNSServer" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

<xs:element name="DNSList">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:DNS" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/Server/NTPServer elements -->

<xs:element name="NTPServerIP" type="xs:string" />

<xs:element name="NTPServer">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:Server" minOccurs="1" maxOccurs="unbounded" />
      <xs:element ref="ws:NTPServerIP" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<xs:element name="NTPServerList">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:NTPServer" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- SyslogConfig elements -->
<xs:element name="SyslogConfig">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:Server" minOccurs="1" maxOccurs="unbounded" />
    </xs:sequence>
    <xs:attribute name="RemoteLogging" type="ws:EnableDisableEnum" use="required" />
  </xs:complexType>
</xs:element>

<xs:element name="SyslogConfigList">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:SyslogConfig" minOccurs="0"
        maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/Server/LogConfig elements -->

<xs:element name="flag">
  <xs:complexType>
    <xs:attribute name="name" type="xs:string" use="required" />
  </xs:complexType>
</xs:element>

<xs:element name="debug-flags">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:flag" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

        </xs:sequence>
    </xs:complexType>
</xs:element>

<xs:element name="Facility">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:debug-flags" minOccurs="0" maxOccurs="1" />
        </xs:sequence>
        <xs:attribute name="name" type="xs:string" use="required" />
        <xs:attribute name="local-log" type="xs:string" use="required" />
        <xs:attribute name="remote-log" type="xs:string" use="required" />
    </xs:complexType>
</xs:element>

<xs:element name="LogConfig">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:Server" minOccurs="0" maxOccurs="unbounded" />
            <xs:element ref="ws:Facility" minOccurs="0" maxOccurs="unbounded" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

<xs:element name="LogConfigList">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:LogConfig" minOccurs="0" maxOccurs="unbounded" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

<xs:element name="RecorderSharedConfig">
    <xs:complexType>
        <xs:attribute name="RecorderManagerIP" type="ws:IsValidIP" use="required"/>
        <xs:attribute name="NTPServerIP" type="ws:IsValidIP" use="required"/>
        <xs:attribute name="HeartbeatInterval" type="ws:Range2To30" use="required"/>
        <xs:attribute name="RecorderLocation" type="xs:string" use="required"/>
        <!-- <xs:attribute name="RecordingModify" type="ws:Range1To60" /> will use
this when App is ready for this to be user modified -->
        <xs:attribute name="RecordingModify" type="ws:ValueIs5" />
        <xs:attribute name="SCTE35AdMarkers" type="ws:SCTE35AdMarkers"
use="required"/>
        <xs:attribute name="RecorderManagerPort" type="ws:RecorderPort"
use="required"/>
        <xs:attribute name="ProtocolVersion" type="ws:ProtocolVersion" />
        <xs:attribute name="ThreadpoolSize" type="ws:ThreadpoolSize" />
        <xs:attribute name="StatusReportInterval" type="ws:StatusReportInterval" />
        <xs:attribute name="HTTPRequestTimeout" type="ws:HTTPRequestTimeout" />
        <xs:attribute name="HTTPResponseTimeout" type="ws:HTTPResponseTimeout" />
        <xs:attribute name="RecordingBandwidth" type="ws:Range1To100" use="required"/>
        <xs:attribute name="DeliveryBandwidth" type="ws:Range1To100" use="required"/>
        <xs:attribute name="StorageCapacity" type="ws:Range1To100" use="required"/>
        <xs:attribute name="LocationVirtualIP" type="ws:IsValidIP" use="required"/>
        <xs:attribute name="LocationSubnetMask" type="ws:IsValidSubNetMask"
use="required"/>
        <xs:attribute name="HTTDPSCP" type="ws:DSCP Limit" use="required"/>
    </xs:complexType>
</xs:element>

<!-- Configure/Server/ServerConfig elements -->
<xs:element name="RecorderServerConfigList">
    <xs:complexType>
        <xs:sequence>

```



```

        <xs:element ref="ws:RecorderServerConfig" minOccurs="0"
maxOccurs="unbounded" />
        <xs:element ref="ws:StreamerRecorderConfig" minOccurs="0"
maxOccurs="unbounded" />
    </xs:sequence>
</xs:complexType>
</xs:element>

<xs:element name="RecorderServerConfig">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:Server" minOccurs="1" maxOccurs="unbounded" />
            <xs:choice>
                <xs:element ref="ws:InterfaceConfig" minOccurs="0"
                    maxOccurs="unbounded" />
                <xs:element ref="ws:ComplexInterfaceConfig" minOccurs="0"
                    maxOccurs="unbounded" />
            </xs:choice>
        </xs:sequence>
        <xs:attribute name="PartNumber" type="xs:string" />
        <xs:attribute name="HostName" type="xs:string" use="required"/>
        <xs:attribute name="ArrayID" type="xs:integer" />
        <xs:attribute name="DefaultGateway" type="ws:IsValidIP" use="required"/>
        <!-- <xs:attribute name="ControlDSCP" type="ws:DSCPLimit" />
        <xs:attribute name="DataDSCP" type="ws:DSCPLimit" /> -->
        <xs:attribute name="HTTPDSCP" type="ws:DSCPLimit" use="required"/>
        <xs:attribute name="Status" type="xs:string" />
        <xs:attribute name="ComponentName" type="xs:string" />
        <xs:attribute name="ModelName" type="xs:string" />
        <xs:attribute name="RecorderManagerIP" type="ws:IsValidIP" use="required"/>
        <xs:attribute name="NTPServerIP" type="ws:IsValidIP" use="required"/>
        <xs:attribute name="HeartbeatInterval" type="ws:Range2To30" use="required"/>
        <xs:attribute name="RecorderLocation" type="xs:string" use="required"/>
        <!--<xs:attribute name="RecordingModify" type="ws:Range1To60" /> will use this
when App is ready for this to be user modified -->
        <xs:attribute name="RecordingModify" type="ws:ValueIs5" />
        <xs:attribute name="SCTE35AdMarkers" type="ws:SCTE35AdMarkers"
use="required" />
        <xs:attribute name="RecorderPort" type="ws:RecorderPort" use="required"/>
        <xs:attribute name="ProtocolVersion" type="ws:ProtocolVersion" />
        <xs:attribute name="ThreadpoolSize" type="ws:ThreadpoolSize" />
        <xs:attribute name="StatusReportInterval" type="ws:StatusReportInterval" />
        <xs:attribute name="HTTPRequestTimeout" type="ws:HTTPRequestTimeout" />
        <xs:attribute name="HTTPResponseTimeout" type="ws:HTTPResponseTimeout" />
        <xs:attribute name="RecordingBandwidth" type="ws:Range1To100" use="required"/>
        <xs:attribute name="DeliveryBandwidth" type="ws:Range1To100" use="required"/>
        <xs:attribute name="StorageCapacity" type="ws:Range1To100" use="required"/>
        <xs:attribute name="LocationVirtualIP" type="ws:IsValidIP" use="required"/>
        <xs:attribute name="LocationSubnetMask" type="ws:IsValidSubNetMask"
use="required" />
        <xs:attribute name="MaxNoOfInterfaces" type="xs:integer" />
    </xs:complexType>
</xs:element>

<xs:element name="SSVServerConfig">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:Server" minOccurs="1" maxOccurs="unbounded" />
            <xs:element ref="ws:SimpleDSCPMarking" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:CustomDSCPMarking" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:InterfaceConfig" minOccurs="0"
                maxOccurs="unbounded" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

```

```

</xs:sequence>
<xs:attribute name="PartNumber" type="xs:string" use="required"/>
<xs:attribute name="HostName" type="xs:string" />
<xs:attribute name="ArrayID" type="xs:integer" />
<xs:attribute name="NullStream" type="xs:string" />
<xs:attribute name="StunPlayErrorDelay" type="ws:StunPlayErrorDelayLimit" />
<xs:attribute name="StunPlayTimeout" type="ws:StunPlayTimeoutLimit" />
<xs:attribute name="SourceIP" type="ws:IsValidIPOrNull" />
<xs:attribute name="TransportPortStart" type="ws:Port" />
<xs:attribute name="TransportPortEnd" type="ws:Port" />
<xs:attribute name="CachePort" type="ws:Port" />
<xs:attribute name="TCPTraffic" type="ws:EnableDisableEnum" />
<xs:attribute name="StreamerIsCache" type="ws:EnableDisableEnum" />
<xs:attribute name="JumboSFrames" type="ws:EnableDisableEnum" />
<xs:attribute name="JumboCFrames" type="ws:EnableDisableEnum" />
<xs:attribute name="VaultMirrorCopies" type="ws:VaultMirrorCopiesLimit" />
<xs:attribute name="VaultLocalCopies" type="ws:VaultLocalCopiesLimit" />
<xs:attribute name="DSCPMarkingMethod" type="ws:DSCPMarkingMethod" />
<xs:attribute name="DualCAS" type="ws:EnableDisableEnum" />
<xs:attribute name="DefaultGateway" type="ws:IsValidIPOrNull" />
<xs:attribute name="FTPOutInterface" type="xs:string" />
<xs:attribute name="FTPOutBandwidth" type="ws:FTPOutBandwidthRange" />
<xs:attribute name="FTPOutSession" type="ws:FTPOutSessionRange" />
<xs:attribute name="TTL" type="xs:positiveInteger" />
<xs:attribute name="MaxNoOfInterfaces" type="xs:integer" />
</xs:complexType>
</xs:element>

