

**Oracle® Communications  
Offline Mediation Controller**

Nortel DMS Operational Metrics Cartridge Pack User Guide

Release 6.0

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Oracle Communications Offline Mediation Controller Nortel DMS Operational Metrics 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 Nortel DMS Operational Metrics (OM) 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.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

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<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit  
<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing  
impaired.

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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.

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

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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 Nortel DMS Operational Metrics (OM) cartridge pack.

The Nortel DMS Operational Metrics (OM) cartridge pack provides functionality to gather files containing OM records from various telecom switches using file transfer protocol (FTP). The Offline Mediation Controller OM node chain does not modify OM records. The OM collection cartridge (CC) gathers files from switches and delivers them to one or more remote computers for archival or processing. The OM distribution cartridge (DC) receives DIRP encoded OM files from the CC and transfers these files to downstream applications using FTP Push or Pull.

### New Features

This section lists the new features.

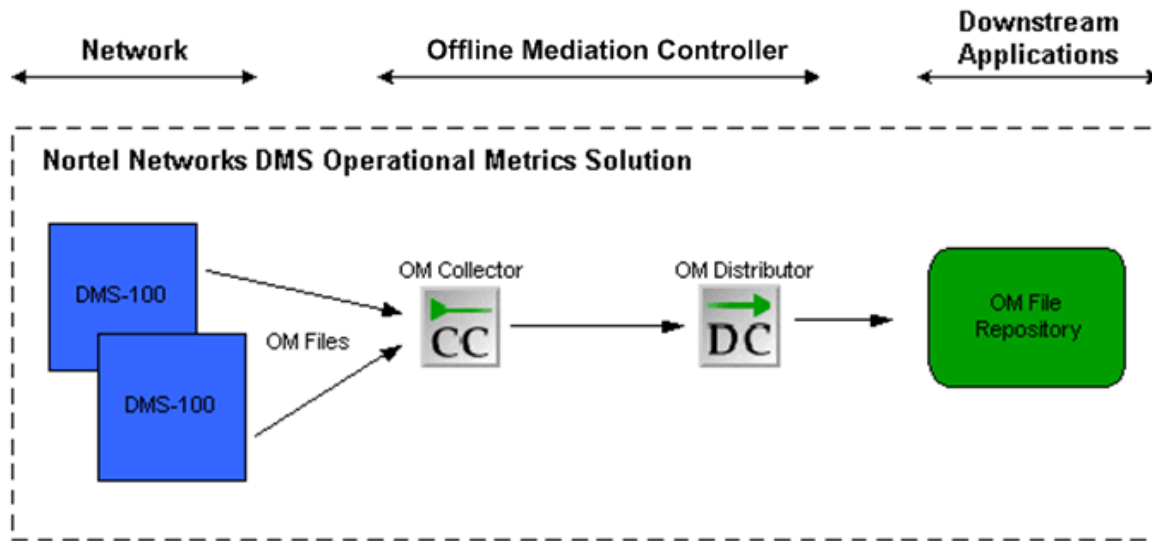
### Version 6.0.0

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

### Architecture

[Figure 2-1](#) displays the architecture of the Nortel DMS Operational Metrics solution.

Figure 2–1 Nortel DMS Operational Metrics Architecture



## 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. In addition, the following alarms are introduced in this cartridge pack:

Fault category: Resources

- **Specific Fault:** File read error. FTP Local output directory ("directory name") does not exist. FTP will fail.

## Behaviors

The following are the known behaviors for this cartridge pack:

- To process OM data, you can only use OM nodes.
- Input stream monitoring is not supported.

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## Installing the Cartridge Pack

This chapter contains information on the requirements for installing and setting up Oracle Communications Offline Mediation Controller Nortel DMS Operational Metrics (OM) 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 DMS OM 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 **om\_r6\_0\_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 Nodes

This chapter contains information on the requirements for creating and configuring the Oracle Communications Offline Mediation Controller Nortel DMS Operational Metrics (OM) nodes.

