vAnalytics™ Technical Deployment Guide

for

Historical and Real Time Video Collaboration

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2 Getting Started - Preparing Your Environment

2.1 Overview

Vyopta's vAnalytics™ application provides an immersive view into your organization's investment in video & unified communications infrastructure, with insights on utilization, capacity and adoption as well as real-time monitoring capabilities. This guide is designed to help you prepare your environment for the installation of Vyopta's vAnalytics. Please follow the subsequent steps in order to completely and properly install Vyopta's vAnalytics.

2.2 Sign Up for a Vyopta Applications Management Portal User Account

To get started, you will need to create a user account in Vyopta's Applications Management Portal. To log into Vyopta's Applications Management Portal:

1. Open a web browser and navigate to the Vyopta website (www.vyopta.com).
2. Select login, in the upper right corner of the screen.
3. Select Create an Account and enter your company email address.
4. You will receive an email containing a link to sign up for a Vyopta Applications Management Portal user account. Fill out the form linked in the email to set up your user account.

Note: your email **must** *be tied to the domain of your organization.*

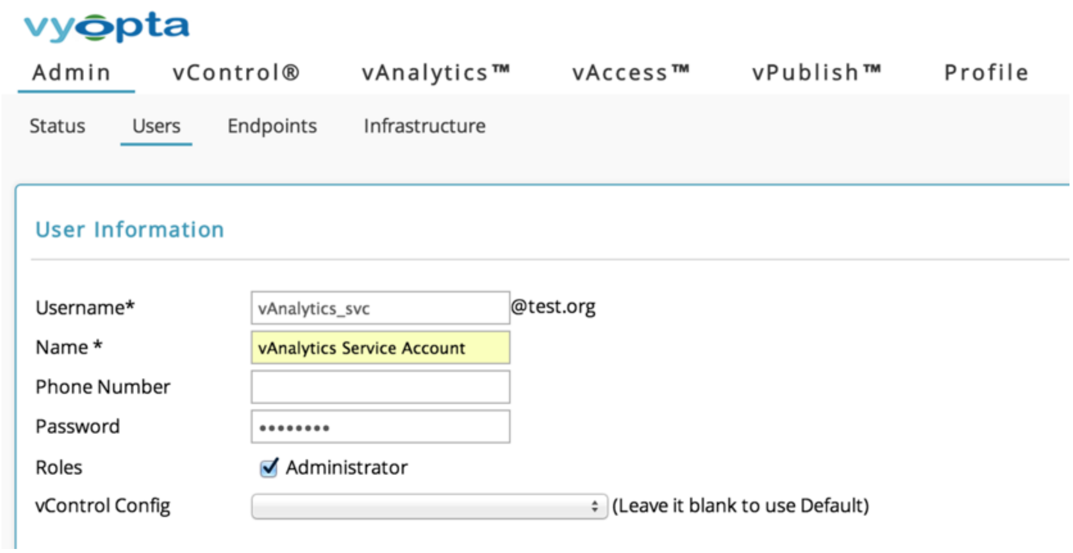
2.3 Obtain Administrator Access for your User Account

Your user account must have Administrator privileges for you to complete the remainder of the steps for the vAnalytics deployment. If you are the first account to register for your organization, you will automatically have Administrator privileges. If you only have access to the Profile menu, you do not have Administrator privileges and will need to request Administrator access. To request Administrator access, please contact your organization's current administrators. The list of administrators for your organization can be found on the Organization Profile page.

2.4 Configure a vAnalytics™ Service Account

Once you have successfully configured your user account and obtained Administrator privileges, you are ready to provision a service account for vAnalytics. The service account is used to manage the vAnalytics Data Collector deployed within your environment.

To create the service account, log into the Applications Management Portal and navigate to the Admin > Users Page. Select the icon in the upper-right corner of the screen to add a new user. Fill out the information for the vAnalytics service account (Figure below); be sure to give the service account administrator privileges.



User Information

Username*	vAnalytics_svc @test.org
Name *	vAnalytics Service Account
Phone Number	
Password	••••••••
Roles	☑ Administrator
vControl Config	(Leave it blank to use Default)

Figure 2-1: vAnalytics Service Account Setup

The vAnalytics service account does not require an active email address for the username or email address fields, but requires your domain be included in the email (i.e. vAnalytics_svc@<yourdomain>.com).

When you have entered the information for the vAnalytics service account, click the save button.

2.5 Prepare a vAnalytics™ Data Collector

A server must be provisioned on which the vAnalytics Data Collector will be installed and configured. The Data Collector is used to communicate with your video infrastructure in your internal, and in some cases, external environment. The server can be either a virtual or physical appliance. The server will need network access to your video infrastructure and will always be running.

Please see the table below for the recommended specifications:

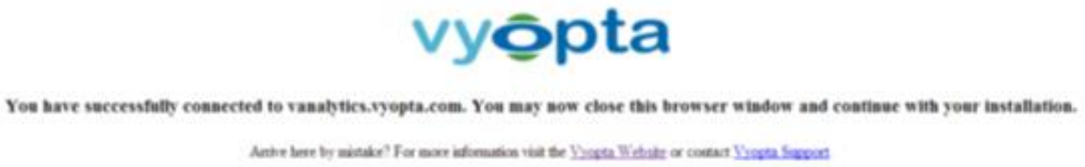
CPU	Dual 2.4GHz or Higher
Memory	8GB RAM Recommended
Disk Space	160 GB OS and Data
Network	Single NIC
Operating System	Windows Server 2012 or 2008 R2
System Software	.NET Framework Version 4.5 (Tested to v4.6)

2.6 Test Connection to the Vyopta Cloud

It is important to test the connection to Vyopta's Cloud on the VM or server provisioned for vAnalytics™. To test the connection to the Vyopta Cloud, the Administrator must ensure https connectivity to the following Vyopta Cloud Servers: apps.vyopta.com, rtadr.vyotpa.com, adr.vyopta.com and vanalytics.vyopta.com.

Please perform the following tests from Remote Desktop (RDP) on the vAnalytics Virtual Machine:

1. Open a web browser and navigate to the Vyopta website (www.vyopta.com) and select login in the upper right corner of the screen.
2. Ensure you are directed to Vyopta's Applications Management Portal (apps.vyopta.com).
3. Navigate to rtadr.vyopta.com and confirm that you see the message similar to below.
4. Navigate to adr.vyopta.com and confirm that you see the message similar to below.
5. Finally, navigate to vanalytics.vyopta.com and confirm that you see the message similar to below.



You have successfully connected to vanalytics.vyopta.com. You may now close this browser window and continue with your installation.

Arrive here by mistake? For more information visit the Vyopta Website or contact Vyopta Support

Figure 2-2: Vyopta vAnalytics Test Connection Page

2.7 Download and Install the vAnalytics™ Data Collector

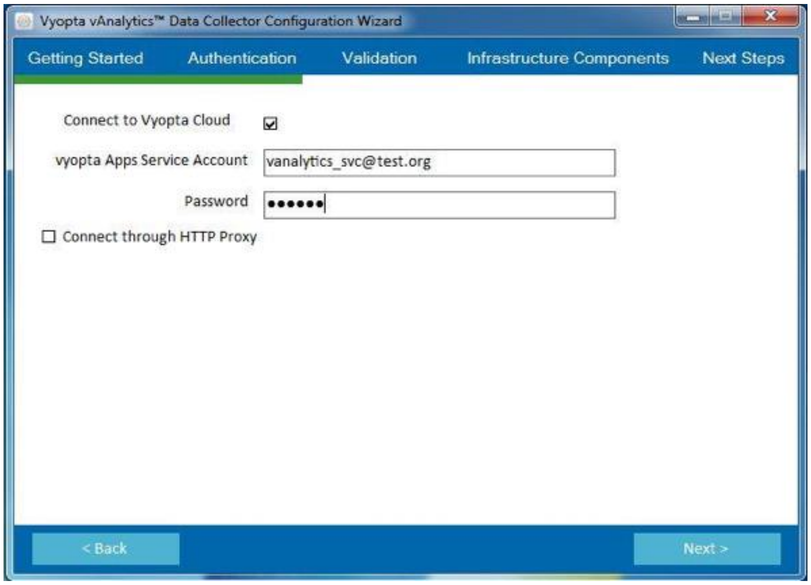
To download and install the vAnalytics Data Collector, please do the following:

1. Download the vAnalytics Data Collector Installer (EXE) from the following URL: http://www.vyopta.com/support/documentation#collector
2. Once the application has downloaded, open and run the installer on the vAnalytics Data Collector provisioned in your environment (refer to step 2.6 in this guide).
3. Follow the installer's instructions to complete the simple installation process.

2.8 Complete vAnalytics™ Configuration Utility Setup

Once the vAnalytics Configuration Utility is installed, you are almost ready to begin adding your infrastructure to the Data Collector. To complete the setup:

1. Go to Start > All Programs > Vyopta > vAnalytics and open the vAnalytics System Configuration Utility.
2. Once the vAnalytics Data Collector application has opened, click on “Get Started” to begin.
3. When ready, click the Proceed button and enter the previously created service account vAnalytics_svc@<yourdomain>.com and your password.
4. Click “Next” to test your connection to the Vyopta Cloud.


