



CHAPTER 3

Managing AON Properties

Properties control how messages are processed in an application-oriented network. Properties can be applied globally to the entire AON environment, or they can be applied only to individual nodes.



Note

Access to items on the Properties tab may be limited depending on the privileges assigned to you. For further details, see the [“Assigning Roles to Users”](#) section on page 5-3. Also, you must open a project to gain access to the Properties tab in AMC.

This chapter includes the following sections:

- [Monitoring Activity](#), page 3-2
- [Adjusting Quality and Performance](#), page 3-4
- [Working with Message Content](#), page 3-6
- [Controlling Message Delivery](#), page 3-8
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Note

This chapter covers most properties that appear on the Properties tab of the AMC. Additional AMC properties related to security, authentication, and authorization are in [Chapter 4, “Managing AON Security.”](#)

Monitoring Activity

Bladelet Monitoring Property

The Bladelet Monitoring Property configures which events are stored for retrieval using the screen at **Monitor > View Events**. You can configure this property globally, or you can apply it to individual nodes.

How to Get There

Open a project, then go to **Properties > Monitoring**.

Action to Take

To configure the Monitoring Property, change events that you want monitored to True, then click the **Submit** button.

Message Log Domain

AON nodes are able to capture application log messages and store them in a database for later retrieval. This functionality requires you to complete the following tasks:

1. [Create a Message Log Database](#)—This is the Oracle or Sybase database in which log messages are to be stored.
2. [Configure Message Log Domain Property](#)—This defines within AMC the database configuration details to be used to store log messages.

Upon completion of these steps, ADS users are able to use the Log bladelet to store messages in the database.

Create a Message Log Database

If you enable AON message logging, you can configure an external Oracle or Sybase database to store log messages. An existing Oracle database can be used for message logging. However, a Sybase database must have a specific configuration to be compatible with AON. For this reason, we recommend that you create a new database.

Step 1 Create a database and a user (for logins). Grant the user database privileges to create, query, delete, update, and insert.

Use one of the following for the Message Log Database:

- Oracle 9i (9.2)

You can create a separate Oracle 9i database for AON Message Logging.

- Sybase 12.5.1

You should create a separate Sybase 12.5.1 Adaptive Server (database) for AON message logging. The requirements for this external database are summarized below.

- Page size \geq 8K
- Procedure cache size - 100000

- Max memory 131072 (in 2k units, i.e. 131072 * 2k = 256MB)



Note See Oracle or Sybase documentation for specific database configuration instructions.

- Step 2** Run the appropriate script to create the Message Log schema in your database. See [Appendix A, “AON Schemas”](#) for Sybase and Oracle scripts.

Configure Message Log Domain Property

After a database as been configured, you can configure Message Log Domain Property. This is a device level property.

How to Get There

Open a project, then go to **Properties > Application > Node**. Select a node, then click the **Edit Properties** button.

Data to Enter

The Message Log Domain Property page includes the entries described in [Table 3-1](#).

Table 3-1 Message Log Domain Property Entries

Entry	Description
Name	Name of your choosing for this property.
Enabled	Select true to enable, false to disable.
Sub-protocol	oracle.thin or oracle.oci for Oracle. sybase.Tds for Sybase.
User ID	User ID required to log on to the database. The user must have permission to create, read, write, update, and query the database.
Password	The password to gain access to the database.
Database alias	Alias pointing to the database. This value depends on the configuration of the database. The format for this entry is <i><IP address> : <port> : <name of database></i> The following are examples: <ul style="list-style-type: none"> • Oracle—@10.1.1.1:1521:aonmlog • Sybase—10.1.1.2:5000/aonmlog The last part in the alias is the name of the database instance. The message log schema should be provided by your database administrator.
Driver	The JDBC driver name. AON supports the following two drivers: <ul style="list-style-type: none"> • Oracle—oracle.jdbc.OracleDriver • Sybase—com.sybase.jdbc2.jdbc.SybDriver
Max Queue Size	Maximum size of the Message Log queue.

Adaptive Load Balancer

Adaptive Load Balancer is used to change the adaptive load balancing algorithm used by AON.

How to Get There

Open the System Project, then go to **Properties > Application > Global**.

Data to Enter

The Adaptive Load Balancing property page includes the entries described in [Table 3-2](#).

Table 3-2 *Adaptive Load Balancer Entries*

Entry	Description
Name	Name of your choosing for this property.
Maximum Request Discard	Number of requests to wait before discarding a server's average response time data.
Maximum Response Samples	Number of samples used for determining the most responsive server.

