Oracle® Communications
Offline Mediation Controller

NetFlow Collection and Processing Cartridge Pack User Guide

Release 6.0

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Oracle Communications Offline Mediation Controller NetFlow Collection and Processing Cartridge Pack User Guide, Release 6.0

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Preface

This document contains guidelines for installing and setting up Oracle Communications Offline Mediation Controller NetFlow Collection and Processing cartridge pack.

Audience

This document is intended for solution designers who configure Offline Mediation Controller cartridges.

Downloading Oracle Communications Documentation

Product documentation is located on Oracle Help Center:

http://docs.oracle.com

Additional Oracle Communications documentation is available from the Oracle software delivery Web site:

https://edelivery.oracle.com

Related Documents

For more information, see the following documents:

- *Offline Mediation Controller Cartridge Development Kit Developer's Guide*: For information about how to develop a cartridge.
- *Offline Mediation Controller Cartridge Development Kit NPL Reference Guide*: For information about how to use the Node Programming Language for developing or extending a cartridge.
- *Offline Mediation Controller System Administrator's Guide*: For administrating Oracle Communications Offline Mediation Controller.

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About this Guide

This chapter contains an overview about Oracle Communications Offline Mediation Controller cartridges.

The scope of this guide includes Offline Mediation Controller as it pertains to the use of this cartridge pack. It is not intended to be a complete Offline Mediation Controller reference guide.

About the Cartridges

Offline Mediation Controller cartridge packs are discrete software components that are developed for the Offline Mediation Controller product. An Offline Mediation Controller cartridge pack offers specific domain behavior on top of the core Offline Mediation Controller software.

An Offline Mediation Controller cartridge pack is not a standalone component; it operates in conjunction with the Offline Mediation Controller core product. Offline Mediation Controller cartridge packs offer the following benefits:

- **Reduced time to market**: Time to market of new services is reduced through simplified development, implementation, and extension of cartridges on customer sites.
- **Extendable**: Cartridges can be extended to include additional services and components that deliver business value, without requiring changes to the original cartridge.
- **Simplified effort**: The effort and technical knowledge that is required to perform customizations is reduced.
- **Ease of installation**: Cartridges can be installed into an Offline Mediation Controller environment without interfering with the existing install base.

> **Note:** Cartridges are designed for a specific technology, software load, and service.

For more information on creating and extending a cartridge, refer to the following documents:

- *Offline Mediation Controller Cartridge Development Kit Developer's Guide*: For information on how to develop a cartridge.
- *Offline Mediation Controller Cartridge Development Kit NPL Reference Guide*: For information on how to use the Node Programming Language for developing or extending a cartridge.

Cartridge Pack Content

An Offline Mediation Controller cartridge contains the following:

- **JAR file**: Contains the cartridge software.
- **Cartridge Pack User Guide**: Contains a description of cartridge pack functionality and installation and configuration instructions.

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Cartridge Pack Overview

This chapter contains an overview of Oracle Communications Offline Mediation Controller NetFlow Collection and Processing cartridge pack.

This cartridge pack is for the NetFlow collection and processing:

- The NetFlow Collection Cartridge (CC) collects the Cisco NetFlow v1, v5, and v7 records.
- The NetFlow Session Aggregation Processor (AP) aggregates Cisco NetFlow (V1, V5, and V7) records which have the following attributes:
  - Source IP addresses
  - Destination IP addresses
  - Source port number
  - Destination port number
  - IP protocol type
  - Day of year and hour

  Each aggregated NetFlow session record will contain the above information as well as total bytes, and total packets.

The NetFlow Collection and Processing cartridge pack will aggregate, into a single record on an hourly basis, NetFlow records belonging to the same NetFlow session. The aggregated records will be output by the AP after the user-configured flush timer has expired.

New Features

This section lists the new features.

NetFlow 6.0.0

This cartridge pack now works with Oracle Communications Offline Mediation Controller 6.0.

NetFlow 1.0.1

The NetFlow UDP receiving socket buffer size is configurable in the GUI. This new functionality replaces the "Packet Queue Size" parameter.

