



## RTP Configuration Guide

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**Americas Headquarters**

OAISYS

7965 South Priest Drive, Suite 105

Tempe, AZ 85284

USA

[www.oaisys.com](http://www.oaisys.com)

(480) 496-9040



## OVERVIEW

OAISYS RTP Capture listens for voice packets across a network, and then uses this data to create voice recordings on the recording server. The OAISYS call recording system monitors the data network for voice packets as they travel across the LAN/WAN and to and from the IP PBX. This packet sniffing technology lets the call recording system identify and extract only the voice packets for recording.

This document will guide a technician through the configuration of the OAISYS Recording Solution to record calls via RTP Packet Capture (VoIP Generic).

## BENEFITS

The benefits of using IP Packet Sniffing include:

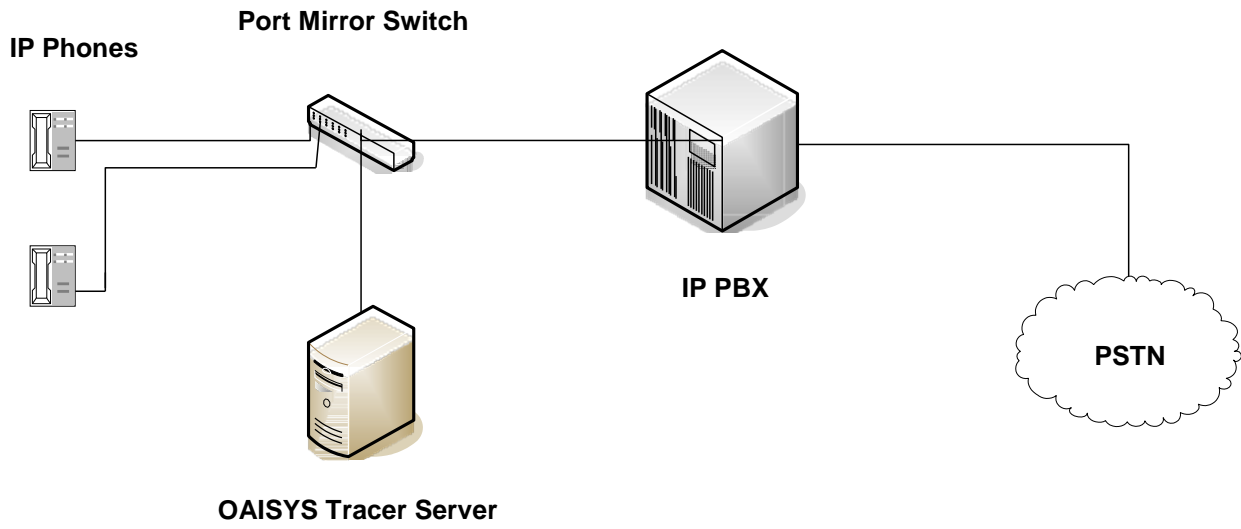
- No CTI/OAI Required for VOX recording
- Can record more configurations
- IC calls can be recorded
  - ShoreTel specific
- Calls that originate on SIP Trunks can be recorded
- Station side recording
- Mitel 33xx phones can be recorded on the Mitel 5000 PBX



## REQUIREMENTS

- OAISYS Recording Server with Version 6.0 or later
- VoIP Call Recording Licensing
- Second NIC Card in the OAISYS Server
- Managed Network Switch supporting Port Mirroring
- Point-to-point conversations outside of a LAN requires a managed switch
  - May need multiple ports mirrored
- Static IP address/Static MAC address
- Encryption must be disabled
- Hold music may be recorded separately from voice recordings
- Whisper announcements will not be recorded
- OAISYS supports G.711 or G.729a
  - NOTE:** Silence Suppression is not supported
    - However, calls using G.711 and G.729 streams simultaneously cannot be recorded (*this is a rare configuration*).
- If configured to use VAD mode (*rare*), separate recordings may exist due to silence detection.
- Hot Desking is only supported with VOX IP Packet Sniffing (Mitel).
- Conference Calls: if an IP switch did NOT combine the voice packets to/from two or more conference devices, the voice packets for one or more parties in the conference will be missing.
  - One example is the way ShoreTel streams voice packets in a third party conference call.
- Mitel 3300 phones set up in a branch office configuration (see Mitel section).

