Cisco Automatic Recording Channel Manager
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Documentation Update Notice: 10/21/08

VPI is getting ready to release several new changes and enhancements to this document. These changes will be coming soon in the next few weeks.

Referenced Guides
Other available guides referenced or used in conjunction with this manual are:

Activ! Voice Configuration Guide 4.0
VPConfig assists you with the administration and configuration of the Activ! Voice server also referred to as the Voice Print server. Activ! Voice server version 4.0 runs as a service and maintains the same functional features as version 2.8.3.10. Additionally, version 4.0 has a 192 channel capacity, versus the 96 channels limitation of version 2.8.3.10.

Cisco® Unified Communications Manager Features and Services Guide for Cisco® Unified Communications Manager Business Edition Release 6.0(1).
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Introduction

The Cisco® Automatic Recording Channel Manager is a software only solution utilizing the built in recording options in the Cisco® Call Manager.

This document explains how to provision the Call Manager for automatic recording, how to configure the TAPI connection (from a Cisco® and VPI standpoint) and how to configure VPI for call recording.

Automatic Call Recording Data Flow

During an automatic recording session, the following steps take place:

1. A customer calls into the call center.
2. The call routes to the agent. The agent answers the call. The agent IP phone starts to exchange media streams with the customer.
3. Because the agent line appearance is configured for automatic recording, the recording session for the media streams automatically gets triggered. Cisco® Unified Communications Manager first makes a recording call to the Built-in Bridge (BIB) of the agent IP phone for the agent voice.
4. Cisco® Unified Communications Manager makes the second recording calls to the BIB of the agent IP phone for the customer voice.
5. The Activ! Voice recorder receives and answers the recording call setup messages from Cisco® Unified Communications Manager for the agent voice in SIP protocol. The agent IP phone sends the agent voice stream to the recorder.
6. The recorder receives and answers the recording call setup messages from the Cisco® Unified Communications Manager for the customer voice in SIP protocol. The agent IP phone starts to send the agent voice stream to the recorder.
7. There is an active TAPI connection between the Recorder and the Call Manager that allows VPI to capture the call details.
Requirements

For VPI:

- Activ! Voice Version - 4.2.xx.
- TAPI Connection between VPI and the Cisco® Call Manager for data events.

NOTE: Software recording solution only, does not require a voice card.

For Cisco®:

- Cisco® Unified Call Manager 6.1.2.
- Cisco® Unified Communications Manager TSP (TAPI) 6.1(2.4).
- An application user that has the correct rights to control a phone device (see page 15 of this document).
- A Call Manager configured with a recording profile and correctly setup with a SIP trunk pointed at the VPI Logger. (see page 6 of this document).
Cisco® Call Manager Automatic Call Recording Configuration

Prerequisite—this section requires a Cisco® Call Manager Administrator to properly configure the recording features that VPI requires for Automatic Call Recording.

1. Create a recording Profile. Click Device > Device Settings > Recording Profile, and then click Add New.
   - **Name**—Enter a name to identify the recording profile. VPI recommends using VPIRecordingProfile1-10.
   - **Recording Calling Search Space**—Choose the CSS that contains the partition of the route pattern that is associated with the SIP trunk that is configured for the recorder.
   - **Recording Destination Address**—Enter the DN of the recorder that associates with this recording profile. Any unused DN on the CUCM can be used. Please provide this DN to the installation technician.

2. Create a **SIP Trunk** that points to the recorder. Click Device > Trunk, and then click Add New.
   - **Trunk Type**—SIP Trunk
   - **Device Protocol**—SIP
   - Click Next

3. Device Information:
   - **Device Name**—Unique identifier for the trunk. VPI recommends using VPIsipTrunk1-10.
   - **Device Pool**—Choose the appropriate device pool for the trunk.
4. **SIP Information:**

**Destination Address**—This address represents the remote SIP peer with which this trunk will communicate with. This IP will be added to VPI’s VPConfig software in the Software RTP field as well as adding this IP to an available NIC on the Logger.

Use the defaults for all other required fields and then click **Save**. Please provide all SIP Trunk IP’s to the installation technician.

5. Create a **Recorder Route Group**. Click **Call Routing > Route/Hunt > Route Group**, and then click **Add New**.
   - **Route Group Name**—Enter a Unique Identifier for the Recorder Route Group. VPI recommends using **VPIRecorderRouteGroup1-10**.
   - **Distribution Algorithm**—Top Down

Highlight the newly created **SIP Trunk** and then click **Add to Route Group** and verify that the **SIP Trunk** is now in the **Selected Devices**, and then click **Save**.
6. Create a new Route List. Click Call Routing > Route/Hunt > Route List, and then click Add New.