This chapter explains how to create and configure the OM Collector CC and OM Distributor DC.

There are two notes that apply to both the OM CC and OM DC:

- You must deploy the nodes on the same server. These nodes cannot be distributed like other nodes.
- In the Node Performance window, there are no counts associated with the nodes.

### OM Collector CC

The OM collection cartridge (CC) collects OM files from DMS-100 switches. The CC uses FTP to periodically connect and pull OM/DIRP encoded files from each switch. A single OM CC is capable of polling and pulling files from multiple switches. The polling period is a single value used for all switches that are assigned to the CC. On a single switch, OM files can be found on multiple volumes, so the OM CC polls multiple directories on each switch.

The OM CC retrieves files from one or more DMS switches, re-names the files and transfers them to local NM directory. The CC re-names the files in the following way:

- DMS file name: R040625145027OM
- OM CC file name: **AAA\_R040625145027OM.done**

The CC adds a three letter prefix, underscore and appends **.done** to the incoming file name. The three letters range in the following way: [A-Z][A-Z][A-Za-z]. The prefix differentiates input files from different IP addresses, port numbers and disk volume combinations. Note that the prefix can change if the device configuration is modified.

The CC does not parse or process the individual OM records. Therefore, the CC does not produce a NAR file and Offline Mediation Controller is unaware of the contents of the OM records.

In the event that the OM CC cannot communicate with a DMS-100, it attempts to re-establish a connection after a configurable delay. You can also configure the number of times the CC attempts to re-establish the connection before raising a critical alarm. The CC raises the alarm in both the GUI and via SNMP and logs the incident to the cartridges log file. At this point, the CC considers the poll to have failed and does not attempt to re-establish a connection with the switch until the next scheduled poll.

You can provision a backup OM CC as a means to recover from a polling failure rather than wait for the next scheduled poll. For example, if the log file of the primary OM CC indicates a polling failure, you can manually configure the backup OM CC to have a short polling interval, such as 5 minutes, for a specific switch. The backup OM CC will collect the files the primary OM CC failed to capture. After the files have been transferred successfully, you can stop the backup CC. This backup method can be used to manually initiate polls to switches instead of waiting a longer period for the primary OM CC to attempt to re-establish the connection.

To create and configure the OM Collector 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 **Voice of IP (VoIP)** and click **Next**.
5. Select **Collection Cartridge (CC)** and click **Next**.
6. Select **OM Collector** and click **Finish**.
7. In the node configuration window, type a name for the node in the **Name** field.
8. In the **Rule File** drop-down list, accept the default rule file, **OM Collector**.
9. On the **General** tab, accept the default field settings, as shown in the sample below.