Adjusting Quality and Performance

AON allows you to measure and control runtime control quality and performance for message types that you specify.

Caching

AON includes a built-in cache engine that can be used as a proxy cache or reverse proxy cache depending on where and in which administrative domain the cache is placed. Use the Caching Property to configure how the AON cache engine operates. This is a device-level property, and it is used in conjunction with PEPs that include the CacheData and RetrieveCache bladelets.

How to Get There

Open a project, then go to **Properties > Application > Node**. Select a node, then click the **Edit Properties** button.

Data to Enter

The Caching Property page includes the entries described in [Table 3-3](#).

Table 3-3 *Entries on Caching Property*

Entry	Description
Override no-cache Response Directive	If this value is set to true , the HTTP “no-cache” response directive is ignored.
Override no-store Response Directive	If this value is set to true , the HTTP “no-store” response directive is ignored.
Override private Response Directive	If this value is set to true , the HTTP “private” response directive is ignored.
Override no-cache Request Directive	If this value is set to true , the HTTP “no-cache” request directive is ignored.

Table 3-3 Entries on Caching Property (continued)

Entry	Description
Override no-store Request Directive	If this value is set to true , the HTTP “no-store” request directive is ignored.
Override Pragma:no-cache Request Directive	If this value is set to true , the HTTP “Pragma:no-cache” request directive is ignored.
Response Cache Default TTL	Default time to live (TTL) to be used for response caching.
Variable Cache Default TTL	Default TTL to be used for variable caching.
Max Objects Variable Cache	Determines the number of objects to store in the variable cache before replacement algorithms are activated.
Max Objects Security Cache	Maximum number of objects to be cached in the security cache before replacement algorithms are activated.
Response cache replacement Algorithm	This value must be set to LRU . This is the replacement algorithm to be used for response caching.
Variable Cache Replacement Algorithm	This value must be set to LRU . This is the replacement algorithm to be used for variable caching.
Security Cache Replacement Algorithm	Must be set to LRU . This is the replacement algorithm to be used for security caching.
Cache Server	Host name or IP address of the caching server. Must be set to localhost.
Cache Server Port	Port on which the caching server listens. Must be set to 60606.
Connection Timeout	Determines how long a request will wait for a response
Queue Size	The pending message queue contains references to messages that are awaiting response from the server. If a message remain in this queue beyond the timeout value, the server is assumed to be down. Typically set for 20–30 seconds.
Polling Interval	Determines the number of seconds the client will wait before checking if a failed server has returned to service.
Pending Message Queue Timeout	Determines the size of the client’s sending queue.
Timed-out Message Count	Determines how many failed messages are required for a server to be considered down.

Application QoS

The Application QoS feature enables AON to prioritize message processing based on the differentiated services code point (DSCP) contained in the IP header. Use the QoSMapping page in AMC to define appropriate DSCP values for the following categories (listed in priority order):

- Bulk data transfer
- Default
- Mission critical
- Network management
- Transactional data

These categories are available to PEP developers who use the Application QoS bladelet.

How to Get There

Open the System Project, then go to **Properties > Application > Global**, then select QoSMapping.

Actions to Take

Click the radio button for the property set you want to change, then click the **Edit** button. On the screen that follows, enter the new DSCP value and click the **Submit** button.

Fastpath

AON enables optimization of some PEPs, using a specialized process called Fastpath. With Fastpath, AON can optimally process messages that are classified with PEPs and meet specific conditions. This optimization substantially increases throughput. For more information on configuring PEPs for FastPath, see the [AON Programming Guide](#).

How to Get There

Open a project, then go to **Properties > Application > (Global or Node) > Fastpath**

Actions to Take

Use this page to change the HTTP port on which the node listens for messages to be processed by Fastpath. The default port is 5556.

Working with Message Content

AON allows you to work with the content of your messages based on properties that you set.

Content Parser

The content parser property specifies a Java class that implements a content parser to use for reading an input content and converting it to an equivalent XML content. This property can also specify a Java class to use to perform the transformation instead of using XSLT-based transformation.

Prerequisite

You must upload a content parser. See the [“Managing Extensions” section on page 5-7](#).

How to Get There

Open a project, then go to **Properties > Application > Node**. Select a node, then click the **Edit Properties** button.

Data to Enter

The Content Parser Property page includes the entries described in [Table 3-4](#).

Table 3-4 **Entries on Content Parser Property**

Entry	Description
Name	Name of the Content Parser property.