<xs:element name="StreamServerConfig">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:Server" minOccurs="1" maxOccurs="unbounded" />
      <xs:element ref="ws:SimpleDSCPMarking" minOccurs="0"
        maxOccurs="1" />
      <xs:element ref="ws:CustomDSCPMarking" minOccurs="0"
        maxOccurs="1" />
      <xs:element ref="ws:InterfaceConfig" minOccurs="0"
        maxOccurs="unbounded" />
    </xs:sequence>
    <xs:attribute name="PartNumber" type="xs:string" use="required"/>
    <xs:attribute name="TTL" type="xs:positiveInteger" />
    <xs:attribute name="TransportDSCP" type="xs:integer" />
    <xs:attribute name="CacheDSCP" type="xs:integer" />
    <xs:attribute name="NullStream" type="ws:EnableDisableEnum" />
    <xs:attribute name="LivePlayback" type="ws:EnableDisableEnum" />
    <xs:attribute name="StunPlayErrorDelay" type="ws:StunPlayErrorDelayLimit" />
    <xs:attribute name="StunPlayTimeout" type="ws:StunPlayTimeoutLimit" />
    <xs:attribute name="HostName" type="xs:string" />
    <xs:attribute name="ArrayID" type="xs:integer" />
    <xs:attribute name="SourceIP" type="ws:IsValidIPOrNull" />
    <xs:attribute name="TransportPortStart" type="ws:Port" />
    <xs:attribute name="TransportPortEnd" type="ws:Port" />
    <xs:attribute name="CachePort" type="ws:Port" />
    <xs:attribute name="TCPTraffic" type="ws:EnableDisableEnum" />
    <xs:attribute name="StreamerIsCache" type="ws:EnableDisableEnum" />
    <xs:attribute name="JumboSFrames" type="ws:EnableDisableEnum" />
    <xs:attribute name="JumboCFrames" type="ws:EnableDisableEnum" />
    <xs:attribute name="DSCPMarkingMethod" type="ws:DSCPMarkingMethod" />
    <xs:attribute name="DualCAS" type="ws:EnableDisableEnum" />
    <xs:attribute name="DefaultGateway" type="ws:IsValidIPOrNull" />
    <xs:attribute name="MaxNoOfInterfaces" type="xs:integer" />
  </xs:complexType>
</xs:element>

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```

<xs:element name="StreamerRecorderConfig">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:Server" minOccurs="1" maxOccurs="unbounded" />
      <xs:element ref="ws:SimpleDSCPMarking" minOccurs="0"
        maxOccurs="1" />
      <xs:element ref="ws:CustomDSCPMarking" minOccurs="0"
        maxOccurs="1" />
      <!-- Interface config is not needed here since it is captured via the
RecorderServerConfig above
      <xs:choice>
        <xs:element ref="ws:InterfaceConfig" minOccurs="0"
          maxOccurs="unbounded" />
        <xs:element ref="ws:ComplexInterfaceConfig" minOccurs="0"
          maxOccurs="unbounded" />
      </xs:choice>
    </xs:sequence>
    <xs:attribute name="PartNumber" type="xs:string" use="required" />
    <xs:attribute name="TTL" type="xs:positiveInteger" />
    <xs:attribute name="TransportDSCP" type="xs:integer" />
    <xs:attribute name="CacheDSCP" type="xs:integer" />
    <xs:attribute name="NullStream" type="ws:EnableDisableEnum" />
    <xs:attribute name="LivePlayback" type="ws:EnableDisableEnum" />
    <xs:attribute name="TCPTraffic" type="ws:EnableDisableEnum" />
    <xs:attribute name="StunPlayErrorDelay" type="ws:StunPlayErrorDelayLimit" />
    <xs:attribute name="StunPlayTimeout" type="ws:StunPlayTimeoutLimit" />
    <xs:attribute name="ArrayID" type="xs:integer" />
    <xs:attribute name="SourceIP" type="ws:IsValidIPOrNull" />
    <xs:attribute name="TransportPortStart" type="ws:Port" />
    <xs:attribute name="TransportPortEnd" type="ws:Port" />
    <xs:attribute name="CachePort" type="ws:Port" />
    <xs:attribute name="StreamerIsCache" type="ws:EnableDisableEnum" />
    <xs:attribute name="JumboSFrames" type="ws:EnableDisableEnum" />
    <xs:attribute name="JumboCFrames" type="ws:EnableDisableEnum" />
    <xs:attribute name="DSCPMarkingMethod" type="ws:DSCPMarkingMethod" />
    <xs:attribute name="DualCAS" type="ws:EnableDisableEnum" />

    <!--
above
    <xs:attribute name="HostName" type="xs:string" />
    <xs:attribute name="DefaultGateway" type="ws:IsValidIP" />
    <xs:attribute name="MaxNoOfInterfaces" type="xs:integer" />
    <xs:attribute name="PartNumber" type="xs:string" />
    <xs:attribute name="HostName" type="xs:string" />
    <xs:attribute name="ArrayID" type="xs:integer" />
    <xs:attribute name="GatewayIP" type="ws:IsValidIP" />
    <xs:attribute name="ControlDSCP" type="ws:DSCPLimit" />
    <xs:attribute name="DataDSCP" type="ws:DSCPLimit" />
    <xs:attribute name="Status" type="xs:string" />
    <xs:attribute name="ComponentName" type="xs:string" />
    <xs:attribute name="ModelName" type="xs:string" />
    <xs:attribute name="RecorderManagerIP" type="ws:IsValidIP" />
    <xs:attribute name="NTPServerIP" type="ws:IsValidIP" />
    <xs:attribute name="HeartbeatInterval" type="ws:Range2To30" />
    <xs:attribute name="RecorderLocation" type="xs:string" />
    <xs:attribute name="RecordingModify" type="ws:ValueIs5" />
    <xs:attribute name="SCTE35AdMarkers" type="ws:SCTE35AdMarkers" />
    <xs:attribute name="RecorderPort" type="ws:RecorderPort" />
    <xs:attribute name="ProtocolVersion" type="ws:ProtocolVersion" />
    <xs:attribute name="ThreadpoolSize" type="ws:ThreadpoolSize" />
    <xs:attribute name="StatusReportInterval" type="ws:StatusReportInterval" />
    <xs:attribute name="HTTPRequestTimeout" type="ws:HTTPRequestTimeout" />

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    <xs:attribute name="HTTPResponseTimeout" type="ws:HTTPResponseTimeout" />
    <xs:attribute name="RecordingBandwidth" type="ws:Range1To100" />
    <xs:attribute name="DeliveryBandwidth" type="ws:Range1To100" />
    <xs:attribute name="StorageCapacity" type="ws:Range1To100" />
    <xs:attribute name="LocationVirtualIP" type="ws:IsValidIP" />
    <xs:attribute name="LocationSubnetMask" type="ws:IsValidSubNetMask" />
    <xs:attribute name="MaxNoOfInterfaces" type="xs:integer" />
    <xs:attribute name="HTTDPDSCP" type="ws:DSCPLimit" />
  -->
</xs:complexType>
</xs:element>

<xs:element name="VaultServerConfig">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:Server" minOccurs="0" maxOccurs="unbounded" />
      <xs:element ref="ws:SimpleDSCPMarking" minOccurs="0"
        maxOccurs="1" />
      <xs:element ref="ws:CustomDSCPMarking" minOccurs="0"
        maxOccurs="1" />
      <xs:element ref="ws:InterfaceConfig" minOccurs="0"
        maxOccurs="unbounded" />
    </xs:sequence>
    <xs:attribute name="PartNumber" type="xs:string" use="required" />
    <xs:attribute name="HostName" type="xs:string" />
    <xs:attribute name="ArrayID" type="xs:integer" />
    <xs:attribute name="JumboCFrames" type="xs:string" />
    <xs:attribute name="VaultMirrorCopies" type="xs:nonNegativeInteger" />
    <xs:attribute name="VaultLocalCopies" type="xs:nonNegativeInteger" />
    <xs:attribute name="DSCPMarkingMethod" type="ws:DSCPMarkingMethod" />
    <xs:attribute name="DualCAS" type="xs:string" />
    <xs:attribute name="DefaultGateway" type="ws:IsValidIPOrNull" />
    <xs:attribute name="FTPOutInterface" type="xs:string" />
    <xs:attribute name="FTPOutBandwidth" type="ws:FTPOutBandwidthRange" />
    <xs:attribute name="FTPOutSession" type="ws:FTPOutSessionRange" />
    <xs:attribute name="TTL" type="xs:positiveInteger" />
    <xs:attribute name="SourceIP" type="ws:IsValidIPOrNull" />
    <xs:attribute name="CachePort" type="ws:Port" />
    <xs:attribute name="TCPTraffic" type="ws:EnableDisableEnum" />
    <xs:attribute name="MaxNoOfInterfaces" type="xs:integer" />
  </xs:complexType>
</xs:element>

<xs:element name="CacheServerConfig">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:Server" minOccurs="0" maxOccurs="unbounded" />
      <xs:element ref="ws:SimpleDSCPMarking" minOccurs="0"
        maxOccurs="1" />
      <xs:element ref="ws:CustomDSCPMarking" minOccurs="0"
        maxOccurs="1" />
      <xs:element ref="ws:InterfaceConfig" minOccurs="0"
        maxOccurs="unbounded" />
    </xs:sequence>
    <xs:attribute name="PartNumber" type="xs:string" use="required" />
    <xs:attribute name="HostName" type="xs:string" />
    <xs:attribute name="ArrayID" type="xs:integer" />
    <xs:attribute name="JumboCFrames" type="ws:EnableDisableEnum" />
    <xs:attribute name="DSCPMarkingMethod" type="ws:DSCPMarkingMethod" />
    <xs:attribute name="DefaultGateway" type="ws:IsValidIPOrNull" />
    <xs:attribute name="TTL" type="xs:positiveInteger" />
    <xs:attribute name="SourceIP" type="ws:IsValidIPOrNull" />
    <xs:attribute name="CachePort" type="ws:Port" />
    <xs:attribute name="TCPTraffic" type="ws:EnableDisableEnum" />
  </xs:complexType>
</xs:element>