- **Name**—Enter a Unique Identifier for the Route List. VPI Recommends VPIRouteList1-10.
- Click Save.

- **Route Group**—Select the newly created Route Group.
- Click Save.

Your Route List is now created.
7. Create a new Route Pattern. Click Call Routing > Route/Hunt > Route Pattern, and then click Add New.

- **Route Pattern**—Enter the DN of recording profile that was created in Step 1.
- **Gateway/Route List**—Select the newly created Route List.
- Click Save.

8. Set the recording Tone Service Parameters (optional) These parameters will alert customers that the call is being recorded. Click System > Service Parameters, select the Server, and then select the service Cisco® Call Manager.

9. Phone Setup. Click Device > Phone then select the phone you want to record. The Built-In Bridge (BIB) must be turned on.
10. Select a Recording Profile for the phone you want to record. From the phone configuration page, click the DN line key that you want recorded. For this example, we are using DN 5600.

11. Highlight the associated Device and then click Edit Line Appearance.

12. Scroll down and set the recording options.

- **Recording Option**—VPI Supports Automatic Call Recording.
- **Recording Profile**—Select the newly created Recording Profile.
- **Monitoring Calling Search Space**—Select the CSS that was created in Step 1.
13. Restart the **SIP Trunk**, and then click **Device > Trunk**: 

- Click on the checkbox next to your **SIP trunk line**, and then click **Reset** on the top menu of the **Device Restart** window.

- **Click Restart** and, if Voice Print is up and running, perform some test calls to verify that your SIP Trunk line is working properly.
Cisco® Failover Configuration

NOTE: Prior to performing Step 14, it is critical that Logger 1 is up and operational.

The following steps are used in conjunction with two VPI Loggers. Logger 1 is always actively recording while Logger 2 is on standby if Logger 1 happens to fail or if Activ! Voice is down. This feature can be used in conjunction with the VPI SIP Recorder Rollover feature (discussed on page 24).

14. Create a new SIP trunk that points to the failover system. Click Device > Trunk, and then click Add New.
   • **Trunk Type**—SIP Trunk.
   • **Device Protocol**—SIP.
   • Click Next.

15. **Device Information:**
   • **Device Name**—Enter a Unique Identifier for the trunk. VPI recommends using VPIFailoverTrunk1-10.
   • **Device Pool**—Choose the appropriate Device Pool for the trunk.
16. SIP Information:

- **Destination Address**—This address represents the failover remote SIP peer with which this trunk will communicate with. This IP will be added to VPI's failover server's VPConfig software in the *Software RTP field* as well as adding this IP to an available NIC on the Logger.

Use the defaults for all other fields and then click Save.

17. Navigate to your existing Recorder Route Group. Click Call Routing > Route/Hunt > Route Group and select the Recorder Route Group that you already created.

18. Verify that your distribution algorithm is set for *Top Down*.

19. Under the option ‘Find Devices…’, highlight your FailOverTrunk and then click Add to Route Group.

20. The FailOverTrunk has now been added as a current Route Group Member.

*NOTE: In Step 5 we changed the algorithm for Top Down, these means that whichever trunk is on top will be the first trunk that the PBX will try to route the call to. If that first trunk is not available the PBX will try the second trunk.*

- Click Save.
21. Restart the SIP Trunk. Click Device > Trunk:

Click on the checkbox next to your FailOverTrunk SIP trunk line, than click Reset Selected on the top menu.

Click Restart and perform some test calls to verify that your failover line is working.
Cisco® Call Manager TAPI Configuration

Prerequisite—this section requires a Cisco® Call Manager Administrator to properly configure the recording features that VPI requires for Automatic Call Recording.

1. Connect to the Call Manager and log into Cisco® Unified CM Administration.

2. Select User Management > Application User.

3. Click Add New.

4. Create the user vptapi with a password of vptapi.


6. Device Information:

   From here you will select which devices (phones) this VPTapi user can control. You will need to select all the phones that are going to be recorded.

   NOTE: Failure to add all the phones will result in loss of data events.

7. CAPF Info can be left blank.

8. Permissions Info, add the VPTapi user to the following Groups.

9. Click Save and verify that the Groups look correct for this user.
Voice Print Side TAPI Configuration

1. Connect to the Cisco® Unified Call Manager Administration page (you will need help from the Cisco® Network Administrator). Select Application and then Plugins. Download and install the Cisco® Telephony Service Provider to the VPI Voice Logger.

   ![Cisco TSP Installation](image)

2. Use all the defaults until asked about the TSP setup. Select No and only install one instance of TAPI. Restart the Logger when prompted.

3. From the Logger, go to the Control Panel and select Phones and Modems and then click Advanced. You should see Cisco® TSP001.tsp in the providers list, if not, click Add and then select the Cisco® TSP001.tsp option.