Table 3-4 Entries on Content Parser Property (continued)

Entry	Description
Transformation Factory	This parameter specifies the class name that implements a custom transformer.
Parser Class Name	This parameter specifies the name of Java class that is used to parse the input message content and convert it to equivalent XML content.
Name of Package	Drop-down list of content parsers that have been uploaded to AMC.

Content Validation

A Content Validation application property imposes an external schema on an XML message that contains no predefined grammar declarations. This property is used when input XML does not contain any grammar declaration (XSD or DTD) but is expected to conform to a receiver point schema. It is also used when Input XML is transformed within AON and is expected to conform to a target schema.

How to Get There

Open a project, then go to **Properties > Application > Node**. Select a node, then click the **Edit Properties** button.

Data to Enter

The Content Validation property page includes the entries described in [Table 3-5](#).

Table 3-5 Entries on Content Validation Property

Entry	Description
Name	Name of the Content Validation property.
Target Schema Name	Target schema to be imposed on XML messages running a particular PEP.
Target Namespace	Namespace for the target schema named above.

Working with XSL Transformation

This property configures AON to perform XSL transformation (XSLT). The Transformation property determines the document style sheet, target content type, and transformation package. This property can be configured globally or for individual nodes.

How to Get There

Open a project, then go to **Properties > Application > (Global or Node** and select a node), then click the **Edit Properties** button.

Data to Enter

The Transformation page includes the entries described in [Table 3-6](#).

Table 3-6 Transformation Property Entries

Entry	Description
Name	Name of the Transformation property.
Name of XSLT Stylesheet	Specifies the name of the transform file to use. The file must be present in the Transform Bundle specified by the parameters below.
Target Content Type	This is used to set the content type of the target content when the input content is stream content and its type is not known.
Transformation Factory	Choose an XSLT transformer to be used.
Name of Package	Specifies the name of the transform package.

Controlling Message Delivery

Message delivery properties define the delivery characteristics associated with a message type. All message types have a default delivery property, which is specified when you create the message type in the ADS. After a message is classified, the delivery properties of that message are dictated by the delivery property associated with that message type. Message delivery properties must be configured in the following order:

1. [Configuring Send Properties.](#)
2. [Configuring Delivery Semantics.](#)
3. [Binding Message Delivery Properties to a Message Type.](#)

After you configure Send Properties and Delivery Semantics, synchronize ADS with the AMC to begin using the new delivery properties with message types.

Configuring Send Properties

The Send Properties page specifies how long a message type should wait for a timeout.

How to Get There

Open a project, then go to **Properties > Application > (Global or Node)**. Then select **Send Properties**.

Data to Enter

The Delivery Notification property page includes the entries described in [Table 3-7](#).

Table 3-7 Delivery Connection Property Entries

Entry	Description
Name	Name of the Send Property.
Request Timeout	Length of time to wait for a response from the endpoint for a timeout, measured in milliseconds.
Retry Interval	Length of time to try re-sending a message.

Table 3-7 *Delivery Connection Property Entries (continued)*

Entry	Description
Retry Count	Number of times AON will attempt to resend the message.

Configuring Delivery Semantics

The Delivery Semantics property specifies delivery properties for a message type. Use this property in conjunction with the Send Properties page to configure the delivery of messages.


Note

You must perform the actions described on the [Configuring Send Properties](#) page before you can configure Delivery Semantics.

How to Get There

Open a project, then go to **Properties > Application > (Global or Node** and select a node). Then select **Delivery Semantics**.

Data to Enter

The Delivery Semantics page includes the entries described in [Table 3-8](#).

Table 3-8 *Delivery Semantics Property Entries*

Entry	Description
Name	Name of your choosing for this property.
Time to live	How long either request message or response message can stay in the system Specified in milliseconds.
Send Properties	Select a Send Property. See Configuring Send Properties for further details.

Actions to Take

Use the **Edit List** button to choose a delivery notification and connection property.

Binding Message Delivery Properties to a Message Type

After you configure message delivery properties in the AMC, the property is available to ADS users when they configure message types.

After you configure an Encoding profile, it is available to ADS users when they configure a message type.

Next Hop Domain

Next Hop Domain Property enables a device to forward all traffic using a specified protocol to a designated AON node. Next Hop Domain is a device-level property.

**Note**

You must configure next hop domain in the System Project. Next hop domain will fail if you configure in another project.

**Note**

In a two-node scenario, configure this property on the client proxy with the configuration details necessary to route messages to the server proxy.

How to Get There

Open the System project, then go to **Properties > Application > Node**. Select a node, then click the **Edit Properties** button.

Data to Enter

The Next Hop Domain Property page includes the entries described in [Table 3-9](#).