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        <xs:attribute name="MaxNoOfInterfaces" type="xs:integer" />
    </xs:complexType>
</xs:element>

<xs:simpleType name="FTPListenerIntType">
    <xs:restriction base="xs:string">
        <xs:pattern value="((Management)|(Ingest))"/>
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="InterfaceTypeRange">
    <xs:restriction base="xs:positiveInteger">
        <xs:minInclusive value="1" />
        <xs:maxInclusive value="7" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="FTPOutBandwidthRange">
    <xs:restriction base="xs:string">
        <xs:pattern value="()|([1-9]|[1-9][0-9]|[1-9][0-9][0-9]|(1000))"/>
        <!--FTPOutBandwidthRange allow only in the range of 1 to 1000-->
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="FTPOutSessionRange">
    <xs:restriction base="xs:string">
        <xs:pattern value="()|([1-9]|(10))"/>
        <!--FTPSessionRange allow only in the range of 1 to 10-->
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="StunPlayErrorDelayLimit">
    <xs:restriction base="xs:positiveInteger">
        <xs:minInclusive value="1" />
        <xs:maxInclusive value="2999" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="StunPlayTimeoutLimit">
    <xs:restriction base="xs:positiveInteger">
        <xs:minInclusive value="1" />
        <xs:maxInclusive value="299" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="IsValidIP">
    <xs:restriction base="xs:string">
        <xs:pattern
value="((([1-9]?[0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.){3}([1-9]?[0-9]|1[0-9][0-9]|2[0-4]
[0-9]|25[0-5]))"/>
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="IsValidIPOrNull">
    <xs:restriction base="xs:string">
        <xs:pattern
value="()|((([1-9]?[0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.){3}([1-9]?[0-9]|1[0-9][0-9]|2[0
-4][0-9]|25[0-5]))"/>
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="IsValidSubNetMask">
    <xs:restriction base="xs:string">
        <xs:pattern

```

```

value="( (255|254|252|248|240|224|192|128)\.0\.0\.0) | (255\. (255|254|252|248|240|224|192|128)
)\.0\.0) | (255\.255\. (255|254|252|248|240|224|192|128)\.0) | (255\.255\.255\. (255|254|252|248
|240|224|192|128))" />
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="IsValidSubNetMaskOrNull">
  <xs:restriction base="xs:string">
    <xs:pattern
value=" () | ((255|254|252|248|240|224|192|128)\.0\.0\.0) | (255\. (255|254|252|248|240|224|192|
128)\.0\.0) | (255\.255\. (255|254|252|248|240|224|192|128)\.0) | (255\.255\.255\. (255|254|252|
248|240|224|192|128))" />
</xs:restriction>
</xs:simpleType>

<xs:simpleType name="IsValidMAC">
  <xs:restriction base="xs:string">
    <xs:pattern value=" ([0-9a-fA-F]{2}:){5} ([0-9a-fA-F]{2})" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="NotNullstring">
  <xs:restriction base="xs:string">
    <xs:minLength value="1" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="VaultMirrorCopiesLimit">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="0" />
    <xs:maxInclusive value="10" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="VaultLocalCopiesLimit">
  <xs:restriction base="xs:positiveInteger">
    <xs:minInclusive value="1" />
    <xs:maxInclusive value="4" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="ValueIs5">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="5" />
    <xs:maxInclusive value="5" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="Range1To100">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1" />
    <xs:maxInclusive value="100" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="Range2To30">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="2" />
    <xs:maxInclusive value="30" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="ProtocolVersion">

```

```

        <xs:restriction base="xs:integer">
            <xs:minInclusive value="1" />
            <xs:maxInclusive value="1" />
        </xs:restriction>
    </xs:simpleType>

    <xs:simpleType name="ThreadPoolSize">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="16" />
            <xs:maxInclusive value="16" />
        </xs:restriction>
    </xs:simpleType>

    <xs:simpleType name="StatusReportInterval">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="60" />
            <xs:maxInclusive value="60" />
        </xs:restriction>
    </xs:simpleType>

    <xs:simpleType name="HTTPRequestTimeout">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="5" />
            <xs:maxInclusive value="5" />
        </xs:restriction>
    </xs:simpleType>

    <xs:simpleType name="HTTPResponseTimeout">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="5" />
            <xs:maxInclusive value="5" />
        </xs:restriction>
    </xs:simpleType>

    <xs:simpleType name="Range1To60">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="1" />
            <xs:maxInclusive value="60" />
        </xs:restriction>
    </xs:simpleType>

    <xs:simpleType name="RecorderPort">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="50005" />
            <xs:maxInclusive value="65535" />
        </xs:restriction>
    </xs:simpleType>

    <xs:simpleType name="SCTE35AdMarkers">
        <xs:restriction base="xs:string">
            <xs:enumeration value="Retain"/>
            <xs:enumeration value="Discard"/>
        </xs:restriction>
    </xs:simpleType>

    <xs:element name="SimpleDSCPMarking">
        <xs:complexType>
            <xs:attribute name="ControlDSCP" type="ws:DSCPLimit" use="required"/>
            <xs:attribute name="DataDSCP" type="ws:DSCPLimit" use="required"/>
            <xs:attribute name="StreamDSCP" type="ws:DSCPLimit" use="optional"/>
            <xs:attribute name="HTTPDSCP" type="ws:DSCPLimit" use="optional"/>
        </xs:complexType>
    </xs:element>

```

```

    <xs:element name="CustomDSCPMarking">
      <xs:complexType>
        <xs:attribute name="ControlTraffic" type="ws:DSCPLimit" use="required"/>
        <xs:attribute name="StreamTraffic" type="ws:DSCPLimit" use="optional"/>
        <xs:attribute name="HTTPTraffic" type="ws:DSCPLimit" use="optional"/>
        <xs:attribute name="HighestPriorityRxTraffic" type="ws:DSCPLimit"
use="required"/>
        <xs:attribute name="CommittedRateLostPktRecovery" type="ws:DSCPLimit"
use="required"/>
        <xs:attribute name="CommittedRateTraffic" type="ws:DSCPLimit" use="required"/>
        <xs:attribute name="MirroringLostPktRecovery" type="ws:DSCPLimit"
use="optional"/>
        <xs:attribute name="MirroringLiveIngestTraffic" type="ws:DSCPLimit"
use="optional"/>
        <xs:attribute name="DriveFailureRepairTraffic" type="ws:DSCPLimit"
use="optional"/>
        <xs:attribute name="MirroringTraffic" type="ws:DSCPLimit" use="optional"/>
        <xs:attribute name="LowestPriorityDataSmoothingTraffic" type="ws:DSCPLimit"
use="optional"/>
      </xs:complexType>
    </xs:element>

    <xs:simpleType name="EnableDisableEnum">
      <xs:restriction base="xs:string">
        <xs:enumeration value="Enable" />
        <xs:enumeration value="Disable" />
      </xs:restriction>
    </xs:simpleType>

    <xs:simpleType name="DSCPMarkingMethod">
      <xs:restriction base="xs:string">
        <xs:enumeration value="Simple" />
        <xs:enumeration value="Auto AF1x" />
        <xs:enumeration value="Auto AF2x" />
        <xs:enumeration value="Auto AF3x" />
        <xs:enumeration value="Auto AF4x" />
        <xs:enumeration value="Custom" />
      </xs:restriction>
    </xs:simpleType>

    <xs:simpleType name="DSCPLimit">
      <xs:restriction base="xs:integer">
        <xs:minInclusive value="0" />
        <xs:maxInclusive value="63" />
      </xs:restriction>
    </xs:simpleType>

    <!-- Configure/Server/Interface elements -->
    <!-- <xs:element name="InterfaceConfigList"> <xs:complexType> <xs:sequence>
    <xs:element ref="ws:InterfaceConfig" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence> </xs:complexType> </xs:element> -->

    <xs:element name="InterfaceConfig">
      <xs:complexType>
        <xs:attribute name="Name" type="xs:string" />
        <xs:attribute name="Type" type="ws:InterfaceType" />
        <xs:attribute name="IPAddress" type="ws:IsValidIPOrNull" />
        <xs:attribute name="SubnetMask" type="ws:IsValidSubNetMaskOrNull" />
        <xs:attribute name="TransportPort" type="ws:Port" />
        <xs:attribute name="CachePort" type="ws:Port" />
        <xs:attribute name="Number" type="xs:integer" />
        <xs:attribute name="FTP" type="ws:EnableDisableEnum" />
      </xs:complexType>
    </xs:element>

```



