SMDI Voice Mail Integration

Simplified Message Desk Interface (SMDI) defines a way for a phone system to provide voice-messaging systems with the information that the system needs to intelligently process incoming calls. Each time that the phone system routes a call, it sends an SMDI message through an EIA/TIA-232 connection to the voice-messaging system that tells it the line that it is using, the type of call that it is forwarding, and information about the source and destination of the call.

The SMDI-compliant voice-messaging system connects to Cisco Unified Communications Manager in two ways:

- Using a standard serial connection to the Cisco Unified Communications Manager
- Using POTS line connections to a Cisco analog FXS gateway

This section covers the following topics:

- SMDI Configuration Checklist, page 30-1
- SMDI Voice-Messaging Integration Requirements, page 30-2
- Port Configuration for SMDI, page 30-3
- Cisco Messaging Interface Redundancy, page 30-4
- Where to Find More Information, page 30-5

SMDI Configuration Checklist

Simplified Message Desk Interface (SMDI) defines a way for a phone system to provide voice-messaging systems with the information that the system needs to intelligently process incoming calls. Each time that the phone system routes a call, it sends an SMDI message through an EIA/TIA-232 connection to the voice-messaging system that tells it the line that it is using, the type of call that it is forwarding, and information about the source and destination of the call.

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Table 30-1 provides an overview of the steps that are required to integrate voice-messaging systems that are using SMDI. For more information, see the “Where to Find More Information” section on page 30-5.
SMDI Voice-Messaging Integration Requirements

The Cisco Messaging Interface service allows you to use an external voice-messaging system with Cisco Communications Manager Release 3.0 and later.

The voice-messaging system must meet the following requirements:

- The voice-messaging system must have a simplified message desk interface (SMDI) that is accessible with a null-modem EIA/TIA-232 cable (and an available serial port). To connect the EIA/TIA-232 cable to Cisco Unified Communications Manager, use a Cisco-certified serial-to-USB adapter.
- The voice-messaging system must use analog ports for connecting voice lines.
- The Cisco Unified Communications Manager server must have an available serial or USB port for the SMDI connection.
- A Cisco Access Analog Station Gateway, Cisco Catalyst 6000 24-port FXS gateway, Cisco VG200 gateway, or Cisco Catalyst 6000 8-port T1 gateway that is configured with FXS ports must be installed and configured.

<table>
<thead>
<tr>
<th>Configuration Steps</th>
<th>Related Procedures and Topics</th>
</tr>
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<tbody>
<tr>
<td>Step 1</td>
<td>Add and configure gateway ports. If you are configuring an Octel system and you are using a Cisco Catalyst 6000 24 Port FXS Analog Interface Module or AST ports, make sure to set the Call Restart Timer field on each port to 1234.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Create a route group and add the gateway ports that you configured in Step 1 to the route group.</td>
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<tr>
<td>Step 3</td>
<td>Create a route list that contains the route group that was configured in Step 2.</td>
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<tr>
<td>Step 4</td>
<td>Create a route pattern.</td>
</tr>
<tr>
<td>Step 5</td>
<td>Activate, configure, and run the Cisco Messaging Interface service.</td>
</tr>
<tr>
<td>Step 6</td>
<td>Configure Cisco Messaging Interface trace parameters.</td>
</tr>
<tr>
<td>Step 7</td>
<td>Configure your voice-messaging system and connect the voice-messaging system to Cisco Unified Communications Manager with an EIA/TIA-232 cable. To connect the EIA/TIA-232 cable to Cisco Unified Communications Manager, use a Cisco-certified serial-to-USB adapter.</td>
</tr>
</tbody>
</table>
You must ensure that gateways are configured in a route pattern. See the “Route Pattern Configuration” chapter in the Cisco Unified Communications Manager Administration Guide for more information.

Be aware that you must configure the following Cisco Messaging Interface service parameters per node if you use the CMI service to deploy multiple third-party voice-messaging systems in the same Cisco Unified Communications Manager cluster.

- CallManager Name
- Backup CallManager Name
- Voice Mail DN
- Voice Mail Partition
- Alternate DN
- Alternate DN Partition

After you configure these parameters in the Service Parameters Configuration window, a message displays that warns that you must configure the value on each node in the cluster to achieve clusterwide support.