Node 16 <OM Collector CC> @ Ottawa:55109

File Window Help

Name : OM Collector CC

Type : CC : OM

Label : 16

ID : z8kflt-16it-gzz9kh6o

Rule File : OM Collector Edit

**Node Configuration**

General Settings Device List

Debug : OFF

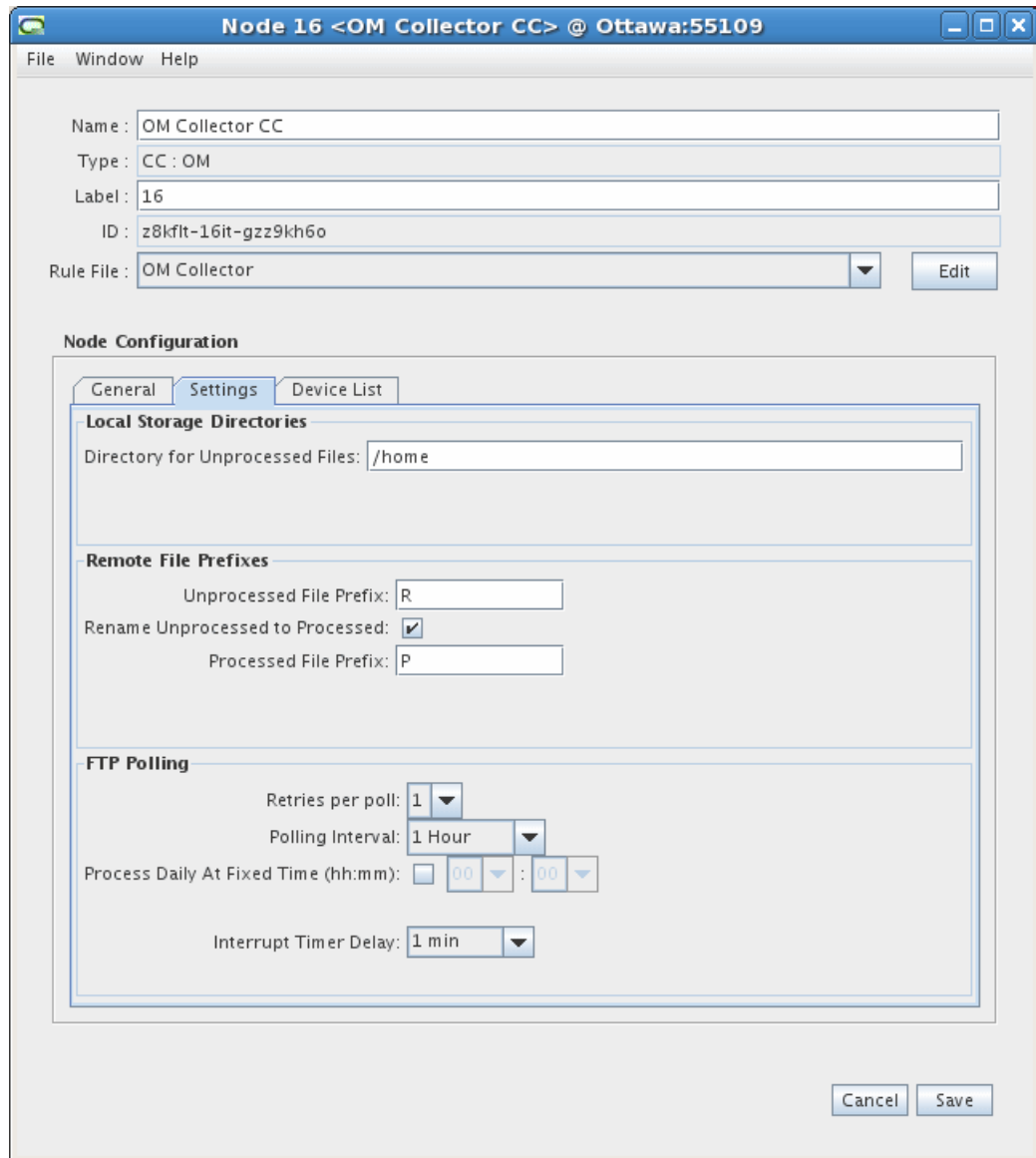
Max Log File Size : 100000

Enable Statistics :

Cancel Save

10. On the **Settings** tab, configure the field values as necessary. The field definitions are as follows:

- **Directory for Unprocessed Files:** files transferred by FTP are stored here for processing by the OM DC
- **Unprocessed File Prefix:** file prefix of unprocessed data files on the remote device
- **Rename Unprocessed to Processed:** Select this checkbox if you want the CC to rename the files on the remote device after successful transfer via FTP.
- **Processed File Prefix:** File prefix of processed files on the remote device
- **Retries per poll:** Number of additional FTP attempts for each polling interval
- **Polling interval:** Time interval between FTP polls
- **Process daily at fixed time:** Select this checkbox if you want the CC to align its polling schedule to a specific time of day. Set the time of day using the drop-down lists.



11. On the **Device List** tab, click **Add**.

The **Add Device** window appears. (If you are editing a device entry, the **Edit Device** window will appear, as shown below).