```

<xs:simpleType name="InterfaceType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Not Used" />
    <xs:enumeration value="Management" />
    <xs:enumeration value="Ingest" />
    <xs:enumeration value="Stream" />
    <xs:enumeration value="Cache" />
    <xs:enumeration value="Stream/Cache" />
    <xs:enumeration value="General" />
    <xs:enumeration value="Stream Control" />
    <xs:enumeration value="Locate" />
    <xs:enumeration value="Default Control" />
    <xs:enumeration value="Ingest/Stream/Cache" />
    <xs:enumeration value="Ingest/Cache" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="Port">
  <xs:restriction base="xs:string">
    <xs:pattern
value="()|([1-9]|[1-9][0-9]|[1-9][0-9][0-9]|[1-9][0-9][0-9][0-9]|[0-5][0-9][0-9][0-9][0-9]
|[0-6][0-4][0-9][0-9][0-9]|[0-6][0-5][0-4][0-5][0-9]|[0-6][0-5][0-5][0-2][0-9]|[0-6][0-5][
0-5][0-3][0-5])"/>
    <!--Port allow only in the range of 1 to 65535-->
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="NotNullPort">
  <xs:restriction base="xs:positiveInteger">
    <xs:minInclusive value="1" />
    <xs:maxInclusive value="65535" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="Vlan">
  <xs:restriction base="xs:nonNegativeInteger">
    <xs:minInclusive value="0" />
    <xs:maxInclusive value="4095" />
  </xs:restriction>
</xs:simpleType>

<!-- <xs:simpleType name="FTPListenerIntType">
  <xs:restriction base="xs:string">
    <xs:pattern value="Eth[0-9]( )\(((Management)|(Ingest))\)" />
  </xs:restriction>
</xs:simpleType> -->

<xs:element name="ServerConfigList">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:SSVServerConfig" minOccurs="0"
maxOccurs="unbounded" />
      <xs:element ref="ws:VaultServerConfig" minOccurs="0"
maxOccurs="unbounded" />
      <xs:element ref="ws:StreamServerConfig" minOccurs="0"
maxOccurs="unbounded" />
      <xs:element ref="ws:CacheServerConfig" minOccurs="0"
maxOccurs="unbounded" />
      <xs:element ref="ws:RecorderServerConfig" minOccurs="0"
maxOccurs="unbounded" />
      <xs:element ref="ws:StreamerRecorderConfig" minOccurs="0"
maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

    </xs:complexType>
  </xs:element>

  <xs:element name="ServerConfiguration">
    <xs:complexType>
      <xs:sequence>
        <xs:element ref="ws:RouteTableList" minOccurs="0"
          maxOccurs="1" />
        <xs:element ref="ws:SNMPAgentList" minOccurs="0"
          maxOccurs="1" />
        <xs:element ref="ws:DNSList" minOccurs="0" maxOccurs="1" />
        <xs:element ref="ws:NTPServerList" minOccurs="0"
          maxOccurs="1" />
        <xs:element ref="ws:RTSPSetupList" minOccurs="0"
          maxOccurs="1" />
        <xs:element ref="ws:FSISetupList" minOccurs="0"
          maxOccurs="1" />
        <xs:element ref="ws:RecorderServerConfigList" minOccurs="0"
          maxOccurs="1" />
        <xs:element ref="ws:LogConfigList" minOccurs="0"
          maxOccurs="1" />
        <xs:element ref="ws:ServerConfigList" minOccurs="0"
          maxOccurs="1" />
        <xs:element ref="ws:SyslogConfigList" minOccurs="0"
          maxOccurs="1" />
      </xs:sequence>
    </xs:complexType>
  </xs:element>

  <xs:simpleType name="EnumOnOff">
    <xs:restriction base="xs:string">
      <xs:enumeration value="On"/>
      <xs:enumeration value="Off"/>
    </xs:restriction>
  </xs:simpleType>

  <xs:simpleType name="EnumReceiveBuffer">
    <xs:restriction base="xs:positiveInteger">
      <xs:enumeration value="65535"/>
      <xs:enumeration value="512000"/>
    </xs:restriction>
  </xs:simpleType>

  <xs:simpleType name="EnumRTSPDeploymentType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="ncube"/>
      <xs:enumeration value="digeo"/>
      <xs:enumeration value="ngod"/>
      <xs:enumeration value="myrio"/>
      <xs:enumeration value="telenet"/>
      <xs:enumeration value="eventis"/>
      <xs:enumeration value="quative"/>
      <xs:enumeration value="voo"/>
      <xs:enumeration value="cisco"/>
    </xs:restriction>
  </xs:simpleType>

  <xs:simpleType name="EnumTransport">
    <xs:restriction base="xs:string">
      <xs:enumeration value="TCP"/>
      <xs:enumeration value="UDP"/>
    </xs:restriction>
  </xs:simpleType>

```

```

<xs:simpleType name="SubInterfaceConfigIdRange">
  <xs:restriction base="xs:positiveInteger">
    <xs:minInclusive value="1" />
    <xs:maxInclusive value="4095" />
  </xs:restriction>
</xs:simpleType>

<xs:element name="ComplexInterfaceConfig">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:SubInterfaceConfig" minOccurs="0"
        maxOccurs="1" />
    </xs:sequence>
    <xs:attribute name="Name" type="xs:string" />
    <xs:attribute name="Type" type="ws:InterfaceType" />
    <xs:attribute name="IPAddress" type="ws:IsValidIPOrNull" />
    <xs:attribute name="SubnetMask" type="ws:IsValidSubNetMaskOrNull" />
    <xs:attribute name="TransportPort" type="ws:Port" />
    <xs:attribute name="CachePort" type="ws:Port" />
    <xs:attribute name="Number" type="xs:integer" />
    <xs:attribute name="FTP" type="ws:EnableDisableEnum" />
  </xs:complexType>
</xs:element>

<xs:element name="SubInterfaceConfig">
  <xs:complexType>
    <xs:attribute name="Id" type="ws:SubInterfaceConfigIdRange" />
    <xs:attribute name="Type" type="ws:SubInterfaceType" />
    <xs:attribute name="SubType" type="ws:SubInterfaceSubType" />
    <xs:attribute name="IPAddress" type="ws:IsValidIP" />
    <xs:attribute name="SubnetMask" type="ws:IsValidSubNetMaskOrNull" />
  </xs:complexType>
</xs:element>

<xs:simpleType name="SubInterfaceSubType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="VLAN" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="SubInterfaceType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Ingest" />
  </xs:restriction>
</xs:simpleType>
</xs:schema>

```

## System-Level Configuration XML Schema

The System-Level Configuration XML schema file describes and dictates the content of the System-Level Configuration XML file.

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:ws="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs"
  targetNamespace="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">

  <!-- Configure/System/DNS elements -->

  <xs:element name="DomainSuffix" type="xs:string" />

```

```

<xs:element name="DNSServer" type="ws:IsValidIP" />

<xs:element name="DNS">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:DomainSuffix" minOccurs="0" maxOccurs="unbounded" />
      <xs:element ref="ws:DNSServer" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/System/NTP elements -->

<xs:element name="NTPServer" type="ws:IsValidIP" />

<xs:element name="NTP">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:NTPServer" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/System/Host Service elements -->

<xs:element name="HostService">
  <xs:complexType>
    <xs:attribute name="Name" type="xs:string"/>
    <xs:attribute name="IPAddress" type="ws:IsValidIP"/>
  </xs:complexType>
</xs:element>

<xs:element name="HostServiceList">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:HostService" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/System/ArrayName elements -->

<xs:element name="ArrayName">
  <xs:complexType>
    <xs:attribute name="ArrayID" type="xs:string"/>
    <xs:attribute name="Name" type="xs:string"/>
    <xs:attribute name="Vendor" type="xs:string"/>
  </xs:complexType>
</xs:element>

<xs:element name="ArrayNameConfig">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:ArrayName" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/System/QAMGateway/ elements -->

<xs:element name="Server">
  <xs:complexType>
    <xs:attribute name="ServerID" type="xs:string" use="required" />
    <xs:attribute name="GroupID" type="xs:string" use="required" />
  </xs:complexType>

```

```

        <xs:attribute name="QAMMAC" type="xs:string" />
    </xs:complexType>
</xs:element>

<xs:element name="QAMStreamGroupPreference">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:Server" minOccurs="0" maxOccurs="unbounded" />
        </xs:sequence>
        <xs:attribute name="StreamGroupName" type="xs:string" />
        <xs:attribute name="QAMMAC" type="xs:string" />
        <xs:attribute name="Preference" type="xs:string" />
    </xs:complexType>
</xs:element>

<xs:element name="TSIDOutLink">
    <xs:complexType>
        <xs:attribute name="Index" type="xs:nonNegativeInteger" />
        <xs:attribute name="TSIDOut" type="xs:string" />
        <xs:attribute name="TSIDOutLinkStatus" type="xs:string" />
        <xs:attribute name="ServiceGroup" type="xs:string" />
        <xs:attribute name="RFNumber" type="xs:string" />
    </xs:complexType>
</xs:element>

<xs:element name="QAMASILink">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:TSIDOutLink" minOccurs="0" maxOccurs="unbounded" />
        </xs:sequence>
        <xs:attribute name="Number" type="xs:string" />
        <xs:attribute name="TSIDIn" type="xs:string" />
        <xs:attribute name="TSIDInLinkStatus" type="xs:string" />
    </xs:complexType>
</xs:element>

<xs:element name="QAMLink">
    <xs:complexType>
        <xs:attribute name="Status" type="xs:string" />
        <xs:attribute name="ServiceGroup" type="xs:string" />
        <xs:attribute name="RFNumber" type="xs:string" />
    </xs:complexType>
</xs:element>

<xs:element name="GQAMLink">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:TSIDOutLink" minOccurs="0" maxOccurs="unbounded" />
        </xs:sequence>
        <xs:attribute name="ServiceGroup" type="xs:string" />
        <xs:attribute name="RFNumber" type="xs:string" />
    </xs:complexType>
</xs:element>

<xs:element name="QAM">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:QAMStreamGroupPreference" minOccurs="0"
                maxOccurs="unbounded" />
            <xs:element ref="ws:QAMLink" minOccurs="0" maxOccurs="unbounded" />
            <xs:element ref="ws:QAMASILink" minOccurs="0" maxOccurs="unbounded" />
            <xs:element ref="ws:GQAMLink" minOccurs="0" maxOccurs="unbounded" />
        </xs:sequence>
        <xs:attribute name="IP" type="xs:string" />
    </xs:complexType>