Port Configuration for SMDI

Previous releases of Cisco Unified Communications Manager required a specific configuration for voice-messaging integration by using the SMDI and the Cisco Messaging Interface. This older configuration method for FXS ports required each individual port of an analog access gateway (Cisco AS-2, Cisco AS-4, Cisco AS-8, or Cisco Catalyst 6000 24 Port FXS gateway) to be explicitly configured as a separate entry in a route group. The relative position within the route list/route group of each analog access port determined the SMDI port number that the Cisco Messaging Interface reported.

For Cisco Communications Manager Release 3.0(5) and later releases, you can configure the SMDI port number through Cisco Unified Communications Manager Administration.

If you use the Cisco Catalyst 6000 8-port T1 gateway (6608) to interface with voice-messaging system, you must configure the SMDI base port for each T1 span.

To use the new SMDIPortNumber configuration, perform the following steps:

1. Modify each analog access port that connects to the voice-messaging system and set the SMDIPortNumber equal to the actual port number on the voice-messaging system to which the analog access port connects.

   With this first step, you do not need to change any route lists/route groups. The newly configured SMDIPortNumber(s) override any existing route list/route group configuration that was set up for the devices that connect to the voice-messaging system.

2. To take advantage of reduced Cisco Unified Communications Manager signaling requirements with this new configuration, change each analog access device that is in a route group that was set up for the older method of configuration from multiple entries that identify individual ports on the device to a single entry in the route group that identifies “All Ports” as the port selection.

   The selection order of each of these device entries differs or does not differ.
Cisco Messaging Interface Redundancy

Most voice-messaging systems that rely on an EIA/TIA-232 serial cable (previously known as a RS-232 cable) to communicate with phone systems only have one serial port. You can achieve Cisco Messaging Interface redundancy by running two or more copies of the Cisco Messaging Interface service on different servers in a Cisco Unified Communications Manager cluster and using additional hardware including a data splitter that is described later in this section.

Each copy of Cisco Messaging Interface connects to a primary and backup Cisco Unified Communications Manager and registers to the Cisco Unified Communications Manager by using the same VoiceMailDn and VoiceMailPartition service parameter values. The Cisco Messaging Interface with the higher service priority (the active Cisco Messaging Interface service) handles the SMDI responsibilities. If this Cisco Messaging Interface encounters problems, another one can take over. Figure 30-1 illustrates one of many layouts that provide Cisco Messaging Interface redundancy.

Figure 30-1  Cisco Messaging Interface Redundancy

To achieve Cisco Messaging Interface redundancy, you must have a device such as the data splitter as shown in Figure 30-1 to isolate the SMDI messaging from the various Cisco Messaging Interface services. You cannot use an ordinary Y-shaped serial cable to combine the EIA/TIA-232 streams together.
The data splitter that you connect to your voice-messaging system, such as the B&B Electronics modem data splitter (models 232MDS and 9PMDS), must have the following characteristics:

- High reliability
- Bidirectional communication
- Minimal transmission delay
- No external software support (desired)
- No extra EIA/TIA-232 control line operations (desired)

The 232MDS includes two DB25 male ports and one DB25 female port. The 9PMDS represents a DB9 version of this modem data splitter. These switches enable Cisco Messaging Interface redundancy with the following limitations when you set the ValidateDNs Cisco Messaging Interface service parameter to false:

- Two Cisco Messaging Interfaces cannot transmit SMDI messages simultaneously. Under extreme circumstances, you may experience network failures that break your Cisco Unified Communications Manager cluster into two unconnected pieces. In the unlikely event that this occurs, both copies of Cisco Messaging Interface may become active, which leads to the possibility that they may simultaneously transmit SMDI messages to the voice-messaging system. If this happens, the collision could result in an erroneous message to the voice-messaging system, which may cause a call to be mishandled.

**Where to Find More Information**

**Additional Cisco Documentation**

- SMDI Configuration Checklist, page 30-1
- SMDI Voice-Messaging Integration Requirements, page 30-2
- Port Configuration for SMDI, page 30-3
- Cisco Messaging Interface Redundancy, page 30-4
- Where to Find More Information, page 30-5
- Service Parameter Configuration, Cisco Unified Communications Manager Administration Guide
  - Cisco Unified Serviceability Administration Guide
  - Cisco Unified Communications Solution Reference Network Design (SRND)