Vyopta vAnalytics™ Data Collector Configuration Wizard
Getting Started
Authentication
Validation
Infrastructure Components
Next Steps
< Back
Next >

Connect to Vyopta Cloud ☑

vyopta Apps Service Account: vanalytics_svc@test.org

Password: ●●●●●●

☐ Connect through HTTP Proxy

Figure 2-3: vAnalytics Configuration Utility

5. Once the connection is validated click “Next” and the utility will then bring you to the Add Infrastructure page. Click on “Add Infrastructure” to add a component of your video infrastructure.

Note: If you forget your organization’s vAnalytics service account username or password, you can log into Vyopta’s Applications Management Portal at apps.vyopta.com to view the name of the account and/or to change the password.

2.9 Operational Prerequisites

The following prerequisites must be met to successfully configure and operate Vyopta's vAnalytics™:

1. Network communication over specific ports between the vAnalytics Data Collector and all video infrastructure components within your video environment.
2. Service accounts with sufficient privileges (typically read-only administrative access) on each component of your video infrastructure.

The remainder of this guide is devoted to taking you through the steps necessary to configure vAnalytics for each of the supported video infrastructure components, detailed in Section 2.10 – Coverage and Compatibility.

2.10 Coverage and Compatibility

The following video infrastructure components are compatible with vAnalytics™:

- Cisco Video Communications Server (VCS) Control and Expressway
- Cisco Multipoint Control Unit (MCU)
- Cisco Telepresence Server (TPS)
- Cisco Telepresence ISDN Gateways
- Cisco Telepresence Management Suite & Provisioning Extension (TMS & TMSPE)
- Cisco Unified Communications Manager (CUCM)
- Cisco WebEx
- Cisco Meeting Server (CMS; formerly Acano Server)
- Microsoft Skype for Business (SfB)
- Pexip Management Node
- Polycom DMA with API License
- Polycom RMX
- Polycom RPRM with API License
- Vidyo Management Portal

3 Cisco VCS Control (VCS-C) & VCS Expressway (VCS-E)

3.1 Set up a Service Account for Cisco VCS Control (VCS-C) & Expressway (VCS-E)

To create a service account on the device, perform the following:

1. Log into the VCS with the proper administrator account.
2. Navigate to the Users > Administrator Accounts tab.

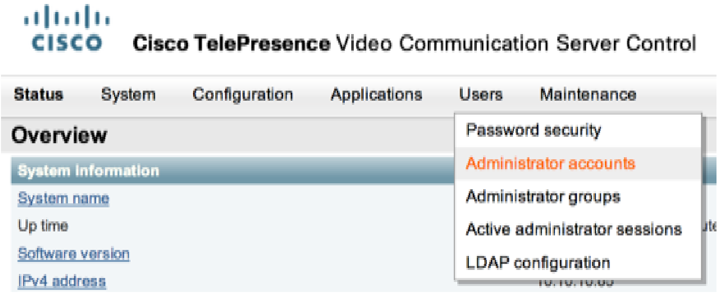
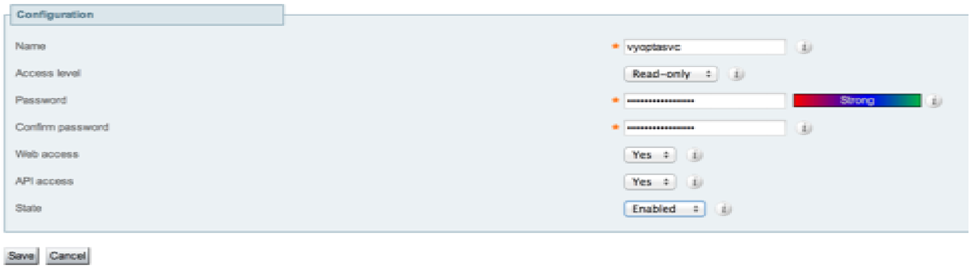


Figure 3-1: Administrator Accounts Tab

3. Select New.
4. Enter the following name for the service account: `vyopta_svc`
5. Set the Access level to *Read-only*.
6. Enter the service account password and confirm this password.
7. Set Web Access and API Access to *Yes* and State to *Enabled*.
8. Click Save.



Configuration

Name	* vyoptasvc
Access level	Read-only
Password	* •••••••••••••••• Strong
Confirm password	* ••••••••••••••••
Web access	Yes
API access	Yes
State	Enabled

Figure 3-2: New Service Account

The Vyopta Service account is now added to the device. The service account must be added to each VCS Control and Expressway within the video environment.

> *Note: VCS Active Directory (AD) accounts are not supported. The account must be a local administrator.*

3.2 Add VCS-C/VCS-E

To add a Cisco VCS-C or VCS-E requires the following:

- Access to the FQDN/IP address of the video device from the vAnalytics Data Collector
- Previously created user service account credentials on each video device

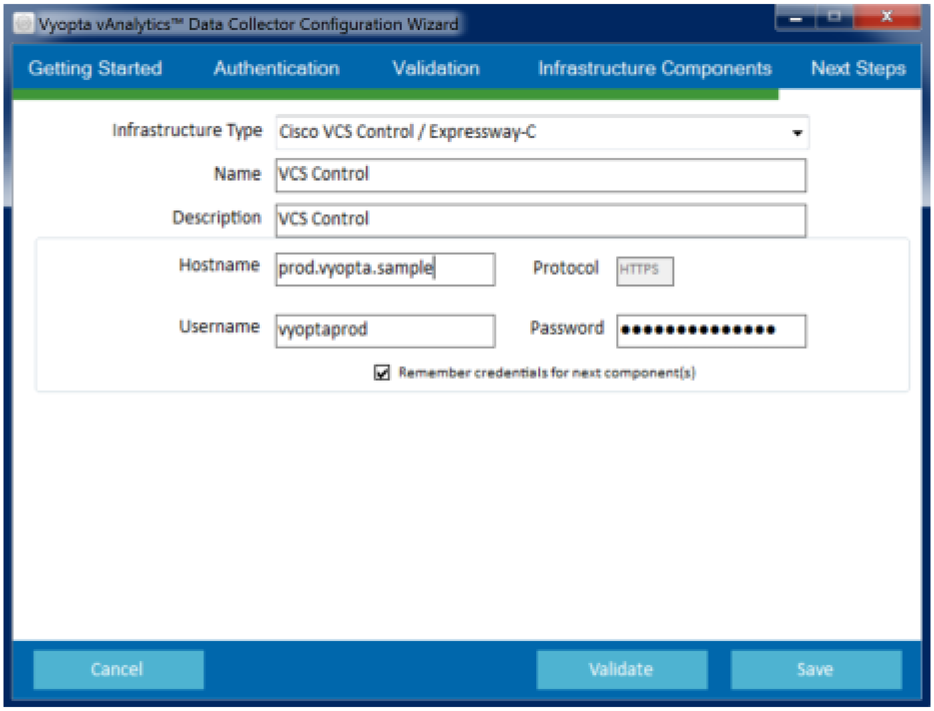
Note: If you have multiple VCS-C or VCS-E devices you must add a connector for each individual device including all peers and slaves.

Please follow the instructions below to add each video infrastructure device:

1. Select the correct VCS type in the Infrastructure Type drop-down menu.
2. Enter the infrastructure name. This will be the name displayed for the video device in the Configuration Utility and within Vyopta's Applications Management Portal.

Note: We recommend using hostname rather than IP as IP addresses are subject to change. It is also helpful to name the infrastructure in a 'friendly' or easily understood way.

1. Enter the description of the video device. This can include the device type, location, and other unique identifiers.
2. Enter the infrastructure hostname or IP address.
3. Enter the username and password created on the video device.
4. Click Validate to ensure that the vAnalytics application can connect to the video device.
5. If the connection to the video component succeeded, click the Save button.


Vyopta vAnalytics™ Data Collector Configuration Wizard
Getting Started
Authentication
Validation
Infrastructure Components
Next Steps
Cancel
Validate
Save

Infrastructure Type: Cisco VCS Control / Expressway-C

Name: VCS Control

Description: VCS Control

Hostname: prod.vyopta.sample

Protocol: HTTPS

Username: vyoptaprod

Password: ●●●●●●●●●●●●●●

☑ Remember credentials for next component(s)

Figure 3-3: VCS Configuration Example

Note: In a clustered VCS environment, please only add the primary/secondary devices. Please do not add the clustered, named environment.