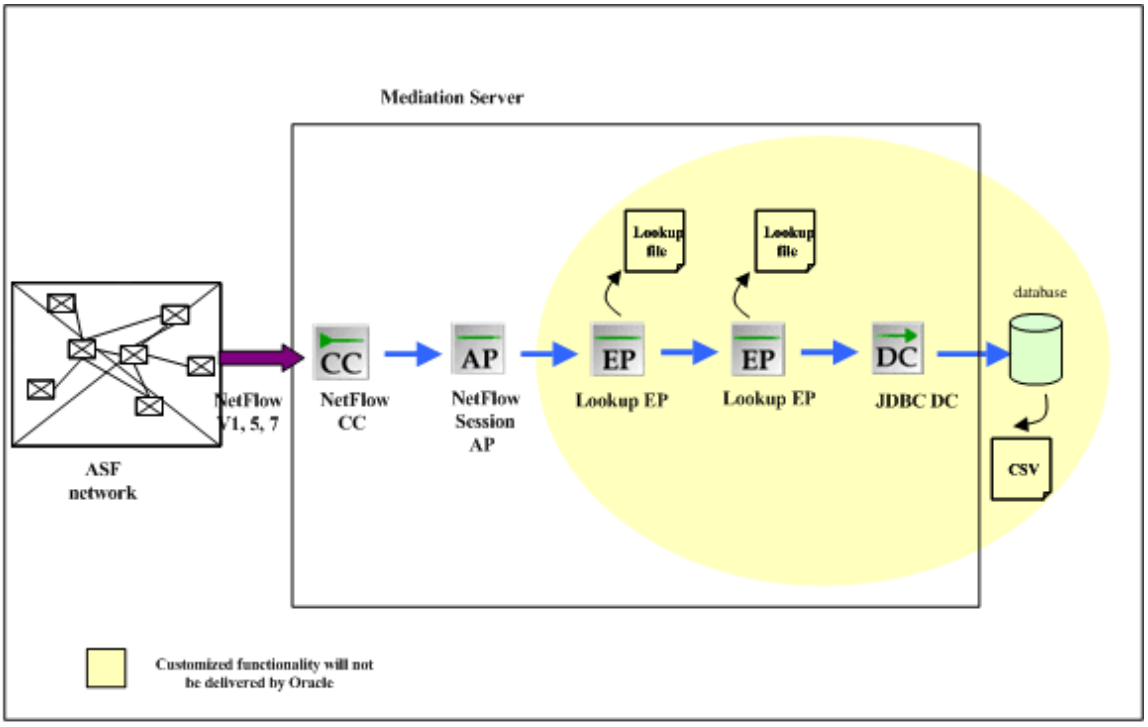
Alarms

All Offline Mediation Controller alarms are listed in the **alarms.txt** file located in the *OMC_Home* directory (*OMC_Home* is the directory in which you installed Offline Mediation Controller.) No new alarms are introduced in this cartridge pack.

Architecture

Figure 2–1 displays the architecture of the solution.

Figure 2–1 Solution Architecture



3

Installing the Cartridge Pack

This chapter contains information on the requirements for installing and setting up Oracle Communications Offline Mediation Controller NetFlow Collection and Processing cartridge pack.

Pre-Installation Tasks

Complete the following pre-installation tasks before installing the cartridge pack:

1. Ensure Offline Mediation Controller 6.0 is installed.
2. Stop Node Manager, Administration Server, and Administration Client.
3. Delete any existing NetFlow cartridge **.jar** files from the *OMC_Home*/**cartridges** directory, where *OMC_Home* is the directory in which Offline Mediation Controller is installed.

Installation Instructions

In a Solaris or Linux environment, you must install the cartridge pack on every UNIX server running Node Manager or Administration Server.

Installing on a Solaris or Linux Workstation

To install the cartridge pack on a Solaris or Linux workstation:

1. Download the **netflow_r6_0.jar** to the *OMC_Home*/**cartridges** directory.
2. Restart Node Manager, Administration Server, and Administration Client.

Post Installation Instructions

After the Cartridge Pack has been installed, restart Node Manager, Administration Server, and Administration Client.

Testing the Cartridge Pack Installation

Verify that the Cartridge Pack has been properly installed by viewing **Version Info** from the **Help** menu in Administration Client. The Cartridge Pack name and version information should appear, along with the information about Node Manager, Administration Server, and Administration Client.

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Creating and Configuring the Cartridges

This chapter contains information on the requirements for creating and configuring the Oracle Communications Offline Mediation Controller NetFlow Collection and Processing nodes.

Creating and Configuring the NetFlow CC

To create and configure the NetFlow CC:

1. Log on to Offline Mediation Controller Administration Client.

   The Node Hosts & Nodes (logical view) screen appears.

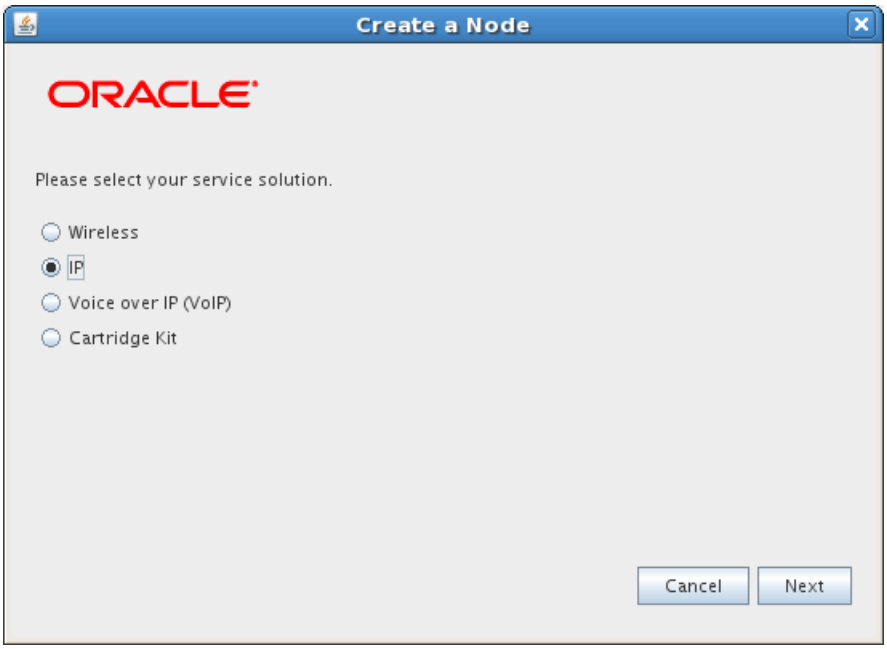
2. In the **Mediation Hosts** table, select a host.