DIAGRAM





## MITEL 3300 CONFIGURATION

### 53XX PHONES ON 5000 PBX

For configurations where 3000 IP Keysets must be recorded on the 5000 IP PBX, the following must be considered:

- OAISYS can be configured to record 5000 keysets and 3300 IP Keysets off of a 5000 PBX using IP Packet Sniffing when all keysets are contained within a firewall.

If two or more 3300 IP Phones are on the same LAN outside of the firewall, this is considered a branch office.

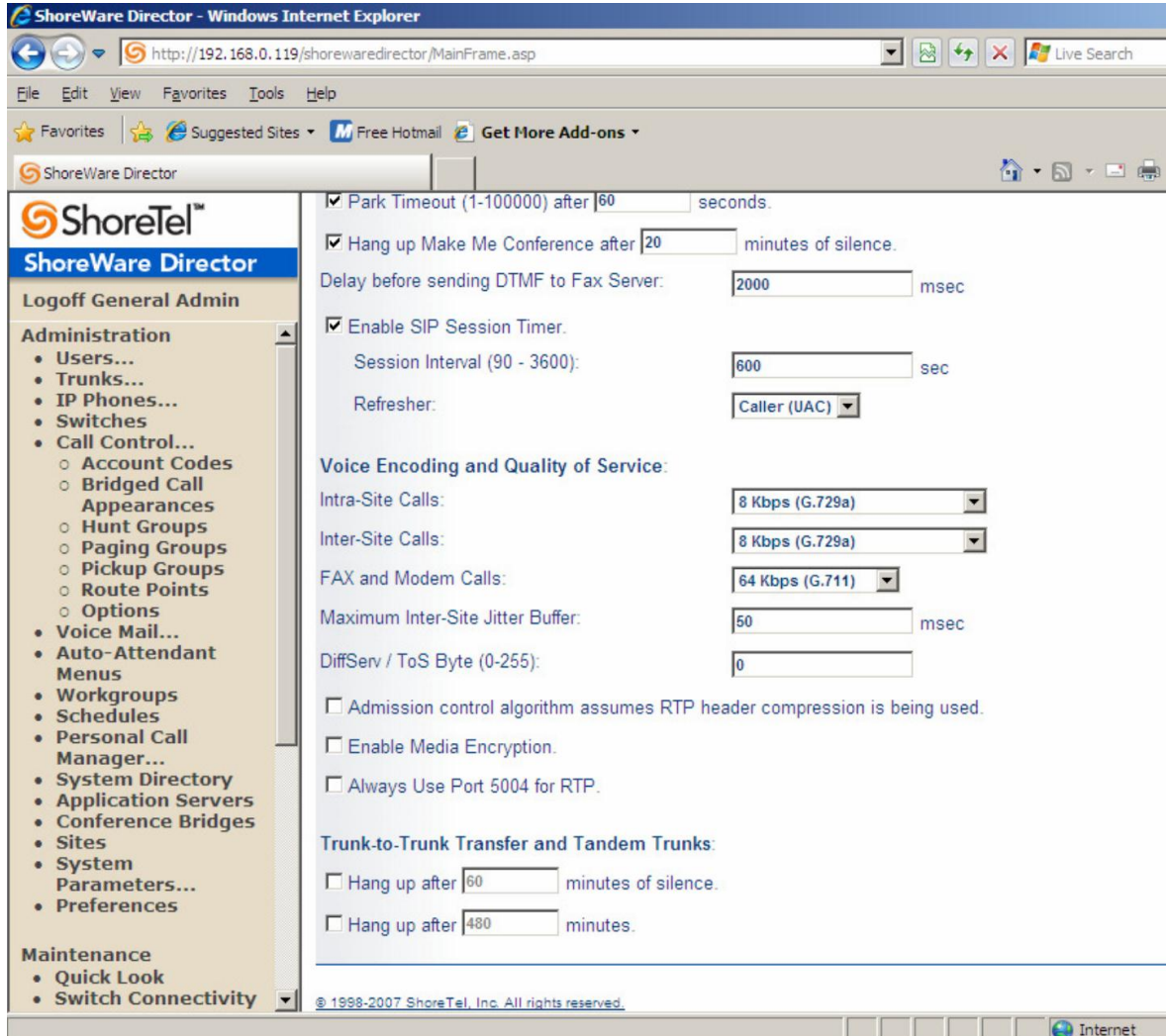
Branch Office calls can be recorded if one of the following conditions is true:

1. A VPN is set up and managed for the remote site
2. An OAISYS Recording Solution is located at the branch office. This can be a Small Office Appliance that is networked to the OAISYS Recording server located at the headquarters.

## SHORETEL CONFIGURATION

Open the ShoreTel ShoreWare Director, navigate to Call Control → Options

- Uncheck the Enable Media Encryption and Always use Port 5004 for RTP
  - This is also where you would change the Voice Encoding (G.711 versus G.729)



The screenshot shows the ShoreWare Director web interface in Internet Explorer. The left sidebar contains a navigation tree with the following items:

- ShoreTel™
- ShoreWare Director
- Logoff General Admin
- Administration
  - Users...
  - Trunks...
  - IP Phones...
  - Switches
  - Call Control...
    - Account Codes
    - Bridged Call Appearances
    - Hunt Groups
    - Paging Groups
    - Pickup Groups
    - Route Points
    - Options
  - Voice Mail...
  - Auto-Attendant Menus
  - Workgroups
  - Schedules
  - Personal Call Manager...
  - System Directory
  - Application Servers
  - Conference Bridges
  - Sites
  - System Parameters...
  - Preferences
- Maintenance
  - Quick Look
  - Switch Connectivity

The main content area displays the 'Options' configuration page for Call Control. Key settings include:

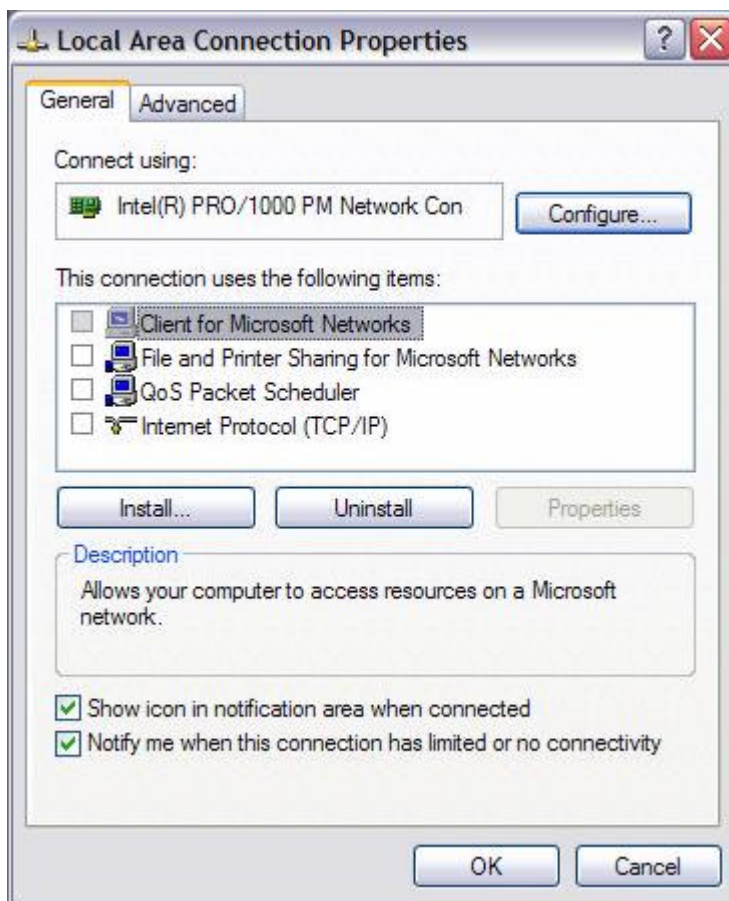
- Park Timeout (1-100000) after  seconds.
- Hang up Make Me Conference after  minutes of silence.
- Delay before sending DTMF to Fax Server:  msec
- Enable SIP Session Timer.
  - Session Interval (90 - 3600):  sec
  - Refresher:
- Voice Encoding and Quality of Service:**
  - Intra-Site Calls:  (dropdown)
  - Inter-Site Calls:  (dropdown)
  - FAX and Modem Calls:  (dropdown)
  - Maximum Inter-Site Jitter Buffer:  msec
  - DiffServ / ToS Byte (0-255):
- Admission control algorithm assumes RTP header compression is being used.
- Enable Media Encryption.
- Always Use Port 5004 for RTP.
- Trunk-to-Trunk Transfer and Tandem Trunks:**
  - Hang up after  minutes of silence.
  - Hang up after  minutes.