3.3 Cisco Video Communications Server Control (VCS-C) & Expressway (VCS-E) Reference Table

Cisco Video Communications Server (VCS) & Expressway (Edge/Core)	
Version	VCS x7.2 or above / Expressway x8.5 or above
Device Access	Server IP/FQDN ; Add all VCS cluster devices if applicable.
User/Service Account	Local Administrator read-only account with API access. *Note: AD integrated accounts are not supported.*
TCP Ports	vAnalytics Data Collector to the VCS / Expressway device(s) TCP 443 (https)

4 Cisco Telepresence Multipoint Control Unit (MCU), Telepresence Server (TPS), or Telepresence Integrated Services Digital Network (ISDN) Gateway

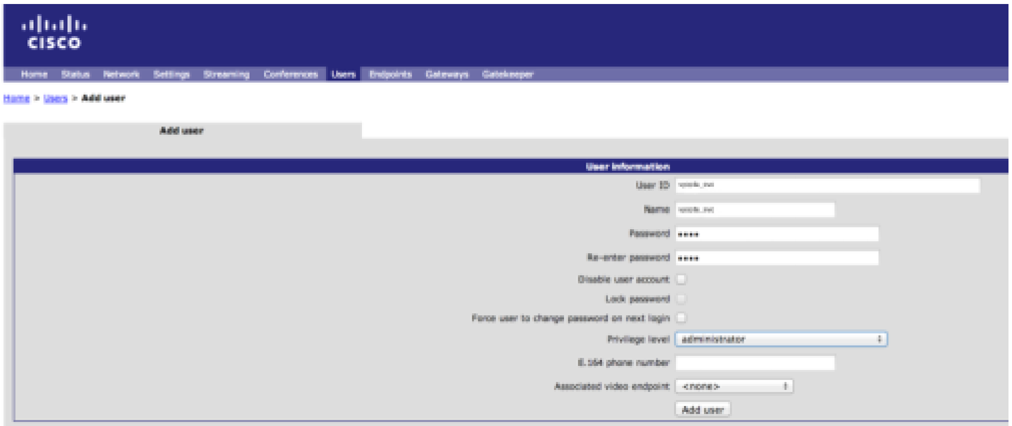
4.1 Set up a Service Account for Cisco Multipoint Control Unit (MCU), Telepresence Server (TPS), or Integrated Services Digital Network (ISDN) Gateway

The instructions below are separated by device type. Please follow the relevant instructions to create a service account on the component being added:

> *Note: MCU supervisor blades and slave blades in an MCU cluster do not need to be added.*

For Cisco Multipoint Control Units (Codian MCUs) or ISDN Gateways:

1. Log into the infrastructure with any Administrator account.
2. Click on the User tab.
3. Select Add New User.
4. Enter the User ID as `vyopta_svc` and Account Name as `vyopta_svc`
5. Enter and Re-enter the password.
6. Uncheck the box for Force user to change password on next login.
7. Set the Privilege level to *administrator*.
8. Leave the E.164 phone number blank.
9. When finished, add the User.

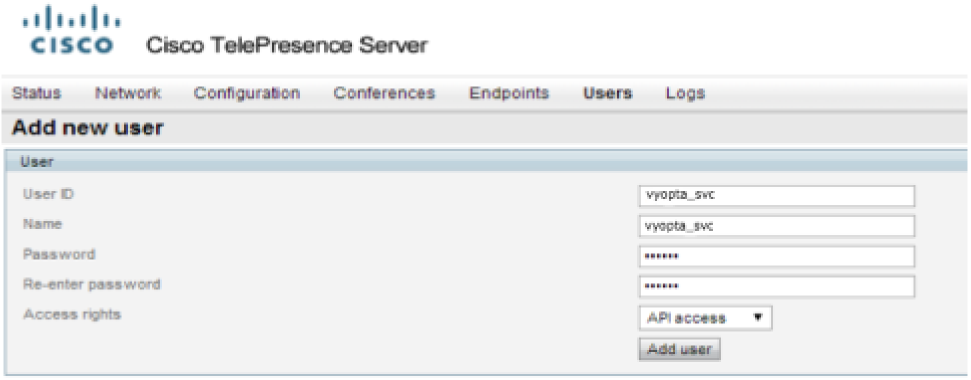


User ID	vyopta_svc
Name	vyopta_svc
Password	****
Re-enter password	****
Disable user account	☐
Lock password	☐
Force user to change password on next login	☐
Privilege level	administrator
E.164 phone number	
Associated video endpoint	<none>

Figure 4-1: Add MCU User Service Account

For Cisco TelePresence Servers (TPS) perform the following:

1. Log into the infrastructure with any Administrator account.
2. Click on the User tab.
3. Select Add New User.
4. Enter in the User ID as `vyopta_svc` and Account Name as `vyopta_svc`.
5. Enter and re-enter the password.
6. Set the privilege level to *API access*.
7. When finished, select Add User.



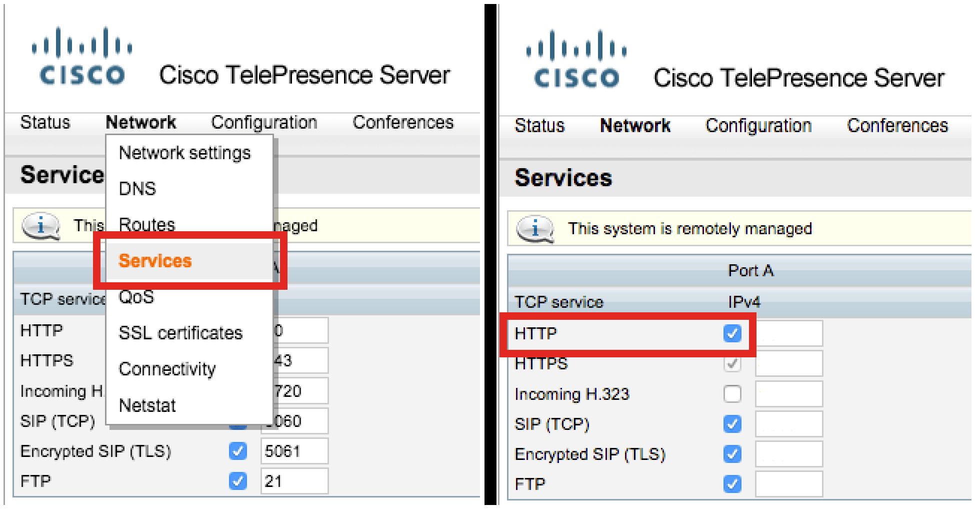
Add new user

User

User ID	vyopta_svc
Name	vyopta_svc
Password	•••••••
Re-enter password	•••••••
Access rights	API access ▼

Figure 4-2: Add TPS User Service Account

*Note: Please ensure that **http** is enabled for your TP Server. If it is not enabled, call quality will not be reported for TP Server in Real Time/Historical.*



Services

This system is remotely managed

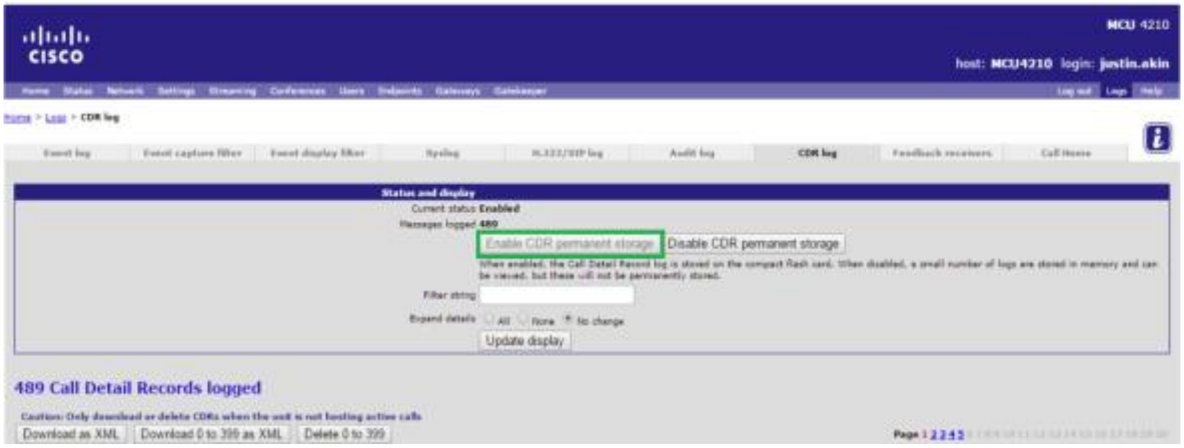
TCP service	Port A IPv4	
HTTP	☑	
HTTPS	☑	
Incoming H.323	□	
SIP (TCP)	☑	
Encrypted SIP (TLS)	☑	5061
FTP	☑	21

Figure 4-3: HTTP can be enabled within your TP Server under Network→ Services→ HTTP

4.2 Enable CDR Permanent Storage on Cisco Codian (MCU) & ISDN Gateway

In order to maximize the number of call detail records stored on the MCU and ISDN Gateway you must enable CDR permanent storage by performing the following:

1. Log into the device with an administrator account.
2. Navigate to Logs -> CDR logs.
3. Click on the Enable CDR permanent storage button.



host: MCU4210 login: justin.akin

Status and display

Current status Enabled

Messages logged 489

When enabled, the Call Detail Record log is stored on the compact flash card. When disabled, a small number of logs are stored in memory and can be viewed, but these will not be permanently stored.

Filter string

Expand details ○ All ○ None ● No change

489 Call Detail Records logged

Caution: Only download or delete CDRs when the unit is not hosting active calls

Page 1 2 3 4 5

Figure 4-4: Click to enable CDR permanent storage

4.3 Add MCU, TP Server, or ISDN Gateway

To add a Cisco MCU, Telepresence Server, or ISDN Gateway requires the following:

- Access to the FQDN/ IP address of the video device from the vAnalytics Data Collector
- Previously created user service account credentials on each video device

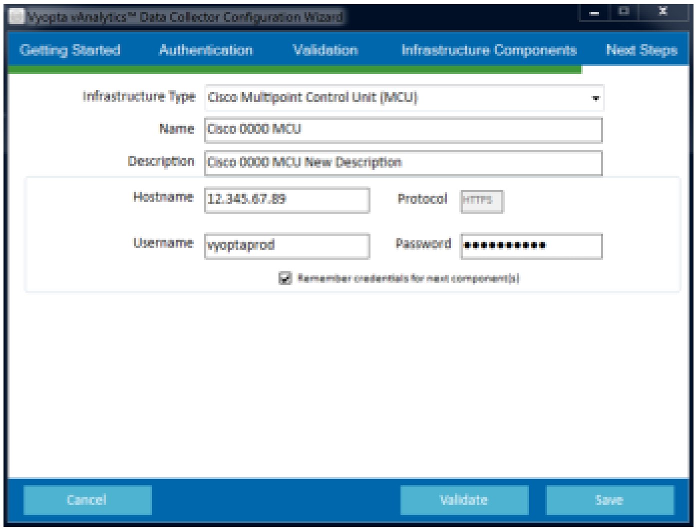
Note: If you have multiple MCUs, TPS peers, or clusters you must add a connector for each individual device or blade. Do not add slave MCUs as all information is obtained from the Master MCU.

