Avaya IP Office CTI Web Services Integration

Integration Guide

QMS 9.4

This guide provides information about configuring the Quality Management Suite for recording Avaya IP Office calls.

Enghouse Interactive

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Solution Overview

The QMS Call Recording solution for Avaya IP Office with CTI Web Services employs a combination of Avaya MTCTI-3 Web Services integration and port mirroring to create call recordings. QMS uses a secure web socket to communicate with the Avaya IPO using the MTCTI-3 API to receive call control events at the QMS server. The MTCTI-3 API is available starting with Avaya IPO Release 11.1. Lastly, port mirroring must be enabled and configured on all network switches to which recorded Avaya IP phones are connected. Port mirroring is needed to send the audio streams from the IP phones to the QMS server for recording.
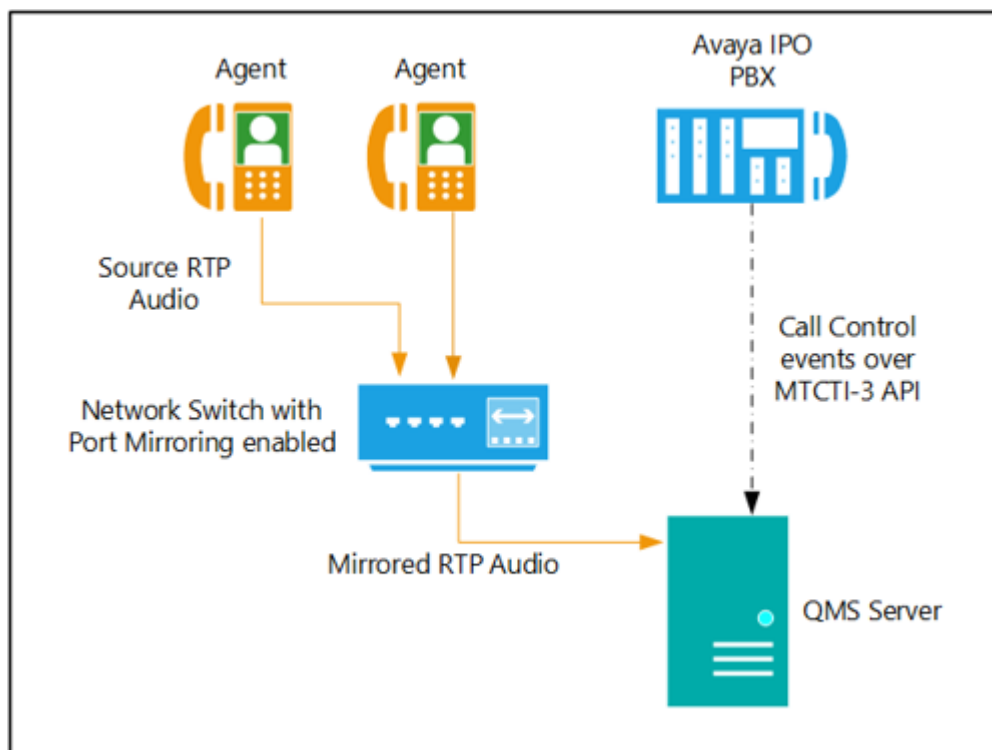
Avaya IPOffice Configuration