Table 3-9 Entries on Next Hop Domain Property

Entry	Description
Name	Use the hostname or IP address of the destination and the port on which the host is listening for messages. <i>ip_address:port</i> or <i>hostname:port</i>
Address	IP address or hostname for next hop device.
Port	Port on which device is listening for next hop traffic.
Protocol	One of the following protocols: <ul style="list-style-type: none"> • AONP-HTTP • AONP-TCP
Mode	Choose secure for encrypted or clear for unencrypted.

Node Capabilities

The Node Capabilities property enables you to configure message delivery persistence on a node. Node Capabilities is a device level property.

**Note**

If message delivery persistence is to be stored in a database, you must configure two databases before you configure this property. See the “[Create a Message Log Database](#)” section on page 3-2 for information on configuring a database.

How to Get There

Open the System Project, then go to **Properties > Application > Node**. Select a node, then click the Edit Properties button.

Data to Enter

The Node Capabilities property page includes the entries described in [Table 3-10](#).

Table 3-10 Node Capabilities Property Entries

Entry	Description
Name	Name of your choosing for this property.
Persistence	Choose off to disable persistence. Choose database to enable
WCCP Service Group	Enter the WCCP service group for the virtual cluster configured for multi-blade message delivery.
Wait Timeout	Specified in milliseconds.
Multi-Blade Database	Click the Edit List button to choose an available Database

Working with Adapters

You can use AMC to control how adapters function within your AON implementation. You can also configure additional properties and extensions for each adapter. Adapters can only be configured in the System project. For more details about adapters, properties, and extensions, see the *AON Programming Guide*.

Adapter Registry

The Adapter Registry page enables you to manage the properties of both built-in and custom adapters. You can activate or deactivate an adapter, change the start-up mode, and change the protocol to be used by the adapter.

How to Get There

Open the System project, then go to **Properties > Adapter**.

Adapter Listener Domain

Adapter Listener Domain enables you to configure the listening parameters of an adapter. You can specify the port on which the adapter listens, and you can choose either clear or secure communication.

How to Get There

Open the System project, then go to **Properties > Application > Adapter Listener Domain**.

For more information about adapters, see the *AON Programming Guide*.

Service Profiles for Adapters

Service Profiles are used in conjunction with the development of custom bladelets and custom adapters. Available services include the following:

- Compression
- Content Lookup
- Content Validation

- Encryption
- Signature

Developers can create profiles, which are sets of attributes that describe how the services listed above are implemented in custom bladelets or adapters. Profiles contain multiple named contexts for a service, and these profiles must be created in AMC in order for developers to access these contexts by name.

For more details about custom bladelets, custom adapters, and external services, see the *AON Programming Guide*.

How to Get There

Open a project, then go to **Properties > Service Profiles**.

Working with Message Transport

Encoding

The Encoding property enables you to configure AON nodes to compress outgoing traffic. After you configure an encoding property, that property is available to ADS users. When message types are configured, each message type can be associated with an encoding property.

How to Get There

Open the System project, then go to **Properties > Application > Node**. Select a node, then click the **Edit Properties** button.

Data to Enter

The Encoding property page includes the entries described in [Table 3-11](#).

Table 3-11 *Encoding Property Entries*

Entry	Description
Name	Name of your choosing for this property.
Request Encoding	Choose the encoding for the request portion of the PEP.
Response Encoding	Choose the encoding for the response portion of the PEP.

Configuring JMS Properties

Use JMS properties to configure the way AON nodes handle JMS messages. You must configure JMS properties in the following order:

1. [JMS Destination Property, page 3-13](#)
2. [JMS Source Property, page 3-13](#)
3. [JMS Reply To, page 3-14](#)
4. [JMS Connections Property, page 3-14](#)
5. [JMS Naming Property, page 3-15](#)

JMS Destination Property

The JMS Destination Property enables you to specify a new destination for JMS messages.

How to Get There

Open a project, then go to **Properties > JMS > Node**. Select a node, then click the **Edit Properties** button.

Data to Enter

The JMS Destination Configuration page includes the entries described in [Table 3-12](#).

Table 3-12 *JMS Destination Configuration Entries*

Entry	Description
Name	Name of your choosing for this configuration.
Destination name	Name of the destination JMS broker.
Delivery Mode	Choose PERSISTENT or NON_PERSISTENT as appropriate.
Time To Live	Use the value specified by the JMS broker. This entry is required.
Priority	Use the value specified by the JMS broker. This entry is required.

JMS Source Property

The JMS Source Property Page enables you to specify a new source for JMS messages. It requires you to specify a JMS Destination, which you should have configured in the previous section.