12. Configure the fields as required. The field definitions are as follows:

- **Name:** Enter a name for the device, if desired.
- **IP Address:** Enter the IP address of the device.
- **Port:** Enter the port you will connect to on the device.
- **FTP User ID:** Enter the user or account ID for the remote device.
- **Password:** Enter your password for the remote device.
- **Confirm Password:** Re-enter your password for the remote device.
- **Disk Volumes:** Enter the disk volume name and click **Add** to add it to the list. The disk volumes are non-delimited location names for files. Multiple disk volumes can be added per device.



**Add Device**

Name (optional): Vancouver

IP Address: 10 13 36 148

Port: 21

FTP User ID: oracle

Password: ●●●●●●

Confirm Password: ●●●●●●

Disk Volumes: volume 13

volume 13

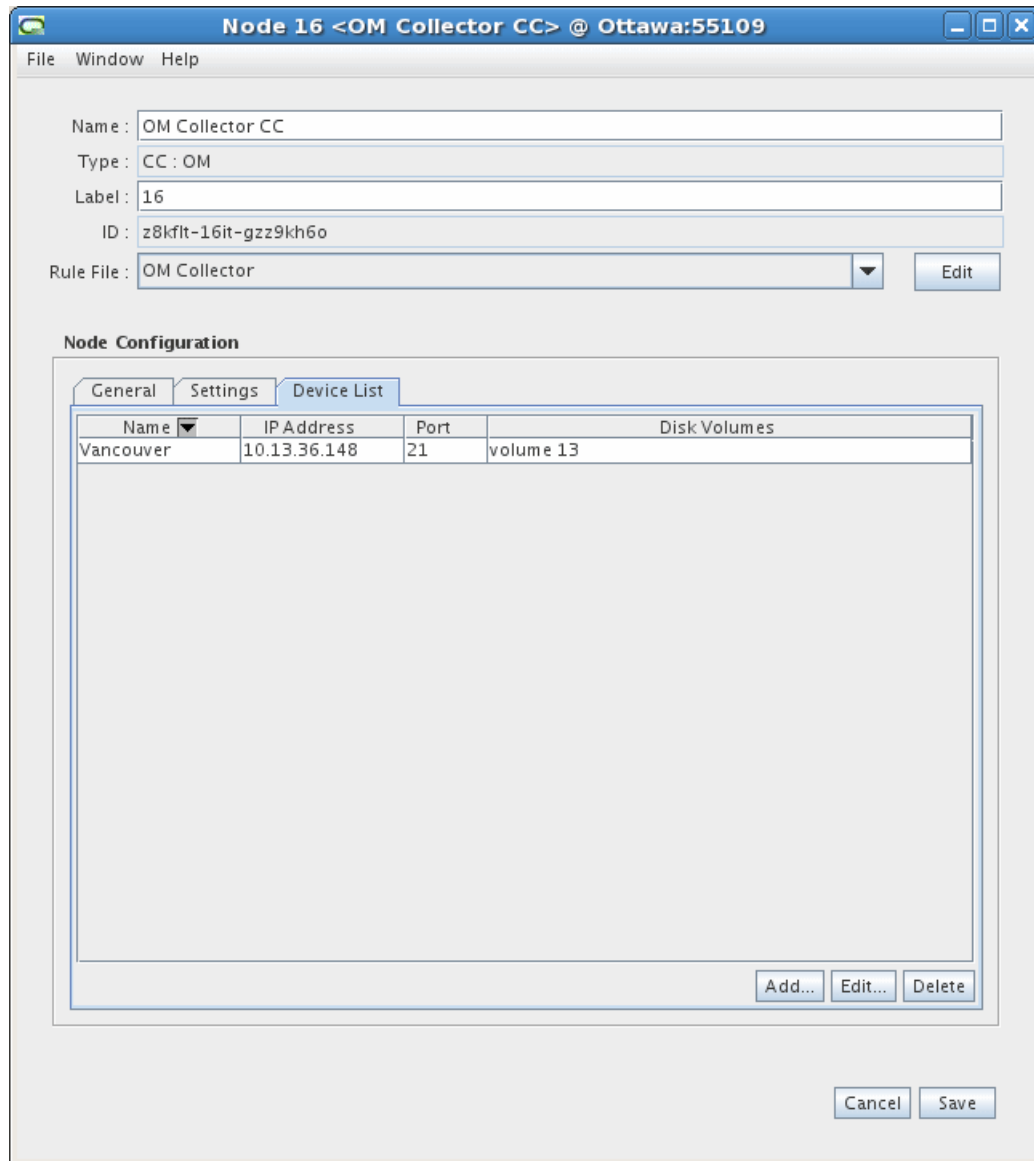
Add Delete

Save Cancel

**13.** Click the **Save** button.

The device appears in the list on the **Device List** tab.

Repeat steps 11 to 13 to add more devices to the list. You can also edit device profiles by clicking the **Edit** button or delete device profiles by clicking the **Delete** button.



14. Click **Save**.

## OM Distributor DC

The OM distribution cartridge (DC) receives DIRP encoded OM files from the CC and transfers these files to downstream applications using FTP Push or Pull. You can configure the DC to transfer files periodically. You can configure the FTP capability in the DC node configuration window.

To create and configure the OM Distributor DC:

1. In the Administration GUI, click **New**.
2. Select **Voice of IP (VoIP)** and click **Next**.
3. Select **Distribution Cartridge (DC)** and click **Next**.
4. Select **OM Distributor** and click **Finish**.
5. In the node configuration window, type a name for the node in the **Name** field.

6. In the **Rule File** drop-down list, accept the default, **OM Distributor**.
7. On the **General** tab, accept the default values, as shown in the sample below.

Node 17 <OM Distributor DC> @ Ottawa:55109

File Window Help

Name : OM Distributor DC

Type : DC : OM

Label : 17

ID : z8kflt-16it-gzz9mkz7

Rule File : OM Distributor Edit

**Node Configuration**

General FTP File Retention

Debug : OFF

Max Log File Size : 100000

Enable Statistics :