The QMS Recording Service requires an Avaya Service User to be configured with "Enhanced TSP Access" rights. The IP Office must also have the "Avaya HTTP Clients only" flag disabled.
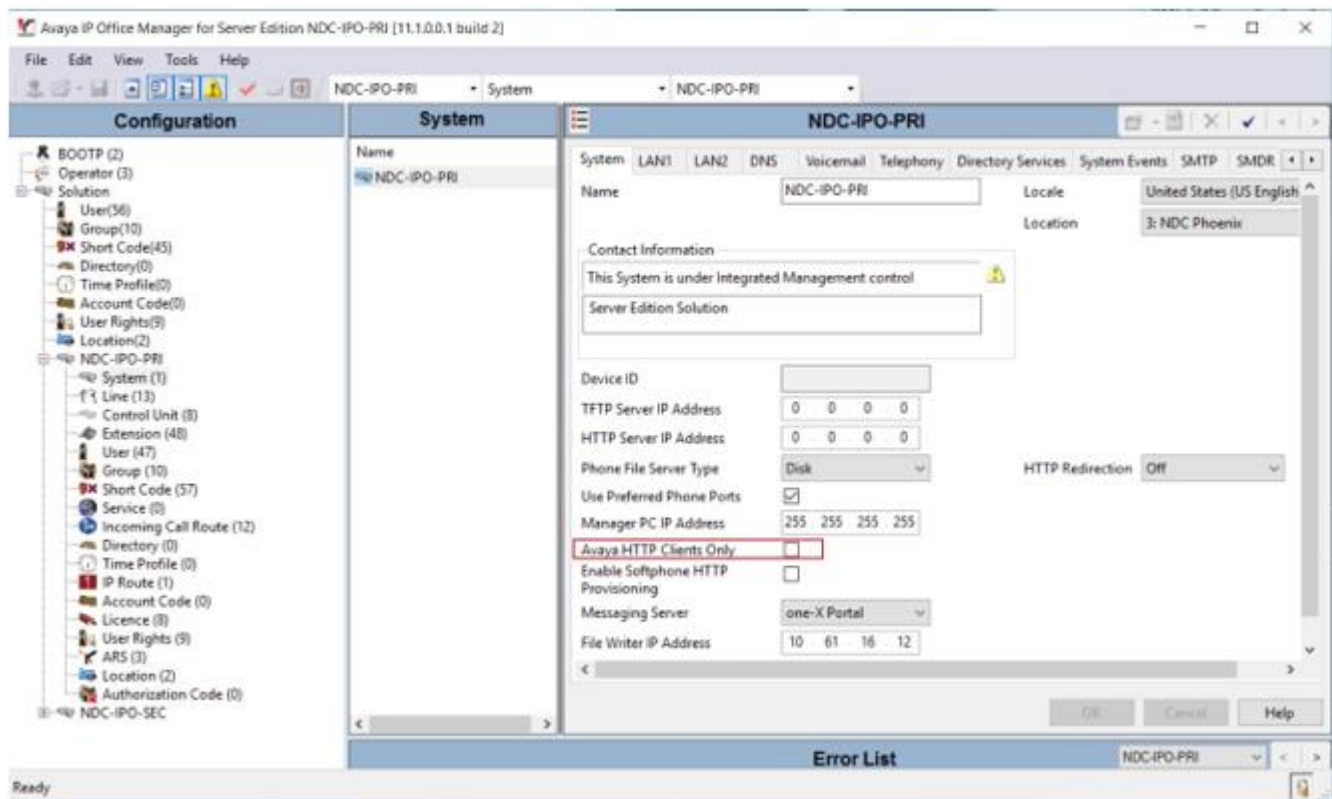