Please follow the instructions below to add each video infrastructure device:

1. Select the correct device type in the Infrastructure Type drop-down menu.
2. Enter the infrastructure name. This will be the name displayed for the video device in the Configuration Utility and within Vyopta's Applications Management Portal.

Note: We recommend using hostname rather than IP as IP addresses are subject to change. It is also helpful to name the infrastructure in a 'friendly' or easily understood way.

3. Enter the description of the video device. This can include the device type, location, and other unique identifiers.
4. Enter the infrastructure hostname or IP address.
5. Enter the username and password created on the video device.
6. Click Validate to ensure that the vAnalytics application can connect to the video device.
7. If the connection to the video component succeeded, click the Save button.


Vyopta vAnalytics™ Data Collector Configuration Wizard
Getting Started
Authentication
Validation
Infrastructure Components
Next Steps
Cancel
Validate
Save

Infrastructure Type: Cisco Multipoint Control Unit (MCU)
Name: Cisco 0000 MCU
Description: Cisco 0000 MCU New Description
Hostname: 12.345.67.89
Protocol: HTTPS
Username: vyoptaprod
Password: ●●●●●●●●●●●
☑ Remember credentials for next component(s)

Figure 4-5: MCU Configuration Example

4.4 Cisco TelePresence Multipoint Control Unit (MCU) Reference Table

Cisco TelePresence MCU	
Version	MCU version 4.1 or above
Device Access	Server IP/FQDN
User/Service Account	Local account with Administrator privileges
TCP Ports	vAnalytics Data Collector to the MCU device(s) TCP 443 (https) If MCU is in a cluster only the Master needs to be added

4.5 Cisco TelePresence Server (TPS) Reference Table

Cisco TelePresence Server (TPS)	
Version	TPS 3.1 or above
Device Access	Server IP/FQDN
User/Service Account	Local account with API Access (or Administrator privileges)
TCP Ports	vAnalytics Data Collector to the TPS device(s) TCP 443 (https)

4.6 Cisco TelePresence ISDN Gateway Reference Table

Cisco TelePresence ISDN Gateway	
Version	Version 2.1 or above
Device Access	Server IP/FQDN
User/Service Account	Local account with Administrator privileges
TCP Ports	vAnalytics Data Collector to the ISDN device(s) TCP 443 (https)

5 Cisco Telepresence Management Suite (TMS) SQL Server Database

5.1 Set up a Service Account for Cisco Telepresence Management Suite (TMS) SQL Server Database

The service account required will be added to the appliance's SQL Database with read-only privileges. You must determine where the appliance's SQL Server Database is located in your environment; whether it is on the TMS appliance or located on a separate SQL server. Once this has been identified, you will require an Administrator account to the server to add the vAnalytics service account. This may require the assistance of a SQL Server Administrator in your organization to provide server access or to add the account manually.

For all instances where the TMS/TMSPE SQL databases are hosted on a separate SQL Server please consult with your organization's SQL Server DBA to create the required database read-only account.

There are two ways to identify where your TMS & TMSPPE databases are located:

1. *RDP to the TMS server as an administrator and run the '**TMS Tools'** application configuration utility from Start > Programs > Cisco TelePresence Management Suite.* ***Please note that this is the recommended option as it highlights the connection port.***

2. *Log in to the TMS Web UI as an administrator and navigate to Administrative Tools > TMS Server Maintenance. Click on 'Database Files and Size Info' to view the database server in use. If the database server is '(local)\SQLTMS' then your database resides on the actual TMS server. Your database could also use the name of the actual server, e.g. 'TMSPROD\SQLTMS'. If the server name matches your TMS server then your database resides on the TMS server.*

The read-only database account should be titled **vyopta_svc** which has the '**db_datareader**' and '**public**' roles as well as access to the '**tmsng**' and '**tmspe**' databases. For SQL databases residing on the TMS server (atypical), please contact support@vyopta.com for assistance with the TMS Preparation Installer.

Note: You will need to make sure that you obtain the assigned password and also the appropriate TCP/IP port for database access. The default for this is 1433 but other ports can be configured.

5.2 Add a TMS and TMS Provisioning Extension Connector

To add a connector for Telepresence Management Suite (TMS) and/or Telepresence Management Suite Provisioning Extension (TMSPE) you will need to prepare by completing the following prerequisites:

- Confirm access to the FQDN/IP address of the server hosting the SQL Database from the vAnalytics Data Collector.
- Obtain credentials for the Microsoft SQL Server Database Read-only Account.
- Identify whether a static or dynamic SQL port is used. (If dynamic, please identify and record the dynamic port value within Microsoft SQL Configuration Manager.)
- Verify that TCP/IP is enabled for the SQL Server within SQL Configuration Manager.

Please follow the instructions below to add TMS and repeat for TMSPE:

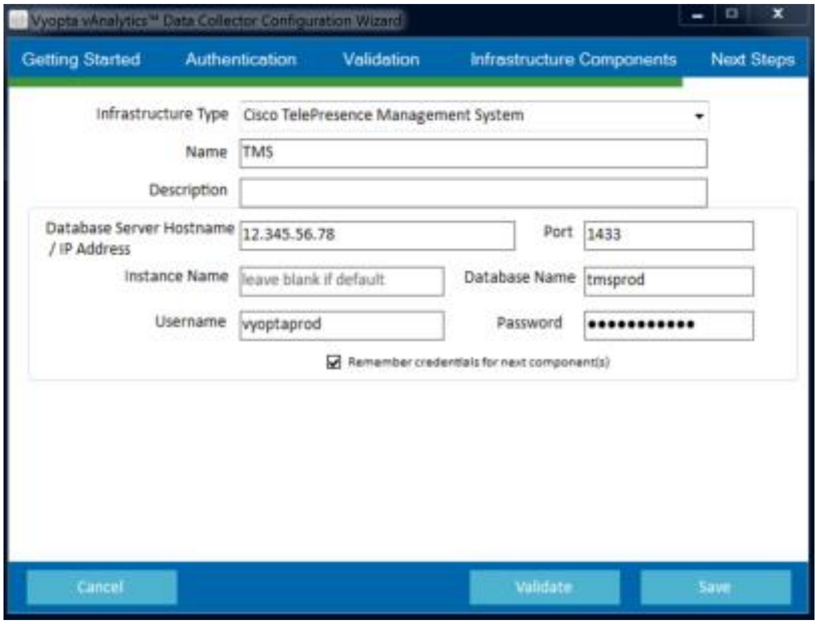
1. Select the correct TMS product type in the Infrastructure Type drop-down menu.
2. Enter the infrastructure name and description of TMS. This will be the name displayed for the video device in vAnalytics. This can include the device type, location, and other unique identifiers.

Note: We recommend using hostname rather than IP as IP addresses are subject to change. It is also helpful to name the infrastructure in a 'friendly' or easily understood way.

3. Enter the SQL Server hostname or IP address. If the SQL Server Instance Name is not the default name MSSQLSERVER, you will have to add the SQL Server Instance Name as a suffix to the Hostname or IP address:

   <Device Hostname>\<SQL Server Instance Name>

4. Enter the username and password created on the SQL Server.
5. Leave the Port Number and Database Name blank, it will use the default port numbers. If you have verified that the default port or database is not used, enter in the custom port number or database name.
6. Click Validate to ensure connectivity to the video device.
7. If the connection to the video component succeeded, click the Save button.


Vyopta vAnalytics™ Data Collector Configuration Wizard
Getting Started
Authentication
Validation
Infrastructure Components
Next Steps
Cancel
Validate
Save

Infrastructure Type: Cisco TelePresence Management System

Name: TMS

Description:

Database Server Hostname / IP Address: 12.345.56.78

Port: 1433

Instance Name: leave blank if default

Database Name: tmsprod

Username: vyoptaprod

Password: ●●●●●●●●●●●●

☑ Remember credentials for next component(s)

Figure 5-1: TMS Configuration Example

Note: You must repeat the procedure above to add the TMSPE database.