```

```

        <xs:attribute name="SubnetMask" type="xs:string" />
        <xs:attribute name="Type" type="xs:string" />
        <xs:attribute name="QAMPort" type="xs:positiveInteger" />
    </xs:complexType>
</xs:element>

<xs:element name="QAMList">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:QAM" minOccurs="0" maxOccurs="unbounded" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

<!-- Configure/System/StreamDestination/ elements -->

<xs:element name="StreamGroupPreference">
    <xs:complexType>
        <xs:attribute name="StreamGroupName" type="xs:string" />
        <xs:attribute name="Preference" type="xs:string" />
    </xs:complexType>
</xs:element>

<xs:element name="StreamDestination">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:StreamGroupPreference" minOccurs="0"
                maxOccurs="unbounded" />
        </xs:sequence>
        <xs:attribute name="SubnetAddress" type="xs:string" />
        <xs:attribute name="SubnetMask" type="xs:string" />
    </xs:complexType>
</xs:element>

<xs:element name="StreamDestinationList">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:StreamDestination" minOccurs="0"
                maxOccurs="unbounded" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

<xs:element name="StreamDestinationConfig">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:StreamDestinationList" minOccurs="0"
                maxOccurs="1" />
        </xs:sequence>
        <xs:attribute name="ReloadServiceGroup" type="xs:boolean" />
    </xs:complexType>
</xs:element>

<xs:element name="StreamDestinationConfig1">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:StreamDestinationList" minOccurs="0"
                maxOccurs="unbounded" />
        </xs:sequence>
        <xs:attribute name="ReloadServiceGroup" type="xs:boolean" />
    </xs:complexType>
</xs:element>

<!-- Configure/System/Headend/ elements -->

```

```

<xs:element name="ServiceGroupToStreamGroup">
  <xs:complexType>
    <xs:attribute name="ServiceGroup" type="xs:string" />
    <xs:attribute name="StreamGroup" type="xs:string" />
  </xs:complexType>
</xs:element>

<xs:element name="ServiceGroup">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:StreamGroupPreference" minOccurs="0"
        maxOccurs="unbounded" />
    </xs:sequence>
    <xs:attribute name="Group" type="xs:string" />
  </xs:complexType>
</xs:element>

<xs:element name="Headend">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:ServiceGroup" minOccurs="0" maxOccurs="unbounded" />
      <xs:element ref="ws:ServiceGroupToStreamGroup" minOccurs="0"
        maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/System/Shared or Distributed ISA Setup -->

<xs:element name="ISA-GeneralSettings">
  <xs:complexType>
    <xs:attribute name="VaultMasterIP" type="ws:IsValidIP"/>
    <xs:attribute name="VaultMasterPort" type="ws:NotNullPort"/>
    <xs:attribute name="WebServicePort" type="ws:NotNullPort"/>
    <xs:attribute name="StreamingMode" type="ws:StreamingMode"/>
    <xs:attribute name="MSASupport" type="ws:EnableDisableEnum"/>
    <xs:attribute name="Pre-EncryptionSupport" type="ws:EnableDisableEnum"/>
    <xs:attribute name="TME-SCE" type="ws:TME-SCE"/>
    <xs:attribute name="FTPOutPort" type="ws:NotNullPort"/>
  </xs:complexType>
</xs:element>

<xs:element name="ISA-ContentStoreSettings">
  <xs:complexType>
    <xs:attribute name="Name" type="ws:NotNullstring"/>
    <xs:attribute name="Kind" type="ws:NotNullstring"/>
    <xs:attribute name="FactoryID" type="ws:NotNullstring"/>
    <xs:attribute name="FactoryKind" type="ws:NotNullstring"/>
    <xs:attribute name="NoOfThreads" type="xs:positiveInteger"/>
    <xs:attribute name="FTPServerPort" type="ws:NotNullPort"/>
  </xs:complexType>
</xs:element>

<xs:element name="CORBAEventChannels">
  <xs:complexType>
    <xs:attribute name="EventChannelID" type="ws:NotNullstring"/>
    <xs:attribute name="EventChannelKind" type="ws:NotNullstring"/>
    <xs:attribute name="ContentChannelID" type="ws:NotNullstring"/>
    <xs:attribute name="ContentChannelKind" type="ws:NotNullstring"/>
    <xs:attribute name="FactoriesID" type="ws:NotNullstring"/>
    <xs:attribute name="FactoriesKind" type="ws:NotNullstring"/>
    <xs:attribute name="EventChannelFactory" type="ws:NotNullstring"/>
  </xs:complexType>

```

```

        <xs:attribute name="LoadQueryInterval" type="xs:positiveInteger" />
    </xs:complexType>
</xs:element>

    <xs:element name="ISASetup">
        <xs:complexType>
            <xs:sequence>
                <xs:element ref="ws:ISA-GeneralSettings" minOccurs="0"
maxOccurs="unbounded" />
                <xs:element ref="ws:ISA-ContentStoreSettings" minOccurs="0"
maxOccurs="unbounded" />
                <xs:element ref="ws:CORBAEventChannels" minOccurs="0"
maxOccurs="unbounded" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>

<!-- Configure/System/Parent/Child Service Group elements -->

<xs:element name="ChildServiceGroup" type="xs:positiveInteger" />

<xs:element name="ParentService">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:ChildServiceGroup" minOccurs="0" maxOccurs="unbounded"
/>
        </xs:sequence>
        <xs:attribute name="ServiceGroup" type="xs:positiveInteger" />
    </xs:complexType>
</xs:element>

<xs:element name="ParentChildServiceGroups">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:ParentService" minOccurs="0" maxOccurs="unbounded" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

<!-- Configure/System/Ingest Tuning elements -->

<xs:element name="TrickModeSettings">
    <xs:complexType>
        <xs:attribute name="Speed0" type="xs:string" />
        <xs:attribute name="Speed1" type="xs:string" />
        <xs:attribute name="Speed2" type="xs:string" />
        <xs:attribute name="Speed3" type="xs:string" />
        <xs:attribute name="Speed4" type="xs:string" />
        <xs:attribute name="Speed5" type="xs:string" />
        <xs:attribute name="Speed6" type="xs:string" />
        <xs:attribute name="Speed7" type="xs:string" />
    </xs:complexType>
</xs:element>

<xs:element name="FailIngestSettings">
    <xs:complexType>
        <xs:attribute name="PSIErrors" type="ws:EnableDisableEnum" />
        <xs:attribute name="BitRateErrors" type="ws:EnableDisableEnum" />
        <xs:attribute name="ErrorCountMethod" type="ws:ErrorCountMethod" />
        <xs:attribute name="NumOfMinutes" type="xs:string" />
        <xs:attribute name="DiscontinuityRate" type="xs:string" />
        <xs:attribute name="NumOfPictureGaps" type="xs:string" />
        <xs:attribute name="PictureGapDuration" type="xs:string" />
    </xs:complexType>
</xs:element>

```



```

        <xs:attribute name="ContinuityCntErrors" type="xs:string"/>
        <xs:attribute name="NumOfSyncLossErrors" type="xs:string"/>
        <xs:attribute name="SyncLossDuration" type="xs:string"/>
    </xs:complexType>
</xs:element>

<xs:element name="IngestTuningSettings">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:TrickModeSettings" minOccurs="0" maxOccurs="unbounded"
/>
            <xs:element ref="ws:FailIngestSettings" minOccurs="0"
maxOccurs="unbounded" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

<!-- Configure/System/MPEG Tuning elements -->

<xs:element name="MPEGTuningSettings">
    <xs:complexType>
        <xs:attribute name="PrgIDStdize" type="ws:EnableDisableEnum"/>
        <xs:attribute name="PSI" type="ws:EnableDisableEnum"/>
        <xs:attribute name="SeqEndRemove" type="ws:EnableDisableEnum"/>
        <xs:attribute name="RateStdize" type="ws:EnableDisableEnum"/>
        <xs:attribute name="DynamicTricks" type="ws:EnableDisableEnum" />
        <xs:attribute name="PTSNPTMode" type="ws:PTSNPTMode"/>
        <xs:attribute name="C2ATimeout" type="ws:C2ATimeout"/>
        <xs:attribute name="FFResume" type="ws:EnableDisableEnum" />
        <xs:attribute name="RWSkip" type="ws:EnableDisableEnum"/>
        <xs:attribute name="DualCAS" type="ws:EnableDisableEnum" />
    </xs:complexType>
</xs:element>

<xs:element name="MPEGTuning">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:MPEGTuningSettings" minOccurs="0"
maxOccurs="unbounded" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

<!-- Configure/System/Ingest Manager elements -->

<xs:element name="GeneralSettings">
    <xs:complexType>
        <xs:attribute name="Host" type="xs:string"/>
        <xs:attribute name="CallbackPort" type="ws:NotNullPort"/>
        <xs:attribute name="AddlPackWindow" type="xs:positiveInteger"/>
        <xs:attribute name="FTPTimeout" type="xs:nonNegativeInteger"/>
        <xs:attribute name="UseAssetID" type="ws:YesNoEnum"/>
        <xs:attribute name="ManageCORBA" type="ws:YesNoEnum"/>
        <xs:attribute name="RequireNotice" type="ws:YesNoEnum"/>
        <xs:attribute name="MetaDataPublish" type="ws:EnableDisableEnum"/>
        <xs:attribute name="MetaDataPublishURL0" type="xs:string"/>
        <xs:attribute name="MetaDataPublishURL1" type="xs:string"/>
    </xs:complexType>
</xs:element>

<xs:element name="IngestSettings">
    <xs:complexType>
        <xs:attribute name="IngestMask" type="xs:nonNegativeInteger"/>
        <xs:attribute name="NameServiceHost" type="ws:IsValidIP" />