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## MANAGED SWITCH CONFIGURATION

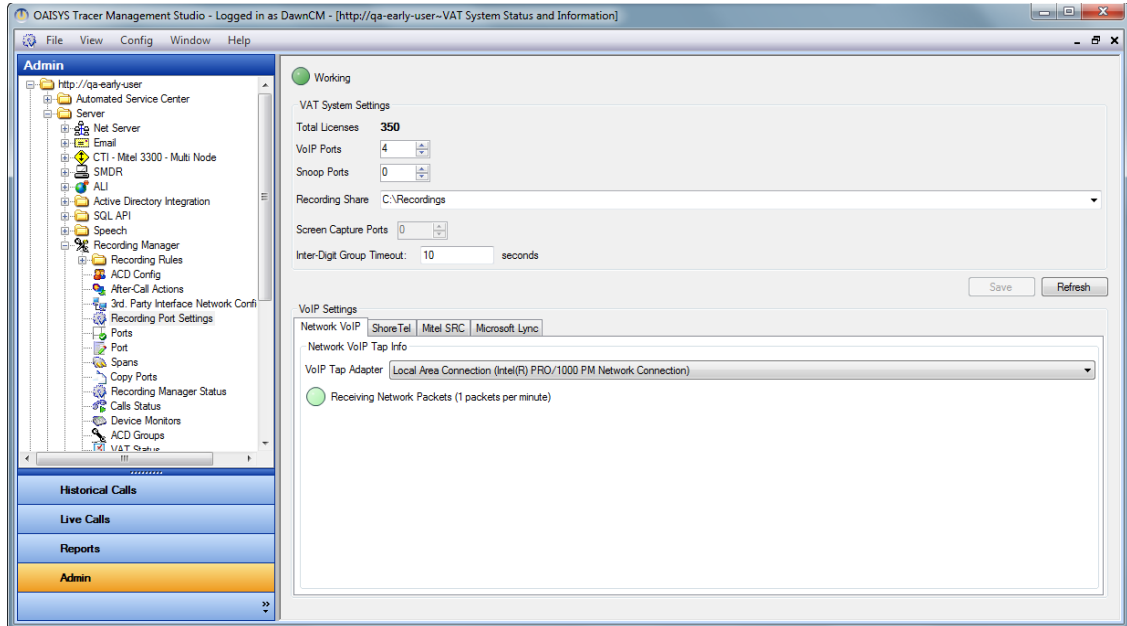
Configure the managed switch for port mirroring.