5.3 Cisco TelePresence Management Suite (TMS) Reference Table

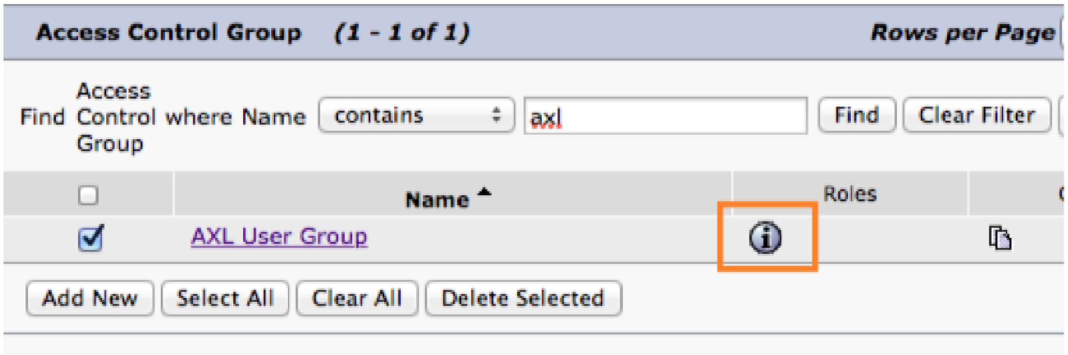
Cisco TelePresence Management Suite (TMS)	
Version	TMS version 13.2 or above
Device Access	Server IP/FQDN that hosts the SQL ‘tmsng’ and ‘tmspe’ databases While the TMS application server can host the SQL database this is typically not implemented in an enterprise environment. Please consult with your organization’s DBA for more information.
User/Service Account	Local DBA read-only user account that has access to the ‘tmsng’ and ‘tmspe’ databases
TCP Ports	vAnalytics Data Collector to the SQL databases TCP 1433 Note: Your SQL DBA may have set a separate TCP port other than the default. Please consult with your organization’s DBA for more information.

6 Cisco Unified Communications Manager (CUCM)

6.1 Enable the AXL API User Role for Cisco Unified Communications Manager (CUCM)

The vAnalytics Data Collector leverages the AXL API for gaining access to CUCM registered endpoints. The AXL API User role is not enabled by default. The following steps will guide you in creating this required user role:

1. Log into the Cisco UCM with an Administrator Account.
2. Navigate to the Cisco Unified CM Administration tab.
3. Go to User Management > User Settings > Role and search for `AXL User Group`.
4. If the role already exists, then proceed to the next section, otherwise click Add New.
5. Under Application, select *Cisco Call Manager AXL Database*, and click Next.
6. Enter `Standard AXL API Access` as the name and `Allow AXL APIs` as the description.
7. Check the Allow to use API check box and click Save.
8. Go to User Management > User Settings > Access Control Group and select Add New.
9. Name the group `AXL User Group` and click Save.
10. Return to the Access Control Group page and search for `AXL User Group` once again.
11. Find the AXL User Group from the List, and select the 'i' button as shown below:



Access Control Group (1 - 1 of 1) ***Rows per Page***

Find Access Control Group where Name contains axl

□	Name ▲	Roles
☑	AXL User Group	ⓘ

Figure 6-1: Add Role To AXL User Group

12. Select Assign Role to Group and find the *Standard AXL API Access* role.
13. Select the role, click the "Add Selected" button, and click the save button. The role will now be listed in this User Group.

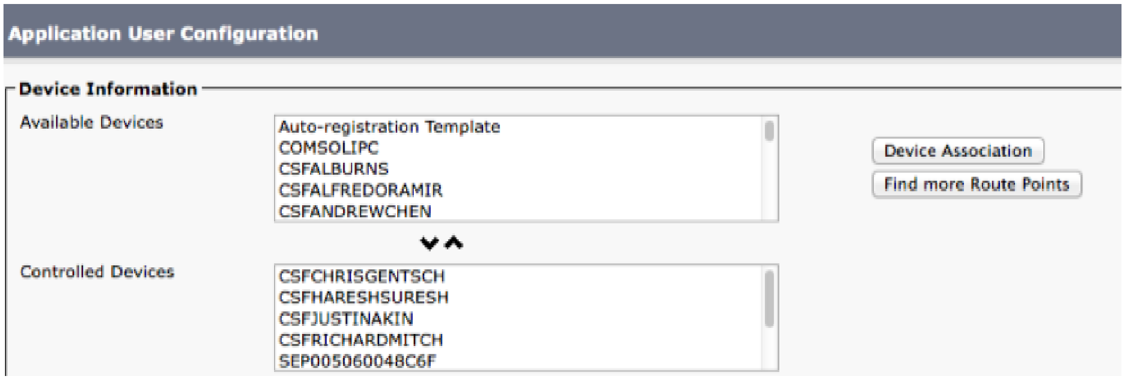
6.2 Set up a Service Account for CUCM

Next, you will create an application user service account on your Call Manager publisher:

1. Log into the CUCM publisher with the Administrator account.
2. Go to User Management > Application User > Add User.
3. Enter `vyopta_svc` for the Username.
4. Set a password for the account.
5. Assign the following groups to the user account:

   - AXL User Group
   - Standard CCM Read-Only
   - Standard CCM Server Monitoring
   - Standard CTI Enabled
   - Standard CTI Allow Control of Phones supporting Connected Xfer and conf

6. Endpoints that you will be monitoring in real time should be moved from the ‘Available Devices’ to the ‘Controlled Devices’ list under the Device Information section. You can use the ‘Device Association’ or ‘Find more phones’ button to better navigate the endpoints in your CUCM environment.



Application User Configuration

Device Information

Available Devices

Auto-registration Template
COMSOLIPC
CSFALBURNS
CSFALFREDORAMIR
CSFANDREWCHEN

Controlled Devices

CSFCHRISGENTSCH
CSFHARESHSURESH
CSFJUSTINAKIN
CSFRICHARDMITCH
SEP005060048C6F

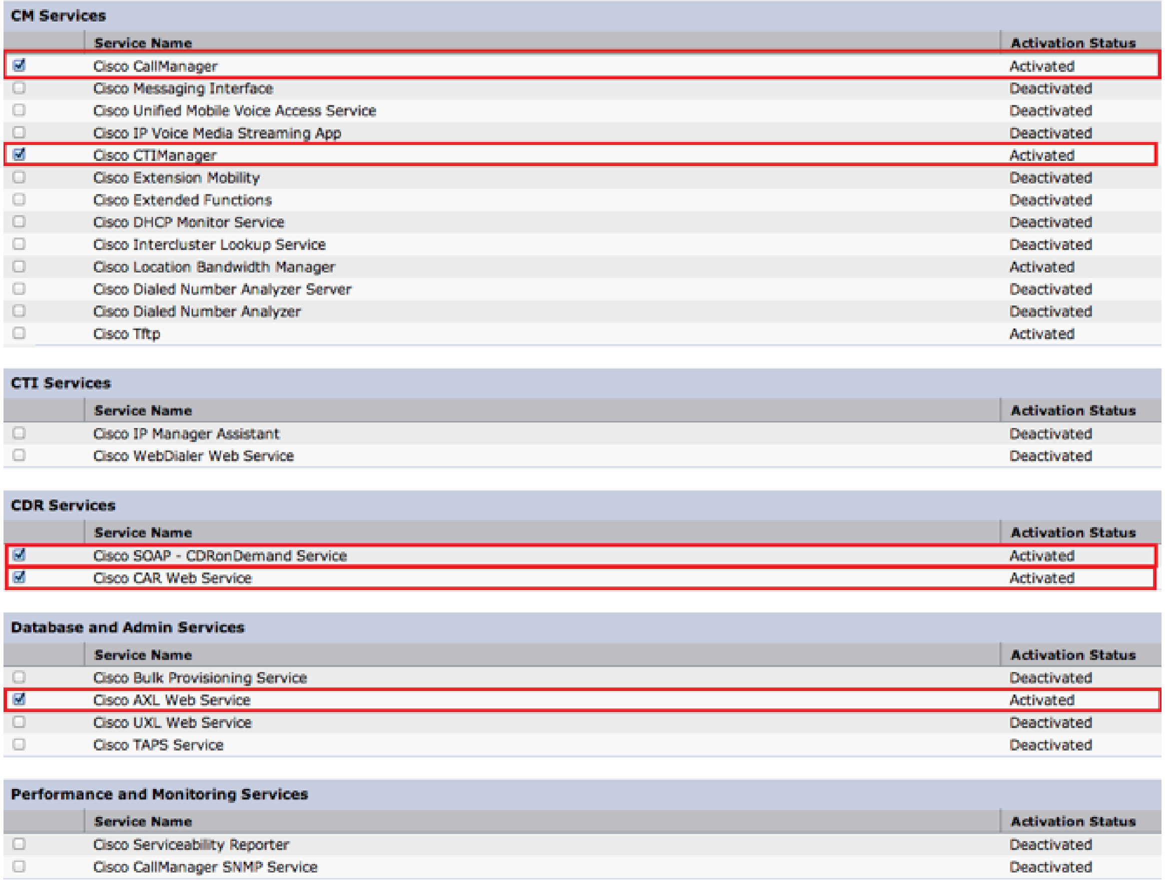
Figure 6-2: CUCM Application User Configuration

Note: For large environments, there may be a prohibitively large amount of devices to move into the controlled group. If that is the case, please contact support@vyopta.com for an alternate solution.