How to Get There

Open a project, then go to **Properties > JMS > Node**. Select a node, then click the Edit Properties button.

Data to Enter

The JMS Source Configuration page includes the entries described in [Table 3-13](#).

Table 3-13 *JMS Source Configuration Entries*

Entry	Description
Name	Name of your choosing for this configuration.

Table 3-13 JMS Source Configuration Entries (continued)

Entry	Description
Source Name	Name of the source sending JMS messages.
Message Selector	Enter a header entry or property reference that is to be used to identify messages of interest.
Delivery Failure Property	Undelivered messages are placed in the dead letter queue (DLQ) and committed.
Destination	Click the Edit List button to choose an available JMS Destination property.

JMS Reply To

The JMS ReplyTo property enables you to specify a new reply queue to be used by JMS clients.

How to Get There

Open a project, then go to **Properties > JMS > Node**. Select a node, then click the Edit Properties button.

Data to Enter

The JMS Reply To Property page includes the entries described in [Table 3-14](#).

Table 3-14 JMS Reply To Property Entries

Entry	Description
Name	Name of your choosing for this property.
ReplyTo Name	Name of the ReplyTo queue.
Definition Type	Choose one of the following types of queues: <ul style="list-style-type: none"> • template • static • temporary
Message Delivery	Choose the appropriate type of delivery.
Batch Size	Size of batch count.
Number of Queues/Topics	Enter number of queues.

JMS Connections Property

How to Get There

Open a project, then go to **Properties > JMS > Node**. Select a node, then click the Edit Properties button.

Data to Enter

The JMS Connection Property page includes the entries described in [Table 3-15](#).

Table 3-15 JMS Connection Configuration Entries

Entry	Description
Name	Name of your choosing for this connection configuration.
Source Name	Name of the JMS broker.
Type	Choose topic or queue.
User	Enter the user name if one is required by the JMS broker.
Password	Enter the password if one is required by the JMS broker.
Vendor Name	Choose Tibco, BEA, or MQ from the drop-down list.
Dead Letter Destination	Specify the queue where AON can store undeliverable messages.
Transaction store	Specify the transaction queue.
Reply To List	Click the Edit List button to make a selection.
Destination List	Click the Edit List button to make a selection.
Source List	Click the Edit List button to make a selection.
SSL configuration	Choose an available configuration from the drop-down list.
Destination Batch Size	Size of the batch at the destination broker.
Destination Batch Interval	Specified in milliseconds.

**Note**

If you are configuring a JMS topic and using a virtual cluster, topic retrieval is not load-balanced across multiple nodes. Only one node retrieves topics in this configuration, however, another node will assume this task should the first node fail.

JMS Naming Property

**Note**

Before configuring this property, go to **Admin > Extensions > JMS Resources** to upload a JMS resource file. See the *AON Programming Guide* for information on creating a JMS resource file.

How to Get There

Open a project, then go to **Properties > JMS > Node**. Select a node, then click the Edit Properties button.

Data to Enter

The JMS Naming Property page includes the entries described in [Table 3-16](#).

Table 3-16 Entries on JMS Naming Property

Entry	Description
Name	Name of your choosing for this property.
Naming Service	Choose remote or local.
JMS Resource File	Use the drop-down list to select the file you have uploaded.

Table 3-16 Entries on JMS Naming Property (continued)

Entry	Description
Initial Context Factory	Constant that holds the name of the environment property for specifying the initial context factory to use.
Provider URL	Constant that holds the name of the environment property for specifying configuration information for the service provider to use.
Security Protocol	Constant that holds the name of the environment property for specifying the security protocol to use.
Security Authentication	Constant that holds the name of the environment property for specifying the security level to use
Authoritative	Constant that holds the name of the environment property for specifying the authoritativeness of the service requested.
URL Package Prefixes	Constant that holds the name of the environment property for specifying the list of package prefixes to use when loading in URL context factories.
State Factories	Constant that holds the name of the environment property for specifying the list of state factories to use.
Language	Constant that holds the name of the environment property for specifying the preferred language to use with the service.
Batch Size	Constant that holds the name of the environment property for specifying the batch size to use when returning data via the service's protocol.
Security Principal	Constant that holds the name of the environment property for specifying the identity of the principal for authenticating the caller to the service.
Object Factories	Constant that holds the name of the environment property for specifying the list of object factories to use.
Referral	Constant that holds the name of the environment property for specifying how referrals encountered by the service provider are to be processed.
Security Credentials	Constant that holds the name of the environment property for specifying the credentials of the principal for authenticating the caller to the service.
DNS URL	Constant that holds the name of the environment property for specifying the DNS host and domain names to use for the JNDI URL context.
Connection List	Click the Edit List button to choose a JMS Connections property.