First configure a Rights Group, with access rights to the "Enhanced TSPI Access" service:
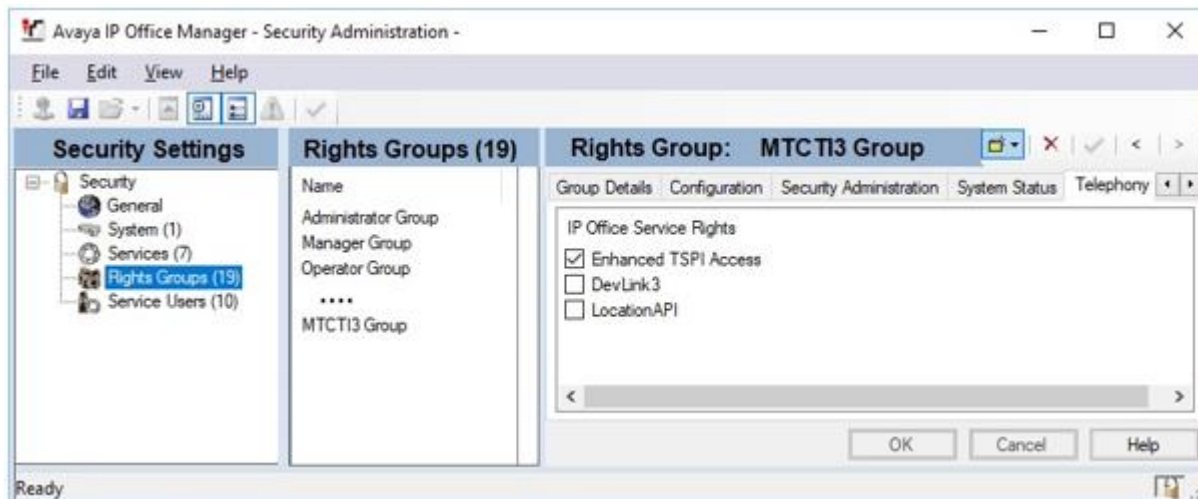
Then create Service User account which is a member of this group:
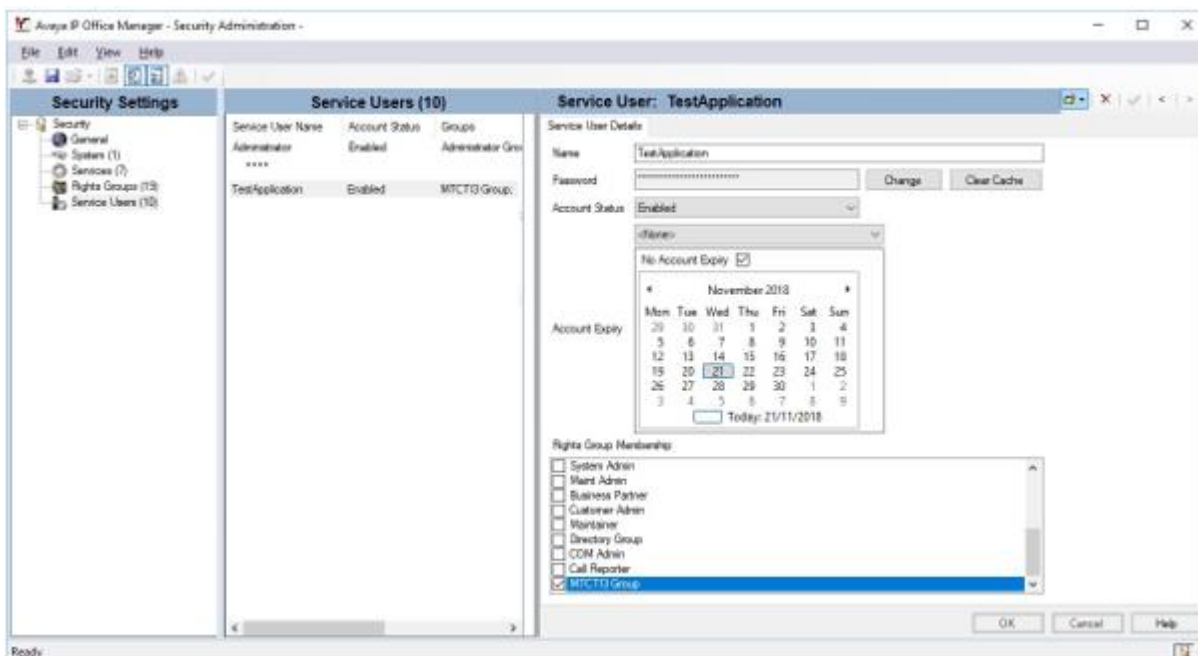
Ensure that the "Avaya HTTP Clients Only" flag is not enabled:

A CTI Link Pro license is required to use the MTCTI-3 API with Avaya IP Office. If you are using a secondary IPO for resiliency, you will need a second CTI Link Pro license for the secondary IPO.

If you are using a secondary IPO for resiliency, you will need to make sure the Rights Group and Service User also exist on the secondary IPO and ensure that "Avaya HTTP Clients Only" is not enabled.

Enabling SNMP Support on IP Office

To enable SNMP support on IP Office, complete the following steps.

1. Open **System > System Events > Configuration** and click the **SNMP Enabled** checkbox.
2. Type a name in the **Community** field. It is recommended that you type in public.
3. Type 161 into the **SNMP Port** field as the default.
4. In the left pane select **Firewall Profile** and double-click Internet01.
5. In the **SNMP** drop-down select **Bothway**. This enables IP Office to receive and send SNMP requests.
6. Restart IP Office for the changes to take effect.

Quality Management Suite Configuration

The information provided in this section describes the necessary steps to configure Quality Management Suite for recording IP Office calls.

SNMP communications with the Avaya IP Office SNMP server is required to support agent hot-desking (the DHCP feature).

To configure Quality Management Suite for recording IP Office calls, complete the following steps.

1. From the computer running the QMS Data Service, open a web browser and access the URL http://localhost/qms. The Call Recording Login page displays.

2. Enter administrative credentials into the Username and Password fields and then click Login. The QMS interface displays.

3. Select Services under the Administration category on the right-side of the window. The Services tab displays.

4. Click Call Recording and click the Edit button. The CallRecording [host] tab displays.

5. Click the PBX Type drop-down under Service Details and select Avaya IP Office Web Services.

6. Enter the Hostname or IP address of the Avaya IPO PBX into the PBX IP Address field. Since the connection between QMS and the Avaya IPO is secured, the hostname or IP address entered into this field must match one of the Subject or Alternate Subject Names in the certificate used to secure the Avaya IPO. You can enter multiple hostnames and/or IP addresses in this field (separated by a semi-colon) if the IPO environment has a primary and secondary IPO.

7. Enter the API port used for the Avaya IPO Web Services into the Api Port field, typically this is port 443 unless it has been modified in the IPO configuration.

8. Enter the Service User username created for QMS to use into the User name field.

9. Enter the Service User password created for QMS to use into the Password field.

10. Click the Save button in the Actions bar.

11. Click Users under the Administration category on the right-side of the window. The Users tab displays.

12. Configure all users that Quality Management Suite will be able to access and configure recorded calls.

13. The AgentID field in the Call Recording Settings section must match the user name configured in Avaya IP Office.

14. The Primary Extension field in the Call Recording Settings section must match the extension configured in Avaya IP Office.

15. Click the Save button in the Actions bar.

16. Repeat steps 13-15 for each user to extension entry listed.

Optional Configuration Options

The following options can be configured in the call recording configuration file (CallRecordingService.exe.config) regarding the SNMP support. Normally the default values will be sufficient so these steps are not mandatory.

All of these options go in the TAPI section of the configuration file e.g.

```
<CallRex>
<Tapi />
</CallRex>
```

- **SNMPServerCommunity** (default "public"). Change to match the SNMP Community field in the Avaya IPOffice manager. If multiple SNMP servers are configured in QMS, then separate multiple values with a semi-colon, or configure a single value which will be applied to all SNMP servers.

- **SNMPServerPort** (default "161"). Change to match the SNMP Port field in the Avaya IPOffice manager. If multiple SNMP servers are configured in QMS, then separate multiple values with a semi-colon, or configure a single value which will be applied to all SNMP servers.

- **EnableVersion1SnmpGetNext** (default "false"). Enables SNMP version 1 compatibility which is slower because it does not support the Get-Bulk method, and will instead issue a separate SNMP query for every user configured in IPOffice. If multiple SNMP servers are configured in QMS, then separate multiple values with a semi-colon, or configure a single value which will be applied to all SNMP servers.

- **SNMPRefreshIntervalSeconds** (default "30"). This controls the polling interval for the SNMP services. If multiple SNMP servers are configured in QMSthere may be a need to increase the polling interval to cater for this.

- **EnableVerboseAvayaLogging** (default "false") gives more detailed logging of the Avaya TAPI events and call control

- **EnableVerboseAvayaSnmpLogging** (default "false") gives more detailed logging of the Avaya SNMP requests and subsequent DHCP processing.

Troubleshooting

IP addresses do not update when users log into phones

Your PBX may only support version one of the SNMP protocol. To enable SNMP version 1 compatibility, update the config file accordingly.

Complete the following steps.

1. Locate the TAPI section in the CallRecordingService.exe.config file, which displays as follows.
   `<CallRex>`
   …
   `<Tapi />`
   `</CallRex>`

2. Add EnableVersion1SnmpGetNext.

3. Set it to True. The code displays as follows.
   `<CallRex>`
   …
   `<Tapi EnableVersion1SnmpGetNext="true" />`
   `</CallRex>`

Verifying the correct AgentID

You can verify the correct AgentID in the QMS Recording Service's ConsolidatedCallRecording log. QMSbuilds a user list by querying the Avaya through an SNMP request. The AgentID information in the Avaya PBX user setup can be verified on the far right of the log lines.

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