3. In the **Nodes on Mediation Host** section, click **New**.

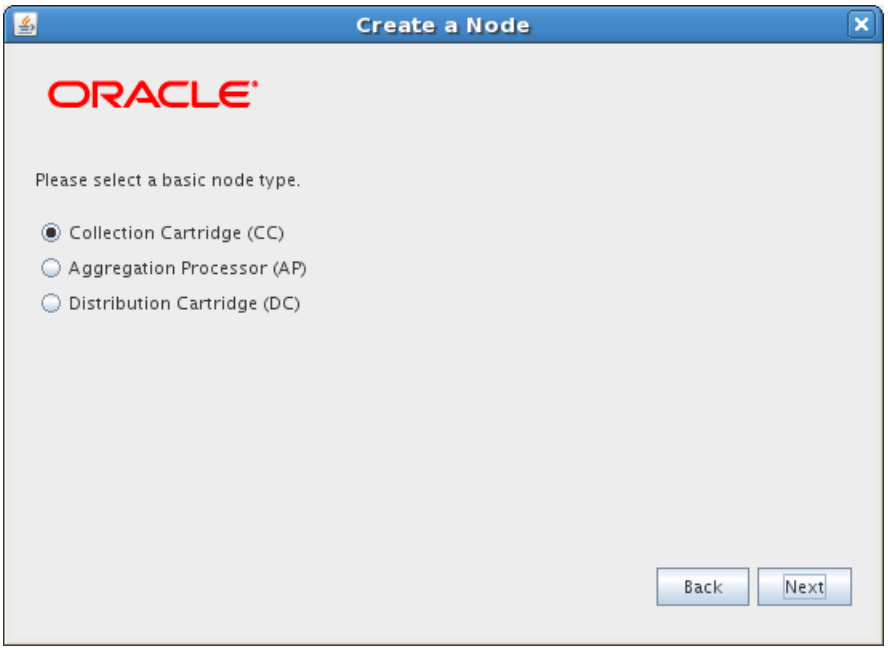
   The Create a Node dialog box appears.

4. Select **IP** and click **Next**.

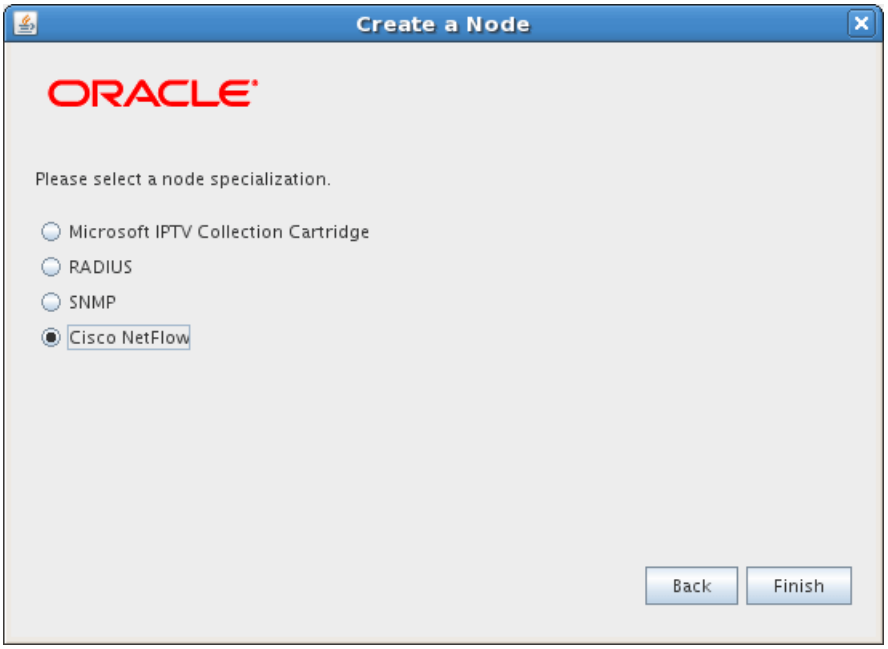
   The **Create a Node** window appears.