   ![Phone and Modem Options](image)
4. Highlight Cisco® TSP001.tsp and click configure.

![Image of Cisco Unified Communications Manager with TSP tab selected]

5. Click the User Tab. Add the vptapi username and password that was created in the Call Manager TAPI setup.

![Image of Cisco Unified Communications Manager with User tab and vptapi credentials]

**Voice Print Side TAPI Configuration**
6. Click the **CTI Manager Tab**. Under the **Primary CTI Manager Location**, select the **IP Address** option and enter the IP of the server that is running the TAPI service, this is typically the **Cisco Call Manager IP**. If you have a backup TAPI service running on a separate server, use the **Backup CTI Manager Location** selection to identify this server.

7. Click the **Security Tab**. Add the **IP** of the server that is running the **TFTP Service** this is typically the **Cisco Call Manager IP**.
8. Click the Trace Tab. Add CTI and TSPI as a Trace option, and then click OK and restart the Logger.
Troubleshooting TAPI

You can use the application LW.exe located in C:\clogger to verify which phones are seen by the TAPI connection. Launch LW.exe.

Click on the TAPI Line Capabilities drop down arrow to view all devices that are being seen by TAPI. The SEPxxxxxxxxxxxx line items are the phone descriptions used by Cisco®, the x’s are the MAC Address. The numbers to the right of the phone description are the associated phone extension.

If the phone is not listed you will not get data events for that phone. You will need to go back to the TAPI user setup and insure that the phone is listed as a Controlled Device and or verify your TAPI configuration. You can also go to C:\TEMP and view the TAPI configuration log.

NOTE: After making any changes, or if you have lost the link to the TAPI service, you will need to restart the Logger to insure that the TAPI service link has been reestablished.
VPI Install and Configuration Requirements

1. Install Activ! Voice 4.2.x.x and above.
2. VPSerial 8/18/08 version or above - use Channel Manager 26 'Cisco® SIP'.
3. Select VPConfig Channel Manager > Server Local Host Tab.
   - Check the Software RTP button.
4. Select VPConfig > Channel Manager > Database—add all available DB fields.
5. Select VPConfig > Channel Manager > Software RTP:

The IP Address in the Software RTP Setup for the Automatic Call Recording solution is the Destination Address of the SIP trunk that is configured for recording (reference the Call Manager Configuration Settings beginning on page 6 of this document).

- Starting Port—40000.
- Idle Timeout—5.
- InterPacket Delay—100.

IMPORTANT: You will need to add the IP address and Gateway to an open NIC on the Logger and insure that the Logger can ping both the Cisco® Unified Call Manager and the Cisco® VOIP phones.

6. Select VPConfig > Channel Manager > Tapi:

The TAPI Server Machine Name is the IP of the Cisco® Call Manager (Ping the IP to insure network connectivity). All other fields can be left blank.
7. Select VPConfig > Channel Manager > SIP:

The SIP Server Address needs to match your Software RTP IP Address from Step 5.

Setup is complete, perform test calls to insure setup is correct and that calls are recording correctly.
SIP Recorder Rollover Address

VPI created the **SIP Recorder Rollover** feature for multi-logger environments to ensure that all calls are given the chance to be recorded. If the **max channel count** on a Logger is reached, VPI has the ability to send that call to another Logger with unused channels. **SIP Recorder Rollover** is different from Cisco® Failover (discussed on page 12) and will not roll calls over to the Logger if the system is down, however, both options can be implemented simultaneously for maximum protection.

**NOTE: This feature is only used when the VPI max channel count is reached.**

Rollover is configured using **VPConfig > Channel Manger > SIP**.

In this example, the address is "4769@10.0.0.250" 4769 which equals the DN assigned to the recording profile. 10.0.0.250 equals the IP of the second Logger that you want calls to rollover too. Keep in mind that the destination Logger must be configured for Cisco® Automatic Recording.

### VPI Event Log Messaging for SIP Rollover

If the **max channel count** is reached on a Logger, and Rollover is not enabled, you will get this error message and the call will not be recorded:

```
No Channel Available for Record Request. Sending SIP Decline. Call Not Recorded.
```

If **SIP Recorder Rollover** is enabled, and the **max channel count** is reached, you will get this warning message:

```
No Channel Available for Record Request. Sending SIP Moved Temporarily to: 4769@10.0.0.250.
```

If the **max channel count** is reached on all Loggers, and Rollover is enabled, you will get the following error message:

```
No Channel Available for Record Request. Sending SIP Decline. Call Not Recorded.
```
## Revision History

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<td>10/15/08</td>
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<td>Rev B</td>
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