7. Save the user account.

8. Once you have added the account, ensure that the following services are enabled by navigating to Cisco Unified Serviceability > Tools > Service Activation on each CUCM Publisher:

    - *Cisco Call Manager*
    - *Cisco CTI Manager*
    - *Cisco SOAP – CDROnDemand Service*
    - *Cisco CAR Web Service*
    - *Cisco AXL Web Service*



CM Services

	Service Name	Activation Status
☑	Cisco CallManager	Activated
☐	Cisco Messaging Interface	Deactivated
☐	Cisco Unified Mobile Voice Access Service	Deactivated
☐	Cisco IP Voice Media Streaming App	Deactivated
☑	Cisco CTIManager	Activated
☐	Cisco Extension Mobility	Deactivated
☐	Cisco Extended Functions	Deactivated
☐	Cisco DHCP Monitor Service	Deactivated
☐	Cisco Intercluster Lookup Service	Deactivated
☐	Cisco Location Bandwidth Manager	Activated
☐	Cisco Dialed Number Analyzer Server	Deactivated
☐	Cisco Dialed Number Analyzer	Deactivated
☐	Cisco Tftp	Activated

CTI Services

	Service Name	Activation Status
☐	Cisco IP Manager Assistant	Deactivated
☐	Cisco WebDialer Web Service	Deactivated

CDR Services

	Service Name	Activation Status
☑	Cisco SOAP - CDRonDemand Service	Activated
☑	Cisco CAR Web Service	Activated

Database and Admin Services

	Service Name	Activation Status
☐	Cisco Bulk Provisioning Service	Deactivated
☑	Cisco AXL Web Service	Activated
☐	Cisco UXL Web Service	Deactivated
☐	Cisco TAPS Service	Deactivated

Performance and Monitoring Services

	Service Name	Activation Status
☐	Cisco Serviceability Reporter	Deactivated
☐	Cisco CallManager SNMP Service	Deactivated

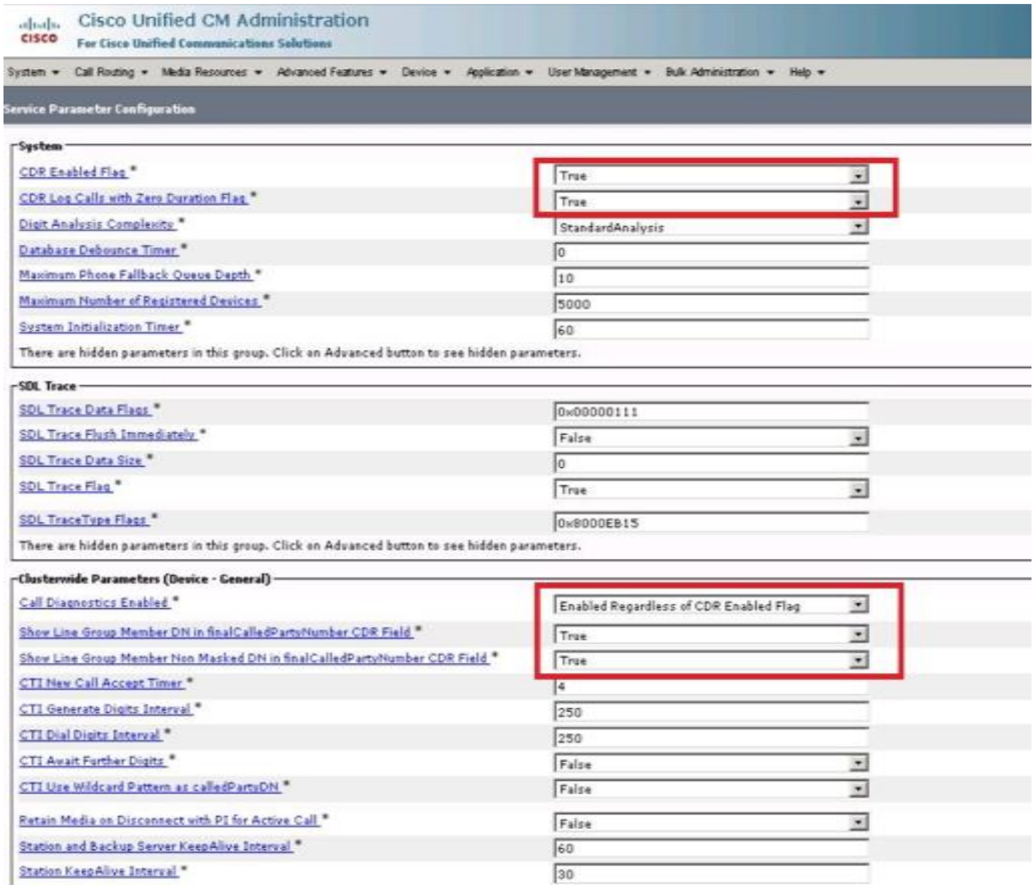
Figure 6-3: CUCM Unified Serviceability Service Activation

9. Make sure parameters are correctly enabled under Cisco Unified CM Administration for Active Publishers:

    a. Navigate to Cisco Unified CM Administration -> System -> Service Parameters.
    b. Select Active Publishing Server(s).
    c. Select the Cisco Call Manager Service.
    d. Under System section set CDR Enabled Flag and CDR Log Calls with Zero Duration Flag to *True*.

> *Note: The CDR Enabled Flag and CDR Log Calls with Zero Duration Flag* ***must*** *be set to* True *on every Publisher and Subscriber – Subscribers do not inherit these values from Publishers, and these values are not set by default. If not set correctly, CDRs will not be transmitted to vAnalytics and data loss is likely.*

    e. Under Cluster Wide parameters (Device - General) set Call Diagnostic Enabled to *Enabled Regardless of CDR Enabled Flag* and the two Show Line Group Member parameters to *True*.



Service Parameter Configuration

System

CDR Enabled Flag *	True
CDR Log Calls with Zero Duration Flag *	True
Digit Analysis Complexity *	StandardAnalysis
Database Debounce Timer *	0
Maximum Phone Fallback Queue Depth *	10
Maximum Number of Registered Devices *	5000
System Initialization Timer *	60

There are hidden parameters in this group. Click on Advanced button to see hidden parameters.

SDL Trace

SDL Trace Data Flags *	0x00000111
SDL Trace Flush Immediately *	False
SDL Trace Data Size *	0
SDL Trace Flag *	True
SDL TraceType Flags *	0x8000EB15

There are hidden parameters in this group. Click on Advanced button to see hidden parameters.

Clusterwide Parameters (Device - General)

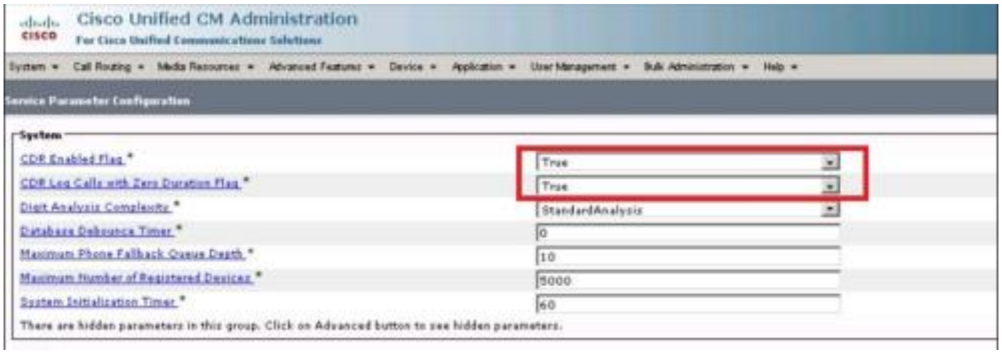
Call Diagnostics Enabled *	Enabled Regardless of CDR Enabled Flag
Show Line Group Member DN in finalCalledPartyNumber CDR Field *	True
Show Line Group Member Non Masked DN in finalCalledPartyNumber CDR Field *	True
CTI New Call Accept Timer *	4
CTI Generate Digits Interval *	250
CTI Dial Digits Interval *	250
CTI Await Further Digits *	False
CTI Use Wildcard Pattern as calledPartyDN *	False
Retain Media on Disconnect with PI for Active Call *	False
Station and Backup Server KeepAlive Interval *	60
Station KeepAlive Interval *	30

Figure 6-4: Cisco Unified CM Administration Service Parameters

10. Make sure the following parameters are enabled under Cisco Unified CM Administration for Subscribers (if applicable)

    a. Navigate to Cisco Unified CM Administration -> System -> Service Parameters.
    b. Select Subscribers.
    c. Select the Cisco Call Manager Service
    d. Under System section set CDR Enabled Flag and CDR Log Calls with Zero Duration Flag to *True*.

> *Note: The CDR Enabled Flag and CDR Log Calls with Zero Duration Flag* ***must*** *be set to* True *on every Publisher and Subscriber – Subscribers do not inherit these values from Publishers, and these values are not set by default. If not set correctly, CDRs will not be transmitted to vAnalytics and data loss is likely.*



System

CDR Enabled Flag *	True
CDR Log Calls with Zero Duration Flag *	True
Digit Analysis Complexity *	StandardAnalysis
Database Debounce Timer *	0
Maximum Phone Fallback Queue Depth *	10
Maximum Number of Registered Devices *	5000
System Initialization Timer *	60

There are hidden parameters in this group. Click on Advanced button to see hidden parameters.