5. Select **Collection Cartridge (CC)** and click **Next**.

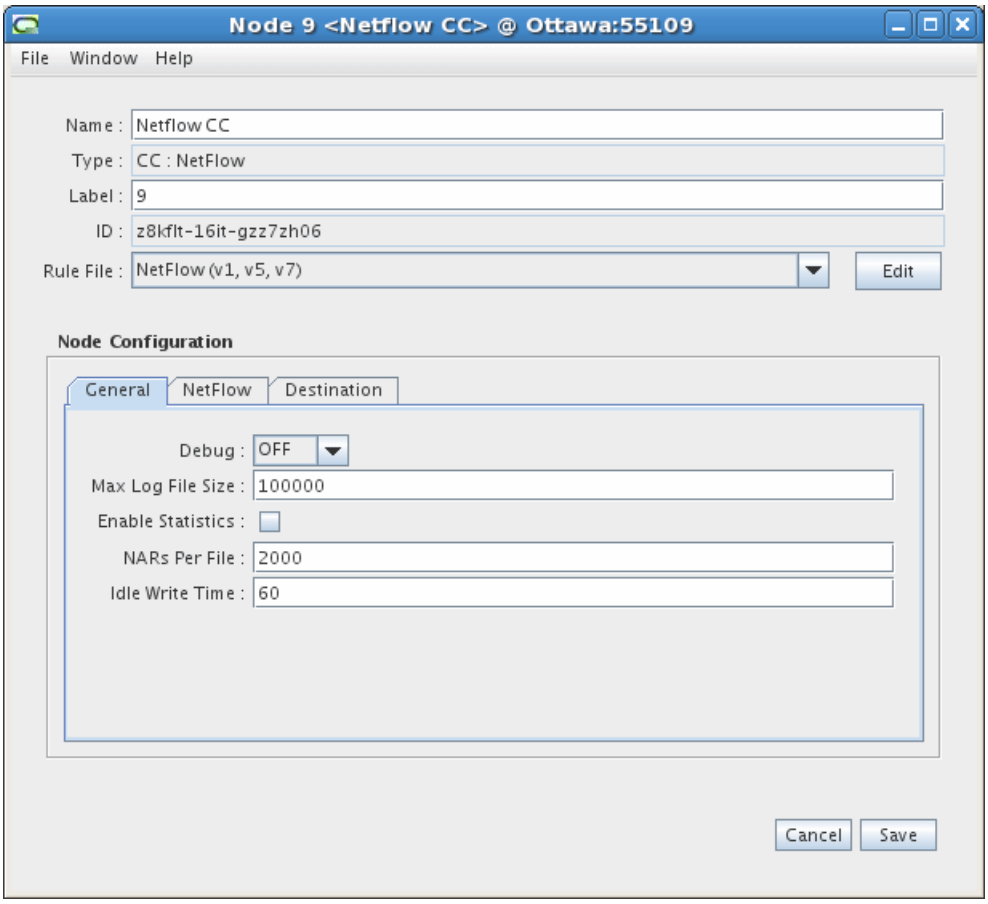


6. Select **Cisco NetFlow** and click **Finish**.

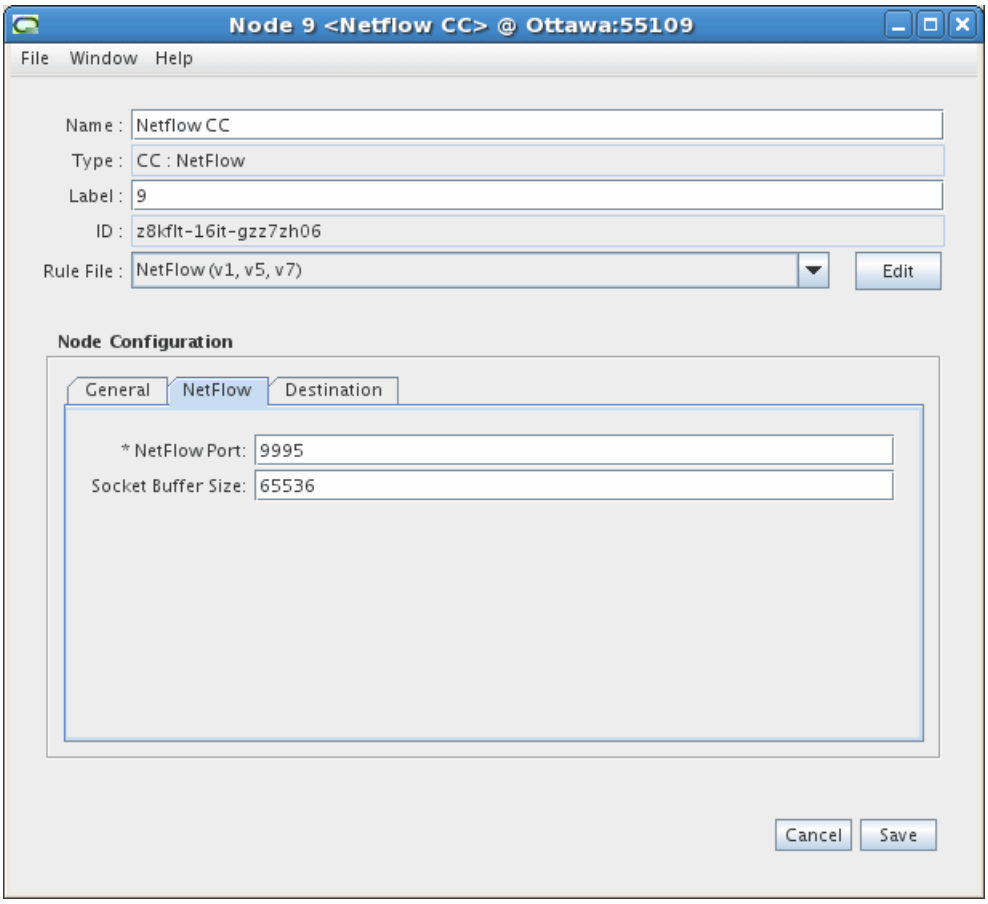


The node configuration window appears.

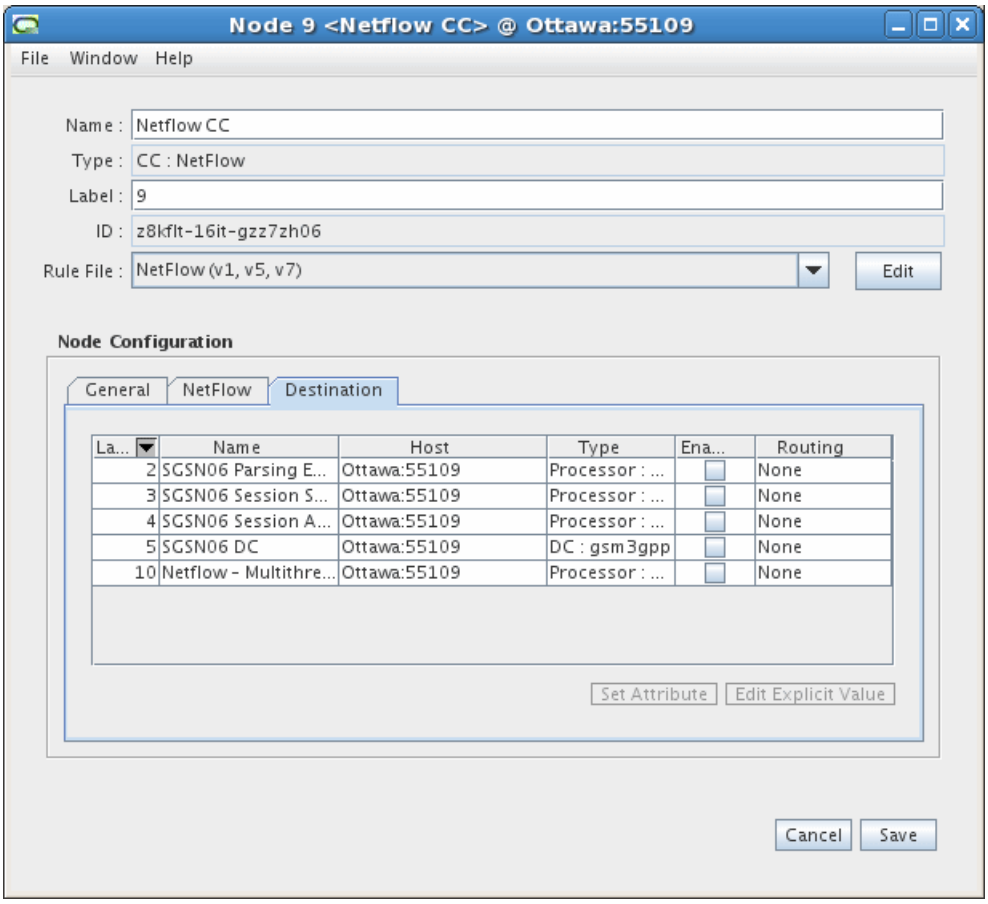
7. Enter a name for the CC in the **Name** field and accept the default rule file **NetFlow (v1, v5, v7)**.
8. On the **General** tab, refer to the online help for field definitions. The default field settings are shown in the sample below:



9. On the **NetFlow** tab, follow these guidelines to configure the settings:
   - **NetFlow Port** - Port number that NetFlow uses to report mediation data. Default is 9995.
   - **Socket Buffer Size** - UDP receiving socket buffer size. Value recommended is 65 536.



10. The **Destinations** tab displays the other nodes in the system and shows which node the current node is connected to, and the type of routing used. You do not need to configure any settings on this tab. An example is shown below. See the Offline Mediation Controller Online Help for more information on this tab.