```

```

    <xs:attribute name="NameServicePort" type="ws:NotNullPort" />
    <xs:attribute name="NotifyServiceHost" type="ws:IsValidIP" />
    <xs:attribute name="NotifyServicePort" type="ws:NotNullPort" />
    <xs:attribute name="NotifyEventChannelFactory" type="ws:NotNullstring" />
    <xs:attribute name="EventChannelsID" type="ws:NotNullstring" />
    <xs:attribute name="EventChannelsKind" type="ws:NotNullstring" />
    <xs:attribute name="FactoriesID" type="ws:NotNullstring" />
    <xs:attribute name="FactoriesKind" type="ws:NotNullstring" />
    <xs:attribute name="PackageChannelID" type="ws:NotNullstring" />
    <xs:attribute name="PackageChannelKind" type="ws:NotNullstring" />
    <xs:attribute name="PackageFactoryId" type="ws:NotNullstring" />
    <xs:attribute name="PackageFactoryKind" type="ws:NotNullstring" />
    <xs:attribute name="PackageFactoryName" type="ws:NotNullstring" />
    <xs:attribute name="PackageFactoryServerId" type="xs:positiveInteger" />
    <xs:attribute name="CiscoSOAPURL" type="ws:NotNullstring" />
    <xs:attribute name="ProdisSOAPURL" type="ws:NotNullstring" />
  </xs:complexType>
</xs:element>

<xs:element name="BackOffice">
  <xs:complexType>
    <xs:attribute name="Name" type="xs:string" />
    <xs:attribute name="URL" type="xs:string" />
  </xs:complexType>
</xs:element>

<xs:element name="BackOfficeSettings">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:BackOffice" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
    <xs:attribute name="MaxRetryCount" type="xs:string" />
    <xs:attribute name="RetryInterval" type="xs:string" />
    <xs:attribute name="BackOfficeTimeout" type="xs:string" />
  </xs:complexType>
</xs:element>

<xs:element name="ContentStoreSettings">
  <xs:complexType>
    <xs:attribute name="Type" type="ws:ContentStoreType" />
    <xs:attribute name="URL" type="xs:string" />
    <xs:attribute name="OpenStreamTimeOut" type="xs:string" />
  </xs:complexType>
</xs:element>

<xs:element name="EncryptionSettings">
  <xs:complexType>
    <xs:attribute name="Type" type="ws:EncryptionType" />
    <xs:attribute name="URL" type="xs:string" />
    <xs:attribute name="FTPURL" type="xs:string" />
  </xs:complexType>
</xs:element>

<xs:element name="IngestManagerSettings">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:GeneralSettings" minOccurs="0" maxOccurs="unbounded" />
      <xs:element ref="ws:IngestSettings" minOccurs="0" maxOccurs="unbounded" />
      <xs:element ref="ws:BackOfficeSettings" minOccurs="0" maxOccurs="unbounded" />
      <xs:element ref="ws:ContentStoreSettings" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

        <xs:element ref="ws:EncryptionSettings" minOccurs="0"
maxOccurs="unbounded" />
    </xs:sequence>
</xs:complexType>
</xs:element>

<!-- Configure/System/Authentication manager elements -->

<xs:element name="AuthenticationManagerSettings">
    <xs:complexType>
        <xs:attribute name="Protocol" type="ws:AuthProtocol" />
        <xs:attribute name="IPAddress" type="ws:IsValidIP" use="required" />
        <xs:attribute name="Port" type="ws:NotNullPort" use="required" />
        <xs:attribute name="TimeOut" type="xs:positiveInteger" />
        <xs:attribute name="EventISHostName" type="xs:string" />
        <xs:attribute name="EventISPort" type="ws:NotNullPort" />
        <xs:attribute name="TraxisURL" type="xs:string" />
        <xs:attribute name="TraxisRetryInterval" type="xs:string" />
        <xs:attribute name="ServerThreadPool" type="xs:positiveInteger"
use="required" />
    </xs:complexType>
</xs:element>

<xs:element name="AuthenticationManager">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:AuthenticationManagerSettings" minOccurs="0"
maxOccurs="unbounded" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

<!-- Configure/System/Ingest Server Manager elements -->

<xs:element name="IngestDriverServer">
    <xs:complexType>
        <xs:attribute name="Port" type="ws:NotNullPort" />
        <xs:attribute name="NoOfThreads" type="xs:string" />
    </xs:complexType>
</xs:element>

<xs:element name="IngestDriverServerSettings">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:IngestDriverServer" minOccurs="0"
maxOccurs="unbounded" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

<!-- Configure/System/Shared Recorder Settings elements -->

<xs:element name="GeneralRecorderSettings">
    <xs:complexType>
        <xs:attribute name="IPAddress" type="ws:IsValidIP" />
        <xs:attribute name="Port" type="ws:NotNullPort" />
        <xs:attribute name="NTPServer" type="ws:IsValidIP" />
        <xs:attribute name="HeartBeatInterval" type="xs:positiveInteger" />
        <xs:attribute name="RecorderLocation" type="xs:string" />
        <xs:attribute name="RecordingModify" type="xs:positiveInteger" />
        <xs:attribute name="AdMarker" type="ws:AdMarker" />
    </xs:complexType>
</xs:element>

```

```

<xs:element name="ManagerNotifyThresholds">
  <xs:complexType>
    <xs:attribute name="RecordingBW" type="xs:positiveInteger"/>
    <xs:attribute name="DeliveryBW" type="xs:positiveInteger"/>
    <xs:attribute name="StorageCapacity" type="xs:positiveInteger"/>
  </xs:complexType>
</xs:element>

<xs:element name="SharedRecorderSettings">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:GeneralRecorderSettings" minOccurs="0"
maxOccurs="unbounded" />
      <xs:element ref="ws:ManagerNotifyThresholds" minOccurs="0"
maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/System/IP Nicknames elements -->

<xs:element name="IPNickName">
  <xs:complexType>
    <xs:attribute name="IPAddress" type="ws:IsValidIP"/>
    <xs:attribute name="NickName" type="xs:string"/>
  </xs:complexType>
</xs:element>

<xs:element name="QAMIPNickName">
  <xs:complexType>
    <xs:attribute name="IPAddress" type="ws:IsValidIP"/>
    <xs:attribute name="NickName" type="xs:string"/>
  </xs:complexType>
</xs:element>

<xs:element name="IPNickNames">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:IPNickName" minOccurs="0" maxOccurs="unbounded" />
      <xs:element ref="ws:QAMIPNickName" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/System/Media Importer/Exporter elements -->

<xs:element name="MediaImporterSettings">
  <xs:complexType>
    <xs:attribute name="ImporterType" type="ws:ImporterType"/>
    <xs:attribute name="TransformerType" type="ws:TransformerType"/>
    <xs:attribute name="AutoImport" type="ws:EnableDisableEnum"/>
    <xs:attribute name="FTPServerIP" type="ws:IsValidIP"/>
    <xs:attribute name="FTPPath" type="ws:NotNullstring"/>
    <xs:attribute name="UserName" type="ws:NotNullstring"/>
    <xs:attribute name="Password" type="ws:NotNullstring"/>
    <xs:attribute name="RetryCount" type="xs:positiveInteger"/>
    <xs:attribute name="RetryInterval" type="xs:positiveInteger"/>
    <xs:attribute name="Schedule" type="ws:Schedule"/>
    <xs:attribute name="ImportTime" type="ws:IsTime"/>
    <xs:attribute name="ImportDays" type="xs:string"/>
  </xs:complexType>
</xs:element>

<xs:element name="MediaExporterSettings">