1. Verify the source port is the port the PBX voice network card is plugged into to ensure packets to all phones communicating with the PBX are visible.
2. The destination port should be directed to the port the OAISYS Server's second NIC is connected to.
3. Verify the TCP/IP Stack is disabled on the Seconds NIC





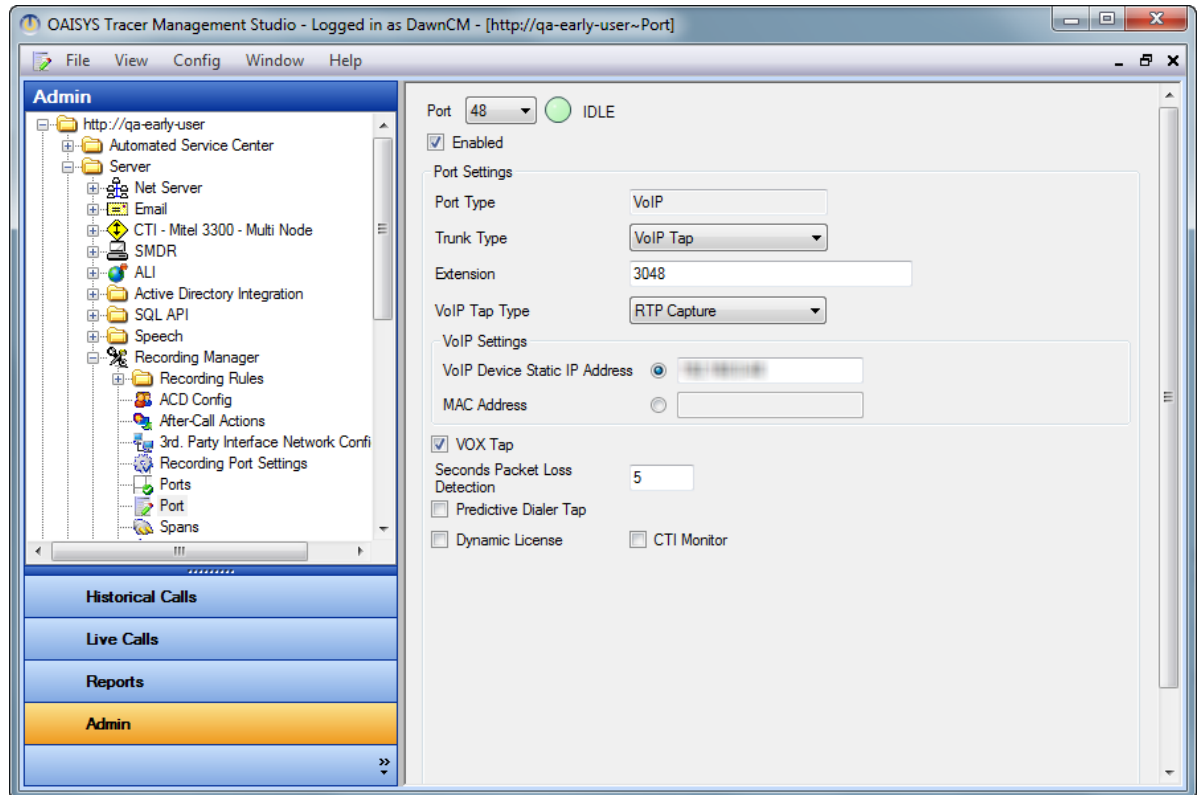
4. Log into OAISYS Management Studio as a system administrator.
  - a. Navigate to the Recording Port Settings and configure the system for Network VoIP Capture by selecting the correct NIC for packet capture.







5. Continue to the Port Programming
  - a. Select a port designated for VoIP Capture and enter the extension information.
  - b. Use the drop list to select the VoIP Tap Type and select RTP Capture.
  - c. Enter the device's Static IP or MAC Address  
**NOTE:** MAC Address format must be xx:xx:xx:xx:xx:xx OR xxxxxxxxxxxxxx
  - d. Click **Save**





## NOTES

If the OAISYS Recording Solution is NOT integrated to a PBX via CTI Integration, be sure to place the Recording Ports into VOX Tap mode. This allows the system to capture the packets coming from the device (extension) rather than waiting for CTI events from a PBX.

WireShark may be necessary to troubleshoot Network Capture failures, and can be downloaded from: <http://www.wireshark.org/>

The OAISYS server may need to be restarted once the server ports have been programmed to enable monitoring the extensions for recording. Once the configuration has been complete, make test calls to verify the configuration.

*If Technical Assistance is required, please call 888-496-9040 Option 4 for Support.*