11. Click **Save**.

Creating and configuring the NetFlow Session AP

To create and configure the NetFlow Session AP:

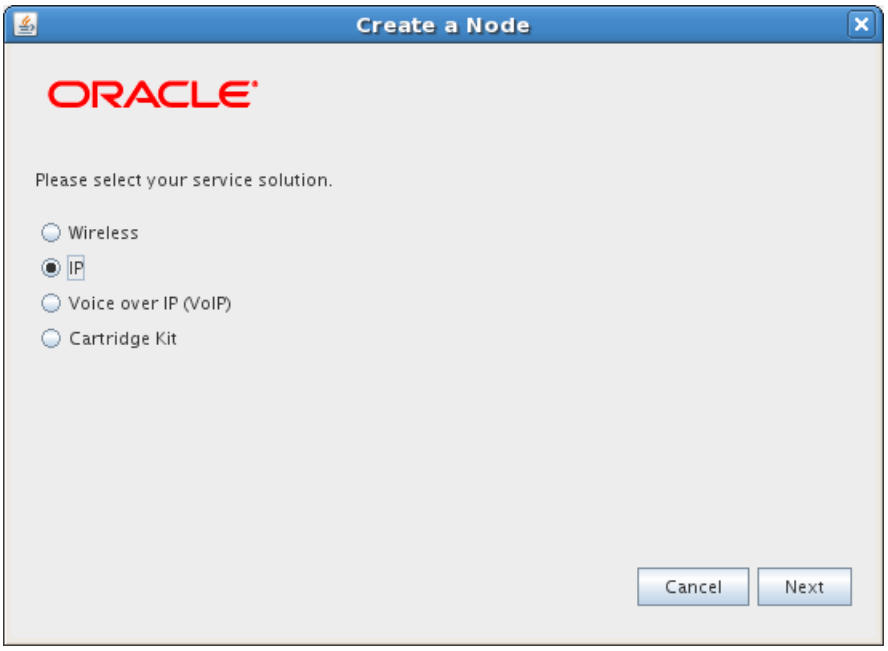
1. Log on to Offline Mediation Controller Administration Client.

   The Node Hosts & Nodes (logical view) screen appears.

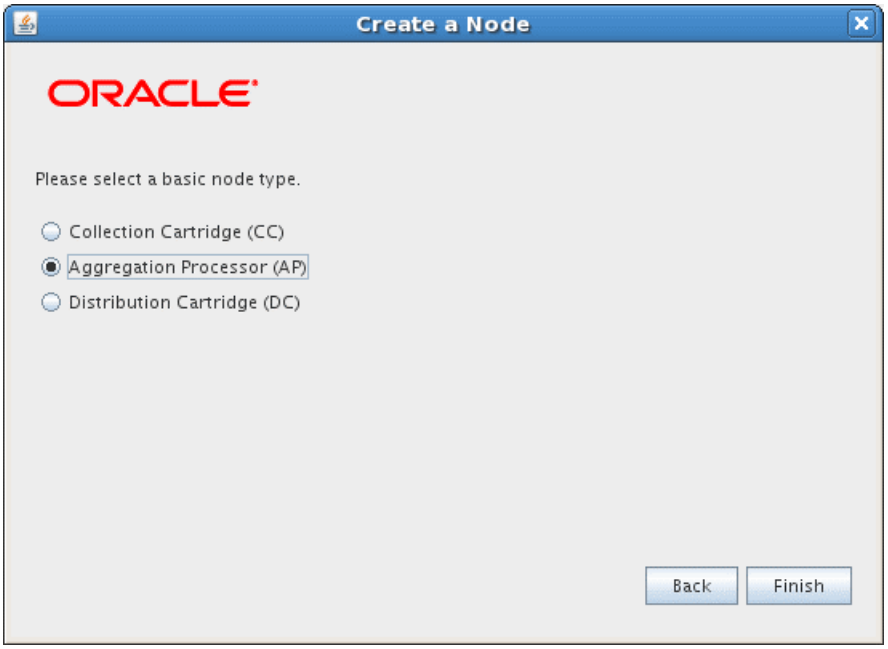
2. In the **Mediation Hosts** table, select a host.
3. In the **Nodes on Mediation Host** section, click **New**.

   The Create a Node dialog box appears.