```

```

    <xs:complexType>
      <xs:attribute name="PreNotification" type="xs:positiveInteger"/>
      <xs:attribute name="NotifyURLPrefix" type="ws:NotNullstring"/>
      <xs:attribute name="NotifyHostIP" type="ws:IsValidIP"/>
      <xs:attribute name="NotifyHostPort" type="ws:NotNullPort"/>
    </xs:complexType>
  </xs:element>

  <xs:element name="MediaServiceSettings">
    <xs:complexType>
      <xs:sequence>
        <xs:element ref="ws:MediaImporterSettings" minOccurs="0"
maxOccurs="unbounded" />
        <xs:element ref="ws:MediaExporterSettings" minOccurs="0"
maxOccurs="unbounded" />
      </xs:sequence>
    </xs:complexType>
  </xs:element>

  <!-- Configure/System/Input Channels elements -->

  <xs:element name="Channel">
    <xs:complexType>
      <xs:attribute name="Name" type="xs:string"/>
      <xs:attribute name="MulticastIP" type="ws:IsValidIP"/>
      <xs:attribute name="Port" type="ws:NotNullPort"/>
      <xs:attribute name="ChannelCode" type="ws:NotNullstring"/>
      <xs:attribute name="ChannelID" type="xs:nonNegativeInteger"/>
      <xs:attribute name="CategoryID" type="xs:nonNegativeInteger"/>
      <xs:attribute name="CatalogID" type="xs:nonNegativeInteger"/>
      <xs:attribute name="Product" type="ws:NotNullstring"/>
      <xs:attribute name="ProviderName" type="ws:NotNullstring"/>
      <xs:attribute name="ProviderID" type="ws:NotNullstring"/>
      <xs:attribute name="PreviewPeriod" type="xs:nonNegativeInteger"/>
      <xs:attribute name="LWindowStart" type="xs:nonNegativeInteger"/>
      <xs:attribute name="LWindowEnd" type="xs:nonNegativeInteger"/>
      <xs:attribute name="Encryption" type="ws:YesNoEnum"/>
      <xs:attribute name="Rating" type="ws:NotNullstring"/>
      <xs:attribute name="PublishTime" type="xs:nonNegativeInteger"/>
      <xs:attribute name="Price" type="ws:NotNullstring"/>
      <xs:attribute name="BillID" type="xs:string"/>
      <xs:attribute name="AudioType" type="ws:AudioType"/>
    </xs:complexType>
  </xs:element>

  <xs:element name="InputChannels">
    <xs:complexType>
      <xs:sequence>
        <xs:element ref="ws:Channel" minOccurs="0" maxOccurs="unbounded" />
      </xs:sequence>
    </xs:complexType>
  </xs:element>

  <!-- Configure/System/Output Channels elements -->

  <xs:element name="OutputChannel">
    <xs:complexType>
      <xs:attribute name="Name" type="xs:string"/>
      <xs:attribute name="DestIP" type="ws:IsValidIP"/>
      <xs:attribute name="DestPort" type="ws:NotNullPort"/>
    </xs:complexType>
  </xs:element>

  <xs:element name="OutputChannelConfig">

```

```

        <xs:complexType>
          <xs:sequence>
            <xs:element ref="ws:OutputChannel" minOccurs="0" maxOccurs="unbounded" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>

<!-- Configure/System/SOP elements -->

<xs:element name="SOP">
  <xs:complexType>
    <xs:attribute name="Name" type="xs:string"/>
    <xs:attribute name="VirtualIP" type="ws:IsValidIP"/>
  </xs:complexType>
</xs:element>

<xs:element name="SourceOutputPort">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:SOP" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/System/CallSign elements -->

<xs:element name="CallSign">
  <xs:complexType>
    <xs:attribute name="Name" type="xs:string"/>
    <xs:attribute name="IPAddress" type="ws:IsValidIP"/>
    <xs:attribute name="Port" type="ws:NotNullPort"/>
    <xs:attribute name="BitRate" type="xs:string"/>
  </xs:complexType>
</xs:element>

<xs:element name="CallSignSetup">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:CallSign" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<!-- Configure/System/LogConfig elements -->

<xs:element name="flag">
  <xs:complexType>
    <xs:attribute name="name" type="xs:string"/>
  </xs:complexType>
</xs:element>

<xs:element name="debug-flags">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:flag" minOccurs="0" maxOccurs="unbounded" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

<xs:element name="Facility">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="ws:debug-flags" minOccurs="0" maxOccurs="1" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

        </xs:sequence>
        <xs:attribute name="name" type="xs:string"/>
        <xs:attribute name="local-log" type="xs:string"/>
        <xs:attribute name="remote-log" type="xs:string"/>
    </xs:complexType>
</xs:element>

<xs:element name="LogConfig">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:Facility" minOccurs="0" maxOccurs="unbounded" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

<!-- SyslogConfig elements -->
<xs:element name="SyslogConfigDetails">
    <xs:complexType>
        <xs:attribute name="RemoteLogging" type="ws:EnableDisableEnum"/>
        <xs:attribute name="IPAddress" type="ws:IsValidIP"/>
        <xs:attribute name="Port" type="ws:NotNullPort"/>
    </xs:complexType>
</xs:element>

<xs:element name="SyslogConfig">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:SyslogConfigDetails" minOccurs="0"
maxOccurs="unbounded" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

<xs:element name="SystemConfiguration">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ws:DNS" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:NTP" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:HostServiceList" minOccurs="0" maxOccurs="1" />
            <xs:element ref="ws:ArrayNameConfig" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:QAMList" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:Headend" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:StreamDestinationList" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:ParentChildServiceGroups" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:ISASetup" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:IngestManagerSettings" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:AuthenticationManager" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:IngestTuningSettings" minOccurs="0" maxOccurs="1" />
            <xs:element ref="ws:MPEGTuning" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:SharedRecorderSettings" minOccurs="0"
                maxOccurs="1" />
            <xs:element ref="ws:IPNickNames" minOccurs="0"
                maxOccurs="1" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

```

```

        maxOccurs="1" />
<xs:element ref="ws:MediaServiceSettings" minOccurs="0"
    maxOccurs="1" />
<xs:element ref="ws:InputChannels" minOccurs="0" maxOccurs="1" />
<xs:element ref="ws:SourceOutputPort" minOccurs="0"
    maxOccurs="1" />
<xs:element ref="ws:OutputChannelConfig" minOccurs="0"
    maxOccurs="1" />
<xs:element ref="ws:CallSignSetup" minOccurs="0"
    maxOccurs="1" />
<xs:element ref="ws:IngestDriverServerSettings" minOccurs="0"
    maxOccurs="1" />
<xs:element ref="ws:LogConfig" minOccurs="0"
    maxOccurs="1" />
<xs:element ref="ws:SyslogConfig" minOccurs="0"
    maxOccurs="1" />
    </xs:sequence>
</xs:complexType>
</xs:element>

<xs:simpleType name="AdMarker">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Retain" />
        <xs:enumeration value="Discard" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="EnableDisableEnum">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Enable" />
        <xs:enumeration value="Disable" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="ImporterType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Host" />
        <xs:enumeration value="Other" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="TransformerType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="OCN" />
        <xs:enumeration value="Tribune" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="Schedule">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Daily" />
        <xs:enumeration value="Weekly" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="StreamingMode">
    <xs:restriction base="xs:string">
        <xs:enumeration value="ASI" />
        <xs:enumeration value="GigE" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="TME-SCE">
    <xs:restriction base="xs:string">

```



```

        <xs:enumeration value="Disable" />
        <xs:enumeration value="Enable for OpenStream" />
        <xs:enumeration value="Enable for MystroMDN" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="YesNoEnum">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Yes" />
        <xs:enumeration value="No" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="IsValidIP">
    <xs:restriction base="xs:string">
        <xs:pattern
value="(([1-9]?[0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.)\{3\}([1-9]?[0-9]|1[0-9][0-9]|2[0-4]
[0-9]|25[0-5])" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="IsTime">
    <xs:restriction base="xs:string">
        <xs:pattern
value="(((0-1)[0-9])|(2[0-3]))\-([0-5][0-9])" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="NotNullPort">
    <xs:restriction base="xs:positiveInteger">
        <xs:minInclusive value="1" />
        <xs:maxInclusive value="65535" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="ErrorCountMethod">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Per Minute(s)" />
        <xs:enumeration value="Per Sample" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="AuthProtocol">
    <xs:restriction base="xs:string">
        <xs:enumeration value="EventIS" />
        <xs:enumeration value="Cisco" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="ContentStoreType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Disable" />
        <xs:enumeration value="ISA" />
        <xs:enumeration value="FSI" />
        <xs:enumeration value="NGOD" />
        <xs:enumeration value="OpenStream" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="EncryptionType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Disable" />
        <xs:enumeration value="Verimatrix" />
    </xs:restriction>
</xs:simpleType>

```

```

        <xs:enumeration value="WideVine" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="AudioType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Mono" />
        <xs:enumeration value="Stereo" />
        <xs:enumeration value="Dolby ProLogic" />
        <xs:enumeration value="Dolby 5.1" />
        <xs:enumeration value="Dolby Digital" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="PTSNPTMode">
    <xs:restriction base="xs:string">
        <xs:enumeration value="File" />
        <xs:enumeration value="Display" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="C2ATimeout">
    <xs:restriction base="xs:positiveInteger">
        <xs:minInclusive value="1000" />
        <xs:maxInclusive value="5000" />
    </xs:restriction>
</xs:simpleType>

<xs:simpleType name="NotNullstring">
    <xs:restriction base="xs:string">
        <xs:minLength value="1" />
    </xs:restriction>
</xs:simpleType>

</xs:schema>

```

## System-Level Configuration XML Example

Following is an example of a System-Level Configuration XML file for the QAM Gateway, Headend Setup, and Stream Destination pages.

```

<?xml version="1.0" encoding="UTF-8" ?>
<SystemConfiguration xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">

  <DNS xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
    <DomainSuffix>cisco.com</DomainSuffix>
    <DNSServer>10.78.176.213</DNSServer>
  </DNS>

  <NTP xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
    <NTPServer>10.78.176.89</NTPServer>
  </NTP>

  <HostServiceList xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
    <HostService Name="Cisco" IPAddress="10.78.176.219" />
  </HostServiceList>

  <ArrayNameConfig xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
    <ArrayName ArrayID="10" Name="Array_10" Vendor="ISA-OpenStream" />
  </ArrayNameConfig>