- Step 3** Click the **Properties** tab on the top right window of AMC.
- Step 4** Ensure that the **Adapter** menu is selected on the left pane.
- Step 5** Click on the **Node** sub-menu under **Adapter**.
- Step 6** Select the AON node for which to configure the connection.

Step 7 Click on **Edit Properties** button.

Configuring Cisco AON Promiscuous Mode

Promiscuous mode (PMode) enables out-of-band message processing using a Cisco AON node. It provides the capability to receive and process messages without introducing latency in the flow of inline network traffic, supporting out-of-band monitoring and analysis.

Prerequisites for Promiscuous Mode

- Ensure that AMC and all AON nodes are correctly configured and running.
- Ensure that any nodes to be used in this procedure are active on AMC.
- Ensure that you have available a valid framing extension. HTTP framing extensions, in addition to FIX extensions, are available for download with other AON software.
- Ensure that the switch or router that hosts any node using PMode meets the requirements in [Table 3-17](#).

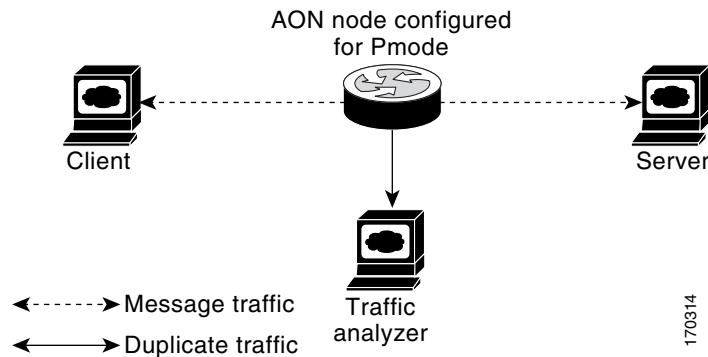
Table 3-17 PMode Operating System Requirements

Platform	Required Operating System
AON-SM with Supervisor Engine 2	Catalyst OS Release 8.5(3) recommended Note Minimum requirement is Catalyst OS Release 8.4(2a).
AON-SM with Supervisor Engine 720	PMode not supported
AON-NM	Cisco IOS Release 12.3(14)T1

Information About Promiscuous Mode

Promiscuous mode allows for message traffic monitoring without affecting traffic flow. When promiscuous mode is enabled, message packets are duplicated in the node and forwarded, in the form of framed application messages, to a third-party application. The forwarded messages can be analyzed or otherwise processed. [Figure 1](#) shows a sample runtime topology where an AON node is using PMode to forward traffic to a traffic analyzer.

Figure 1 Promiscuous Mode Sample Topology



The sample topology shown in [Figure 1](#) requires the following runtime components:

- **Client**—sends traffic to the server. The client is configured with a default gateway IP address that is assigned to an interface on the router hosting the AON node.
- **Server**—receives traffic from the client through the AON node. The server is configured with the default gateway IP address of the router interface into which it connects.
- **AON node**—the router or switch, configured with IP addresses and port numbers for the traffic to be captured. The node makes copies of this traffic and passes it to AON. AON in turn processes these messages, packages them into AON monitoring messages (AMM), and sends them to the analyzer. Depending on the node's location in the network, the AON node requires a specific IP and VLAN configuration to perform this function.
- **Traffic analyzer**—receives duplicate traffic from the AON node. The analyzer is a third-party or customer-provided component. It is not part of the AON product.

Pmode Deployment Options

You can run promiscuous mode both on AON-NM and on AON-SM.

When you use AMC to deploy PMode on an AON-NM, PMode is enabled, by default, on the external interface—with the option of changing to an internal monitoring interface. You can choose to use either of the interfaces, or set up a deployment that uses both interfaces simultaneously. For information on changing to an internal monitoring interface, see the section [Enabling the Internal Interface on an AON-NM, page 3-20](#).

When you use AMC to deploy PMode on an AON-SM, PMode is enabled on Gigabit Ethernet 3, a deployment for which you must configure either SPAN or VACL for forwarding the traffic.

For copying traffic to AON, you can select from the following options:

- Configure RITE (Router IP Traffic Export) at the router.

- Use SPAN or VACL in a switch to capture and direct traffic to AON.

**Note**

When using RITE, AON can reside in the same router as that you configure for RITE, or it can reside in a separate router—if in a separate router it must be within the same VLAN.