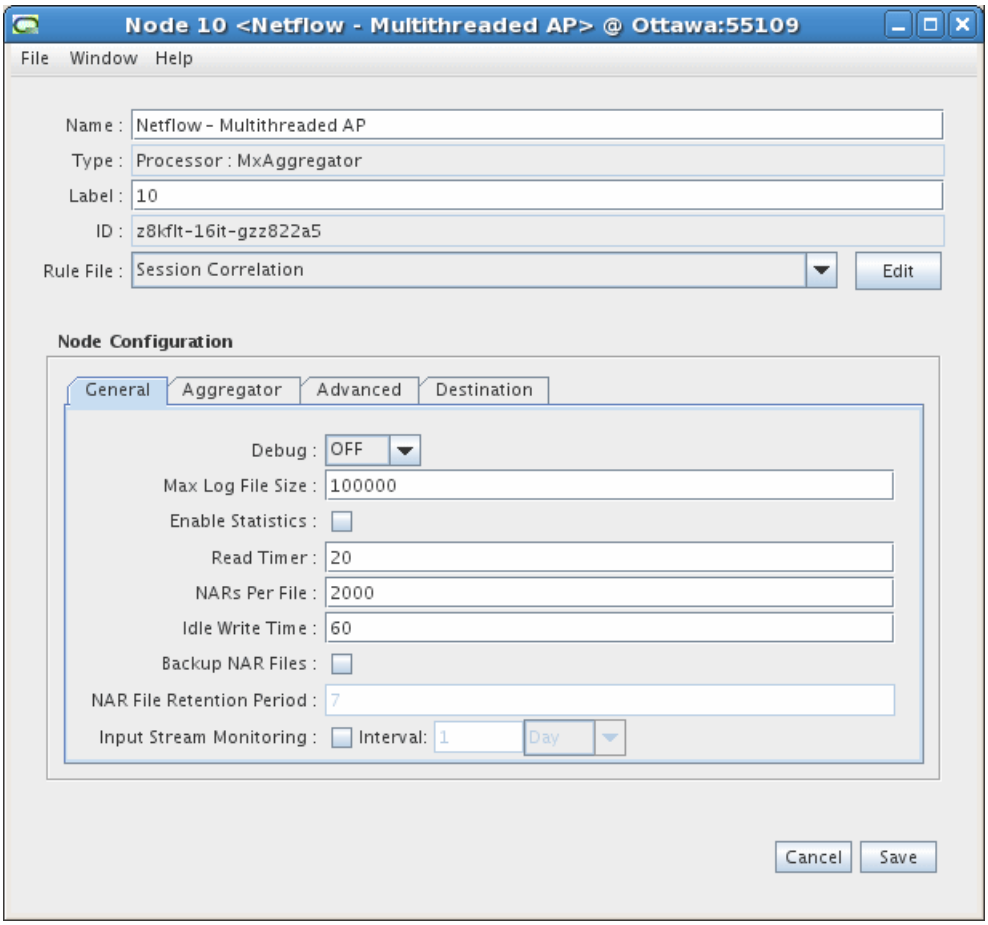
4. Select **IP** and click **Next**.



5. Select **Aggregation Processor (AP)** and click **Next**.

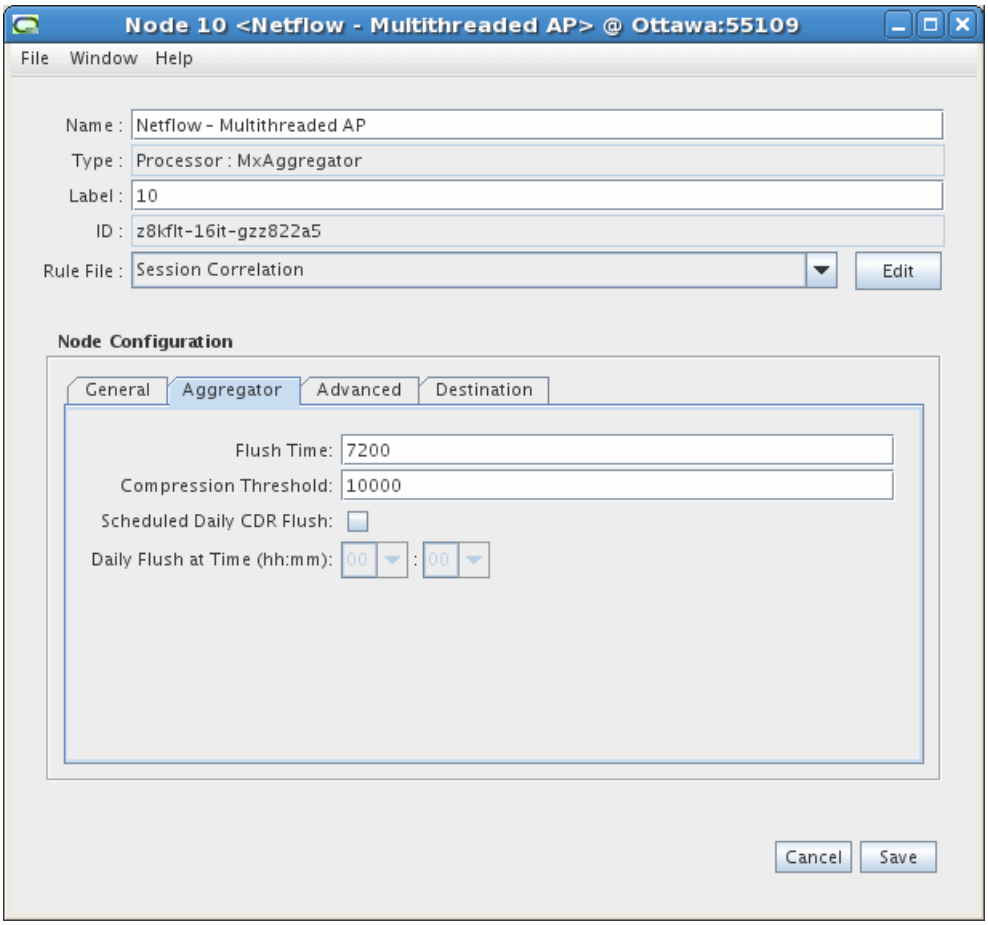


6. In the node configuration window, type a name for the cartridge in the **Name** field.
7. In the **Rule File** drop-down list, select **NetFlow v. 1, 5, 7 Session Aggregation**.
8. On the **General** tab, refer to the online help for field definitions. The default field settings are shown in the sample below:



9. On the **Aggregator** tab, accept the default field values or make changes where necessary. The field definitions are as follows:

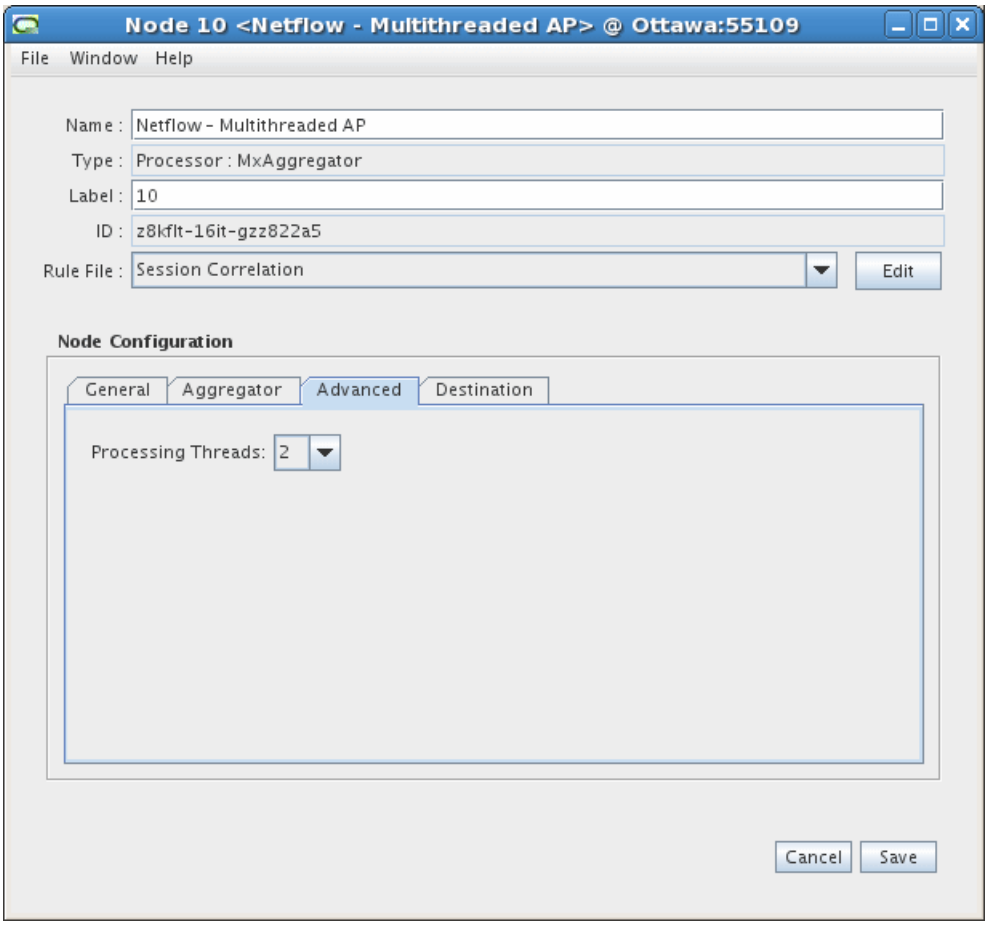
   - **Flush Time** - The interval, in seconds, at which the node sends aggregated NARs to the next node in the chain.
   - **Compression Threshold** - The number of stale records the node allows before compressing the aggregation table.
   - **Scheduled Daily CDR Flush** - If you select this checkbox, all records will be flushed at the specified time regardless of whether or not the aggregator is finished.
   - **Daily Flush at Time (hh:mm)** - Scheduled time that call records will be flushed.



10. On the **Advanced** tab, select the number of multiprocessor threads that can be created for the instance of the Aggregation Processor. Up to 16 threads can run concurrently to take advantage of the multiprocessor capability of the server (if available).

    With multithreading, a single Aggregation Processor configured in the Administration Client can process multiple threads at the same time.

    This allows numerous aggregation instances to run within a single AP. Each thread manages its own resources, including the aggregation table, and NPL processing instance.



11. The **Destinations** tab displays the other cartridges in the system and shows which cartridge the current cartridge is connected to, and the type of routing used. You do not need to configure any settings on this tab. See the Offline Mediation Controller Online Help for more information on this tab.
12. Click **Save**.

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Uninstalling the Cartridge Pack

This chapter contains information on the requirements for uninstalling Oracle Communications Offline Mediation Controller NetFlow Collection and Processing cartridge pack.

Uninstalling the Cartridge Pack from a Solaris or Linux Workstation

To uninstall the NetFlow Collection and Processing cartridge pack from a Solaris or Linux Workstation:

1. Go to the *OMC_Home*/**cartridges** directory, where *OMC_Home* is the directory in which Offline Mediation Controller is installed.
2. Run the following command, which removes the cartridge pack:

   ```
   rm netflow_r6_0.jar
   ```