```

```

<QAMList xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
  <QAM IP="10.78.176.2">
    <QAMStreamGroupPreference StreamGroupName="SG1" QAMMAC="af:3a:4a:ee:aa:11"
    Preference="High">
      <Server ServerID="2" GroupID="10" QAMMAC="af:3a:4a:ee:aa:11" />
    </QAMStreamGroupPreference>
    <QAMStreamGroupPreference StreamGroupName="SG2" QAMMAC="" Preference="Medium">
      <Server ServerID="5" GroupID="10" QAMMAC="" />
    </QAMStreamGroupPreference>
    <QAMStreamGroupPreference StreamGroupName="SG3" QAMMAC="" Preference="Low">
      <Server ServerID="6" GroupID="10" QAMMAC="" />
    </QAMStreamGroupPreference>
    <QAMStreamGroupPreference StreamGroupName="SG4" QAMMAC="" Preference="None">
      <Server ServerID="7" GroupID="10" QAMMAC="" />
    </QAMStreamGroupPreference>
  </QAM>
  <QAM IP="10.78.176.117" SubnetMask="255.255.255.0">
    <QAMStreamGroupPreference StreamGroupName="SG1" QAMMAC="AF:33:11:EE:2B:FF"
    Preference="High">
      <Server ServerID="2" GroupID="10" QAMMAC="AF:33:11:EE:2B:FF" />
    </QAMStreamGroupPreference>
    <QAMStreamGroupPreference StreamGroupName="SG2" QAMMAC="" Preference="Medium">
      <Server ServerID="5" GroupID="10" QAMMAC="" />
    </QAMStreamGroupPreference>
    <QAMStreamGroupPreference StreamGroupName="SG3" QAMMAC="" Preference="None">
      <Server ServerID="6" GroupID="10" QAMMAC="" />
    </QAMStreamGroupPreference>
    <QAMStreamGroupPreference StreamGroupName="SG4" QAMMAC="" Preference="None">
      <Server ServerID="7" GroupID="10" QAMMAC="" />
    </QAMStreamGroupPreference>
  </QAM>
</QAMList>
<ParentChildServiceGroups
xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
  <ParentService ServiceGroup="123">
    <ChildServiceGroup>1000</ChildServiceGroup>
    <ChildServiceGroup>1010</ChildServiceGroup>
    <ChildServiceGroup>1020</ChildServiceGroup>
    <ChildServiceGroup>2000</ChildServiceGroup>
    <ChildServiceGroup>2010</ChildServiceGroup>
    <ChildServiceGroup>2020</ChildServiceGroup>
    <ChildServiceGroup>3000</ChildServiceGroup>
    <ChildServiceGroup>3010</ChildServiceGroup>
    <ChildServiceGroup>3020</ChildServiceGroup>
    <ChildServiceGroup>4000</ChildServiceGroup>
    <ChildServiceGroup>4010</ChildServiceGroup>
    <ChildServiceGroup>4020</ChildServiceGroup>
    <ChildServiceGroup>5000</ChildServiceGroup>
    <ChildServiceGroup>5010</ChildServiceGroup>
    <ChildServiceGroup>5020</ChildServiceGroup>
    <ChildServiceGroup>6000</ChildServiceGroup>
    <ChildServiceGroup>6010</ChildServiceGroup>
    <ChildServiceGroup>6020</ChildServiceGroup>
    <ChildServiceGroup>7000</ChildServiceGroup>
    <ChildServiceGroup>7010</ChildServiceGroup>
    <ChildServiceGroup>7020</ChildServiceGroup>
    <ChildServiceGroup>8000</ChildServiceGroup>
    <ChildServiceGroup>8010</ChildServiceGroup>
    <ChildServiceGroup>8020</ChildServiceGroup>
  </ParentService>
</ParentChildServiceGroups>

<IngestManagerSettings xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">

```

```

    <GeneralSettings Host="10.78.23.65" CallbackPort="16" AddlPackWindow="2" FTPTTimeOut="0"
    UseAssetID="No" ManageCORBA="No" RequireNotice="No" MetaDataPublish="Enable"
    MetaDataPublishURL0="" MetaDataPublishURL1="" />
    <IngestSettings IngestMask="0" />
    <BackOfficeSettings MaxRetryCount="2" RetryInterval="55" BackOfficeTimeout="66">
    <BackOffice Name="iTVManager" URL="" />
    </BackOfficeSettings>
    <ContentStoreSettings Type="Disable" />
    <EncryptionSettings Type="Disable" />
    </IngestManagerSettings>

    <IngestTuningSettings xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
    <TrickModeSettings Speed0="6X" Speed1="-5X" Speed2="15X" Speed3="-15X" Speed4="30X"
    Speed5="-30X" Speed6="127X" Speed7="-60X" />
    <FailIngestSettings PSIErrors="Disable" BitRateErrors="Disable" ErrorCountMethod="Per
    Sample" NumOfMinutes="0 min" DiscontinuityRate="Ignore" NumOfPictureGaps="3"
    PictureGapDuration="5 sec" ContinuityCntErrors="Ignore" NumOfSyncLossErrors="3"
    SyncLossDuration="5 sec" />
    </IngestTuningSettings>

    <MPEGTuning xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
    <MPEGTuningSettings PrgIDStdize="Disable" PSI="Disable" SeqEndRemove="Disable"
    RateStdize="Disable" PTSNPTMode="File" C2ATimeout="1500" FFResume="Disable"
    RWSkip="Disable" DualCAS="Disable" />
    </MPEGTuning>

    <IPNickNames xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
    <IPNickName IPAddress="10.78.176.214" NickName="" />
    <IPNickName IPAddress="10.78.176.213" NickName="CDSM213" />
    <IPNickName IPAddress="10.78.176.210" NickName="" />
    <IPNickName IPAddress="10.78.176.122" NickName="" />
    <IPNickName IPAddress="10.78.176.222" NickName="" />
    <IPNickName IPAddress="10.78.176.244" NickName="" />
    <IPNickName IPAddress="10.78.176.215" NickName="" />
    <QAMIPNickName IPAddress="10.78.176.2" NickName="qamip" />
    </IPNickNames>

    <MediaServiceSettings xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
    <MediaImporterSettings ImporterType="Host" TransformerType="OCN" AutoImport="Enable"
    FTPServerIP="10.78.176.210" FTPPath="/CDSM/public/" UserName="arroyo" Password="arroyo"
    RetryCount="7" RetryInterval="56" Schedule="Daily" ImportTime="00-00" ImportDays="" />
    <MediaExporterSettings PreNotification="" NotifyURLPrefix="" NotifyHostIP=""
    NotifyHostPort="" />
    </MediaServiceSettings>

    <InputChannels xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
    <Channel MulticastIP="235.0.0.2" Port="2" ChannelCode="1ch" ChannelID="200"
    CategoryID="100" CatalogID="100" Product="MOD" ProviderName="tv1" ProviderID="sun"
    PreviewPeriod="25" LWindowStart="0" LWindowEnd="0" Encryption="Yes" Rating="5"
    PublishTime="35" Price="15.00" AudioType="Mono" />
    <Channel MulticastIP="235.0.0.3" Port="3" ChannelCode="2ch" ChannelID="200"
    CategoryID="100" CatalogID="100" Product="MOD" ProviderName="tv2" ProviderID="sun"
    PreviewPeriod="20" LWindowStart="0" LWindowEnd="0" Encryption="Yes" Rating="5"
    PublishTime="94" Price="25.00" AudioType="Mono" />
    </InputChannels>

    <CallSignSetup xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
    <CallSign Name="newCallSign" IPAddress="235.11.11.2" Port="21" />
    </CallSignSetup>

    <LogConfig xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
    <Facility name="aim" local-log="" remote-log="" />
    <Facility name="avs_launch" local-log="" remote-log="" />
    <Facility name="avsdb" local-log="critical" remote-log="emergency" />
    <Facility name="bwm" local-log="" remote-log="" />
  
```

```
<Facility name="c2k" local-log="" remote-log="" />
<Facility name="content_store" local-log="" remote-log="" />
<Facility name="content_store_master" local-log="" remote-log="" />
<Facility name="content_store_vho" local-log="" remote-log="" />
<Facility name="http" local-log="" remote-log="" />
<Facility name="ingest_driver" local-log="" remote-log="" />
<Facility name="lscp" local-log="" remote-log="" />
<Facility name="ns" local-log="" remote-log="" />
<Facility name="orphan_streams" local-log="" remote-log="" />
<Facility name="pvr_asset_manager" local-log="" remote-log="" />
<Facility name="sess_gateway" local-log="" remote-log="" />
<Facility name="statsd" local-log="" remote-log="" />
<Facility name="stream_event" local-log="" remote-log="" />
<Facility name="stream_service" local-log="" remote-log="" />
<Facility name="stream_service_vho" local-log="" remote-log="" />
<Facility name="stream_trace" local-log="" remote-log="" />
<Facility name="streams_driver" local-log="" remote-log="" />
<Facility name="utils" local-log="" remote-log="" />
<Facility name="vqes_cp" local-log="" remote-log="" />
<Facility name="wmsvr" local-log="" remote-log="" />
</LogConfig>

<SyslogConfig xmlns="http://www.cisco.com/schemas/VCPBU/VDS-TV/R0/ciscowebsvcs">
  <SyslogConfigDetails RemoteLogging="Enable" IPAddress="10.0.1.2" Port="4" />
</SyslogConfig>
</SystemConfiguration>
```