Figure 6-5: Cisco Unified CM Administration Service Parameters for Subscribers

11. For large Call Manager deployments (i.e., More than 5 nodes or with multiple clusters) it is recommended to adjust the following parameters under Cisco Unified CM Administration > System > Enterprise Parameters from their default values in order to facilitate timely CDR collection:

    a. CDR File Time Interval: By increasing this value from the default of 1 minute to 5 minutes, the number of CDR files will be reduced by a factor of 5 with no impact on CUCM performance. Please ensure that any other CDR reporting / billing solutions will not be adversely affected by changing this parameter.
    b. Allowed CDRonDemand get_file Queries per Minute: For larger Call Manager deployments (greater than 20 total nodes) it is recommended to increase this value from the default value of 10 to 20, which will assist in CDR collection with no impact on CUCM performance.

6.3 Add CUCM Connectors for the Publisher

To add a CUCM Connector requires the following:

- Access to the FQDN/ IP address of the video device from the vAnalytics Data Collector
- Previously created user service account credentials on each video device

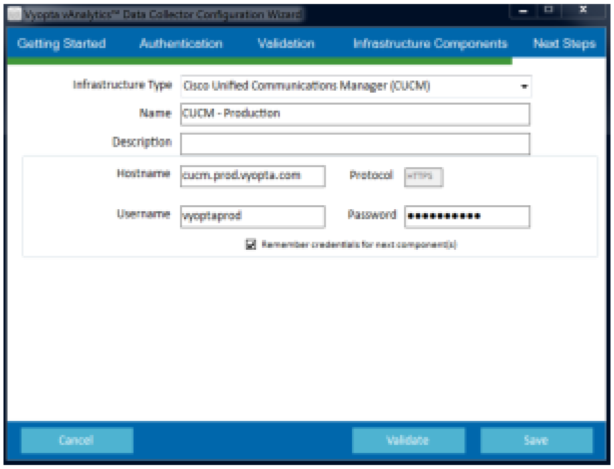
> *Note: **Only Publishers should be added**. (No Subscribers should be added.) If Publisher services cannot be enabled, please contact support@vyopta.com.*

Please follow the instructions below to add each CUCM Publisher:

1. Select Cisco Unified Communications Manager (CUCM) from the Infrastructure Type menu.
2. Enter the infrastructure name. This will be the name displayed for the video device in the Configuration Utility and within Vyopta's Applications Management Portal.

> *Note: We recommend using hostname rather than IP as IP addresses are subject to change. It is also helpful to name the infrastructure in a 'friendly' or easily understood way.*

3. Enter the description of the video device. This can include the device type, location, and other unique identifiers.
4. Enter the infrastructure hostname or IP address.
5. Enter the username and password created on the video device.
6. Click Validate to ensure that the vAnalytics application can connect to the video device.
7. If the connection to the video component succeeded, click the Save button.



Vyopta vAnalytics™ Data Collector Configuration Wizard

Infrastructure Type: Cisco Unified Communications Manager (CUCM)

Name: CUCM - Production

Description:

Hostname: cucm.prod.vyopta.com

Protocol: HTTPS

Username: vyoptaprod

Password: ●●●●●●●●●●●

☑ Remember credentials for next component(s)

Figure 6-6: CUCM Configuration Example

6.4 Cisco Unified Communications Manager (CUCM) Reference Table

Cisco Unified Communications Manager (CUCM)	
Version	CUCM version 10.0 or above
Device Access	Call Manager Publisher(s) IP/FQDN; Subscribers not required.
User/Service Account	CUCM Application User with Standard CCM Read-only, AXL User Group, and Standard CTI Enabled, and Standard CTI Allow Control of Phones supporting Connected Xfer and conf
TCP Ports	vAnalytics Data Collector to CUCM TCP 443, 8443, 2748, 2749, 2789 CUCM to vAnalytics Data Collector Passive FTP (21) or SFTP* *FTP requires that passive FTP be open and allowed from CUCM to the Vyopta Data Collector. If SFTP is selected then only port 22 must be open. SFTP requires using a third party SFTP client on the Vyopta Data Collector.
Call Manager Service Requirements	Cisco Call Manager CISCO CTI Manager Cisco SOAP – CDROnDemand Service CISCO CAR Web Service Cisco AXL Web Service
Call Manager Service Parameters	‘CDR Enabled Flag’ and ‘CDR Log Calls with Zero duration’ to True ‘Call Diagnostic Enabled’ to Enabled Regardless and ‘Show Line Group Member’ parameters to true

7 Cisco Meeting Server (CMS; formerly Acano Server)

7.1 Set up a Service Account for Cisco Meeting Server (CMS)

To utilize CMS meeting and user reporting APIs, a service account with read-only administrator access must be created:

1. SSH into the CMS box using any convenient command line utility.
2. Login with the Administrator account (e.g. admin@10.10.10.200).
3. Enter the following command: `user add vyopta_svc api`
4. Type in the `vyopta_svc` user account password.

Note: By default, CMS provisions new account passwords with a 180-day duration, meaning that you will need to update the password on the service account twice yearly. If your corporate service account policies permit, you may want to extend this default duration ***before*** *adding the vyopta_svc account.*

To change the default user account password duration, after logging into the CMS command line interface with your administrator account, ***but before adding the vyopta_svc account****, enter the following command:*

```
user rule password_age NNNN
```

where NNNN is the number of days before a password expires. So to set the default expiration to yearly, enter:

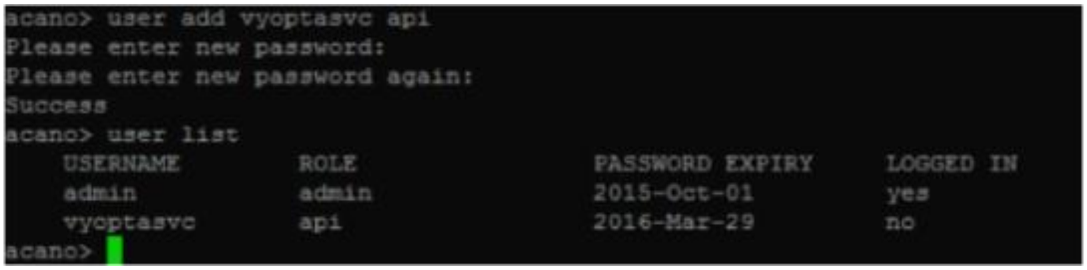
```
user rule password_age 365
```

If you have already added the Vyopta service account but want to extend its expiration duration, you still enter the above command, followed by:

```
passwd vyopta_svc
```

You'll then be prompted to confirm your administrator password to allow you to do this, then simply reenter the existing password on the vyopta_svc account. It does not need to change to be refreshed -- and if you do change it, you will need to update it on the vAnalytics apps management portal.

5. To verify that the API role is set (and the password expiration, if changed), enter the following command: `user list`
6. Close the SSH session.



```
acano> user add vyoptasvc api
Please enter new password:
Please enter new password again:
Success
acano> user list
    USERNAME        ROLE                PASSWORD EXPIRY     LOGGED IN
    admin           admin               2015-Oct-01         yes
    vyoptasvc       api                 2016-Mar-29         no
acano> 
```

Figure 7-1: CMS User Account Information

7.2 Add a CMS Connector

To add a CMS Connector requires the following:

- Access to your organization's CMS Webpage from the vAnalytics Data Collector
- Credentials for the CMS read-only API service account established in the previous step (*Section 7.1, Set up a Service Account for Cisco Meeting Server (CMS)*)

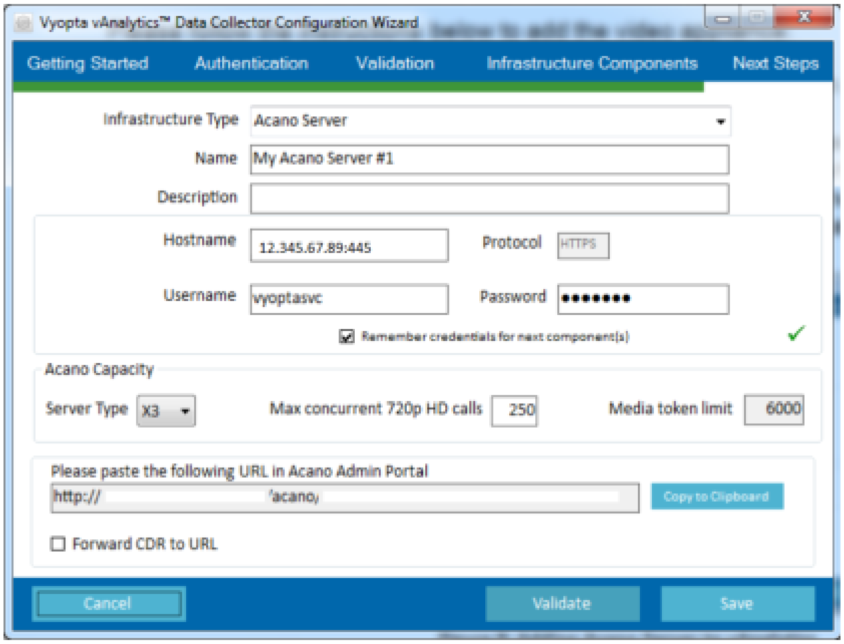
Please follow the instructions below to add the CMS instance:

1. Select either *Cisco Meeting Server (CMS)* or *Acano Server*, depending upon your version of the vAnalytics Data Collector, in the Infrastructure Type drop-down menu. (Only one of those two choices will be available.)
2. Enter the server name.
3. Enter the CMS URL into the Hostname.

Note: Please include any non-standard port number in the URL. For example: 10.200.30.24:445 (where 445 is the port number).