Read Timer : 20

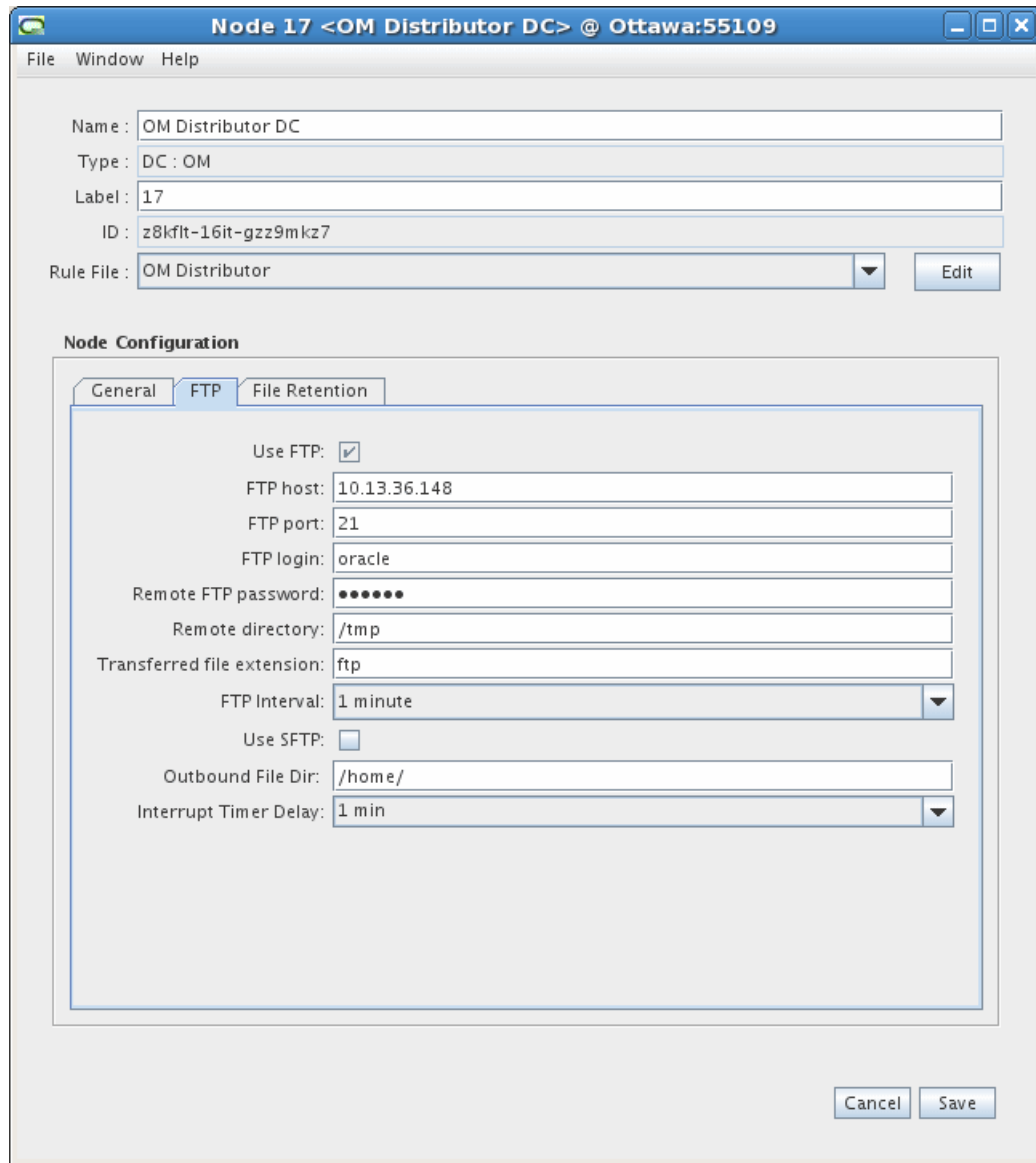
Backup NAR Files :

NAR File Retention Period : 7

Input Stream Monitoring :  Interval: 1 Day

Cancel Save

8. On the **FTP** tab, configure the settings as necessary to point to the remote location where the files will be stored. The **Outbound File Directory** field refers to the output directory of the CC. This value must match the OM CC output directory value. The directory string must terminate with a directory separator - '/' for UNIX or '\ ' for Windows.



9. Click **Save**.

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## Configuring the Node Chain

This chapter contains information on the requirements for creating and configuring the Oracle Communications Offline Mediation Controller Nortel DMS Operational Metrics (OM) node chain. For a diagram of the node chain, see "[Architecture](#)".

### OM Collection and Distribution

To configure the node chain for **OM** collection with **OM** file distribution, you must create and configure an OM CC and an OM DC. You can connect the nodes with any kind of routing and it will not impact the functionality of the nodes. The mechanism of communication for the nodes is the directory in which they store and retrieve files. You can configure this mechanism in the node configuration windows.

If you want the DC to output files, you must select the **Use FTP** checkbox and enter the correct FTP parameters for the remote device.

You can provision a backup OM CC as a means to recover from a polling failure rather than wait for the next scheduled poll. For example, if the log file of the primary OM CC indicates a polling failure, you can manually configure the backup OM CC to have a short polling interval, such as 5 minutes, for a specific switch. The backup OM CC will collect the files the primary OM CC failed to capture. After the files have been transferred successfully, you can stop the backup CC. This backup method can be used to manually initiate polls the switches instead of waiting a longer period for the primary OM CC to attempt to re-establish the connection.



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## Uninstalling the Cartridge Pack

This chapter contains information on the requirements for uninstalling Oracle Communications Offline Mediation Controller Nortel DMS Operational Metrics (OM) cartridge pack.

### Uninstalling the Cartridge Pack from a Solaris or Linux Workstation

To uninstall the Nortel DMS Operational Metrics 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 om_r6_0_0.jar
```