To configure RITE, see the following:

- http://www.cisco.com/en/US/products/ps6350/products_configuration_guide_chapter09186a0080455b94.html

To configure either SPAN or VACL see the following:

- SPAN—<http://www.cisco.com/warp/public/473/41.html>
- VACL—<http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/122sx/swcg/vacl.htm>

**Note**

Use either SPAN or VACL, but not both.

For information on SPAN and on VACL configurations, see the following documents:

- SPAN—<http://www.cisco.com/warp/public/473/41.html>
- VACL—<http://www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/122sx/swcg/vacl.htm>

Promiscuous Mode Enhancements

Beginning with AON Version 2.4, PMode provides the following enhancements:

Promiscuous Mode Support for UDP Packets

Pmode now has the ability to capture UDP packets. The feature is enabled by default; no further configuration is necessary.

Promiscuous Mode Support for Time-Based Interval Sampling

To configure time-based sampling, open a project and go to **Properties > Adapter** and select the **pmode** adapter. Click the **Properties** button, then choose the **PmodeAdapter** and click the **New** button. The page that loads includes three new elements, which are described in the following table:

Element	Description
Default Sampling Mode	True enables time-based interval sampling. False disables it.
Default Sampling Delay	Number of seconds to wait before sampling commences.
Default Sampling Duration	Number of seconds sampling will last once it commences.

How to Configure Promiscuous Mode

PMode configuration involves the following:

- [Enabling the Internal Interface on an AON-NM, page 3-20](#) (optional)
- [Configuring PMode Adapter on AMC, page 3-20](#) (required)

Enabling the Internal Interface on an AON-NM

This optional procedure is required only if you are enabling PMode on the internal interface of an AON-NM. To configure this, complete the following steps.

-
- Step 1** Establish a session to the AON-NM and enter configuration terminal mode.
- ```
aon-nm> configuration terminal
Enter configuration commands, one per line. End with exit.
```
- Step 2** Use the **aon monitoring interface** command to enable the internal interface.
- ```
aon-nm(config)>aon monitoring interface internal
```
- Step 3** Exit configuration terminal mode.
- ```
aon-nm(config)>exit
```

### Configuring PMode Adapter on AMC

Activate the Cisco AON PMode adapter by performing the following steps.

- 
- Step 1** Click the **Properties** tab in the top menu of AMC.
- Step 2** Click **Global** in the **Adapter** menu on the left side of the window. The global properties of each registered adapter are displayed.
- Step 3** Make sure **PMode** adapter is checked. On the bottom part of the window, click **Edit** to display the **Edit Property Set** window.
- Step 4** In the **Is Active** field, choose **true**.
- Step 5** Click **Submit**.
- 

### Configuring the PMode Adapter

To configure the PMode adapter and deploy the changes to the node, perform the following steps:

- 
- Step 1** Click on the **Properties** Tab in the top menu of AMC.
- Step 2** Select the **Adapter** menu in the left pane.
- Step 3** Select the sub-menu **Global** under **Adapter**.
- Step 4** Select **PMode**.
- Step 5** Click the **Properties** button.
- Step 6** Select **PmodeAdapter** under **Categories**.
- Step 7** Click on **New**.
- Step 8** Enter the name as **default**.



**Warning** If you enter a name other than "default," the configuration will fail.

---

- Step 9** Enter the **Default Destination port** as 5011 for our example.
- Step 10** Enter the **Default Destination IP** as the IP address of the analyzer.

- Step 11** Click **Submit**.
  - Step 12** Click the **Deploy** Tab in the top menu of AMC.
  - Step 13** Click **Manage Staging** on the menu in the left window.
  - Step 14** Notice a **Global Deployment Request**. Select the Global deployment request and click **Stage** as shown below.
  - Step 15** Click on **Manage Deployment** in the menu in the left window.
  - Step 16** Select the Global deployment Request and click **Deploy**.  
Once deployed, a message 'Successfully deployed all configurations to the node' displays.
- 

### Loading the HTTP Extension

To load the HTTP extension, perform the following steps:

- Step 1** Click **Admin** tab on the top right of the window of AMC.
  - Step 2** On the left side window, click Adapter Extension Packages in the Extensions menu.
  - Step 3** Click **Upload**.
  - Step 4** Click **Register** on the **Upload and Register Package** window.
- 

### Enabling the HTTP Extension

To enable the HTTP Extension, perform the following steps:

- Step 1** Click the **Properties** tab on the top of the window.
  - Step 2** On the left hand side of the window, click **Global** in the **Adapter** menu.
  - Step 3** Select the **PMode** radio button, then click the Extensions button.  
The **PMode Adapter Extensions: Global Properties** window displays.
  - Step 4** Select the **HTTP-FRAMING-EXTN-1** radio button, then click the **Edit** button.
  - Step 5** The **Adapter Extension Registry: Edit Property Set** window displays. In the **Is Active** field choose **True**, then click the **Submit** button.  
The adapter extension is now activated.
- 

### Configuring HTTP Extension

To configure the HTTP Extension, perform the following steps:

- Step 1** Click on the **Properties** Tab.
- Step 2** Make sure that **Global** is selected under **Adapter** menu in the left hand pane. Select the **PMode** radio button, then click the **Properties** button.
- Step 3** Select **PmodeAdapterExtension** and click the **New** button.

- Step 4** Enter a name for this extension, then click the **Edit List** button.
- Step 5** Select **HTTP-FRAMING-EXTN-1**, click the **Save** button, then click the **Submit** button.
- Step 6** Click the **Deploy** Tab in the top menu of AMC.
- Step 7** Click **Manage Staging** on the menu in the left window.
- Step 8** Notice a new **Global Deployment Request**. Select the Global deployment request and click **Stage** as shown below.
- Step 9** Click on **Manage Deployment** in the menu in the left window.
- Step 10** Select the Global deployment Request and click **Deploy**.  
Once deployed a message ‘Successfully deployed all configurations to the node’ is displayed.
- Step 11** Click the **Properties** tab on the top right window of AMC.
- Step 12** Ensure that the **Adapter** menu is selected on the left pane.
- Step 13** Click on the **Node** sub-menu under **Adapter**.
- Step 14** Select the AON node for which to configure the connection.
- Step 15** Click on **Edit Properties** button.
- Step 16** Select the **PMode** property from the list of Node Properties for the AON node.
- Step 17** Click on the **Extensions** button.
- Step 18** Select **HTTP-FRAMING-EXTN-1** and then click the **Properties** button.
- Step 19** Under **Categories** select **HTTPExtension** and click **New**.
- Step 20** For **Name**, enter a name for the connection—**Connection1** in the example
- Step 21** For **Monitored IP**, enter the IP address of the Server machine—10.221.1.14 in the example.
- Step 22** For **Mask**, enter 255.255.255.255
- Step 23** For **Monitored Port**, enter the value of the port to monitor—while 9000 is used in the example below, the default value is 80.
- Step 24** Click the **Edit List** button next to **AdapterExtPolicyLink**.
- Step 25** Select the **HTTP\_EXTN** and click **Save**.
- Step 26** Review your entries and click the **Submit** button.
- Step 27** Select the **Deploy** Tab.
- Step 28** Notice a listing under **Open Node Deployment Requests**. Stage the request by clicking **Stage**.
- Step 29** Select **Manage Deployment** in the left hand window and select the deployment request, then deploy it by clicking **Deploy**.  
Once the request is successfully deployed, a message ‘Successfully deployed configuration to node’ displays.

**Step 30** Establish a session to the AON node and restart it as follows:

```
aon-node> enable
aon-node# aon restart force
CAUTION! Stopping all AON processes!
Are you sure[n]? y
```



**Note**

The PMode configuration will take affect once the node is restarted.

## Connecting to Databases

Database properties enable AON to read and write to databases. For example, PEPs that use the Log bladelet need a database property that tells AON where to write log data. This is a global property.

### How to Get There

Open a project, then go to **Properties > Application > Global**, then select Databases.

### Data to Enter

The Database Property page includes the entries described in [Table 3-18](#).

**Table 3-18** *Entries on Database Property*

| Entry         | Description                                                                                                                                                                                                |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name          | Name of your choosing for this database property                                                                                                                                                           |
| User ID       | User ID required to log on to the database. The user must have permission to create, read, write, update, and query the database.                                                                          |
| Password      | Password required to log on to the database                                                                                                                                                                |
| JDBC URL      | Location of database. This entry must use one of the following formats:<br>Oracle: <b>jdbc:oracle:thin:@ip_address:port:database_name</b><br>Sybase: <b>jdbc:sybase:Tds: ip_address:port/database_name</b> |
| Database name | One of the following: <ul style="list-style-type: none"> <li>• Oracle</li> <li>• Sybase</li> </ul>                                                                                                         |

### Actions to Take

After completing the entries, you can take one of the following actions:

- Click **Submit** to save your changes.

Click **Cancel** to discard your changes and return to the previous screen.