4. Enter an optional description of the video device in the Description field.
5. Enter the username and password of the service account established in the prior section.
6. Select Server Type (X2, X3 or VM). If VM, enter the number of ports for which your CMS is licensed in the 'Max concurrent 720p calls' field.

> *Note: If you are on a fractionally licensed X2 / X3 then please add as a VM instead and specify your max concurrent HD calls.*



Infrastructure Type: Acano Server

Name: My Acano Server #1

Description:

Hostname: 12.345.67.89:445

Protocol: HTTPS

Username: vyoptasvc

Password: •••••••

☑ Remember credentials for next component(s) ✓

Acano Capacity

Server Type: X3

Max concurrent 720p HD calls: 250

Media token limit: 6000

Please paste the following URL in Acano Admin Portal

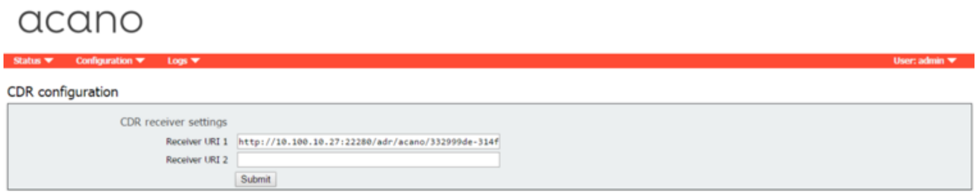
http:// 'acano/

☐ Forward CDR to URL

Figure 7-2: Adding CMS to vAnalytics

7. Click Validate to ensure that the vAnalytics can connect to your CMS.
8. If the connection to the video component succeeded, click the 'Copy to Clipboard' button in order to capture the CDR URL which needs to be entered in CMS and then click the Save button.
9. Login to the CMS configuration portal using administrator credentials.
10. Navigate to Configuration > CDR Settings tab

    a. If the Receiver URI 1 field is blank then paste the URL that you copied in step 8 into the 'URI 1' field. Otherwise paste the value into the 'URI 2' field.
    b. Click Submit.



CDR configuration

CDR receiver settings

Receiver URI 1: http://10.100.10.27:22280/adr/acano/332999de-314f

Receiver URI 2:

Figure 7-3: Adding CDR Receiver URL (CMS 1.8 and Higher)

11. For Acano versions prior to 1.8 or for deployments which require more than 2 CDR streams, please contact support@vyopta.com

Note: Port 22280 is the default port over which the vAnalytics Data Collector will listen for inbound CMS CDR data. ***If this port is not open in your network environment then please reach out to*** *support@vyopta.com* ***for further assistance.***

7.3 Cisco Meeting Server (CMS) Reference Table

CMS	
Version	Acano 1.7 or above, CMS 2.0.0 or above
Device Access	Server IP/FQDN of CMS device(s)
User/Service Account	Local account with read-only API access enabled.
TCP Ports	vAnalytics Data Collector to CMS TCP 443* CMS CDR forward push to vAnalytics Data Collector TCP 22280 Note: the management port can be set to a separate port such as TCP so please confirm the correct port with your CMS administrator.

8 Cisco WebEx

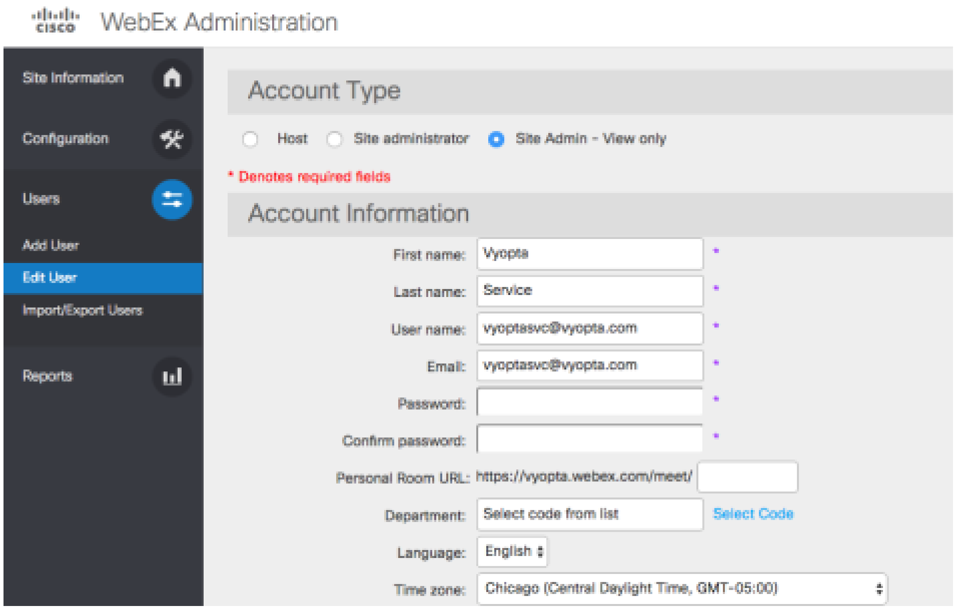
8.1 Set up a Service Account for Cisco WebEx

To create a service account for Cisco WebEx, perform the following:

1. Log into the WebEx Web Portal using an existing site administrator account.
2. Select Site Administrator tab to open the Administration page.
3. Use the appropriate tab under Manage Users to create a new WebEx account:

    a. Select the *Site Admin – View only* privilege.
    b. Enter `Vyopta` for the First name.
    c. Enter `Service` for the Last name.
    d. Enter `vyoptasvc` for the User name.
    e. Enter [`vyoptasvc@vyopta.com`](mailto:vyoptasvc@vyopta.com) for the Email address.
    f. Set and confirm the password for the service account.

4. Select Update to save the service account information.



Account Type

○ Host ○ Site administrator ● Site Admin - View only

* Denotes required fields

Account Information

First name: Vyopta *
Last name: Service *
User name: vyoptasvc@vyopta.com *
Email: vyoptasvc@vyopta.com *
Password: *
Confirm password: *
Personal Room URL: https://vyopta.webex.com/meet/
Department: Select code from list Select Code
Language: English
Time zone: Chicago (Central Daylight Time, GMT-05:00)

Figure 8-1: WebEx User Account Information

8.2 Add a WebEx Connector

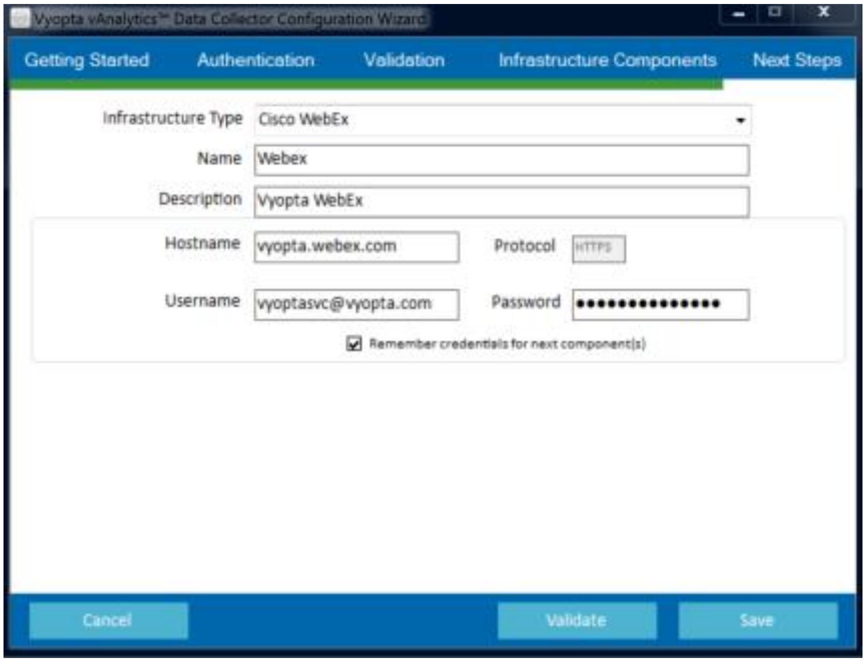
To add a WebEx Connector requires the following:

- Access to your organization’s WebEx Site URL from the vAnalytics Data Collector
- Credentials for the WebEx Site Admin - View only account

Please follow the instructions below to add your WebEx site:

1. Select *Cisco WebEx* in the Infrastructure Type drop-down menu.
2. Enter the WebEx site name.
3. Enter `WebEx` into the Description field; you may also add the WebEx type, location, or other unique identifiers.
4. Enter the WebEx Site URL in the Hostname field.
5. Enter the username and password of the Site Admin - View only account.
6. Click Validate to ensure that the vAnalytics application can connect.
7. If the connection succeeded, click the Save button.

Note: You must repeat the procedure above for each WebEx site.


Vyopta vAnalytics™ Data Collector Configuration Wizard
Getting Started
Authentication
Validation
Infrastructure Components
Next Steps
Cancel
Validate
Save

Infrastructure Type: Cisco WebEx

Name: Webex

Description: Vyopta WebEx

Hostname: vyopta.webex.com

Protocol: HTTPS

Username: vyoptasvc@vyopta.com

Password: ••••••••••••••

☑ Remember credentials for next component(s)

Figure 8-2: Adding a WebEx Site

8.3 Cisco WebEx (Cloud only) Reference Table

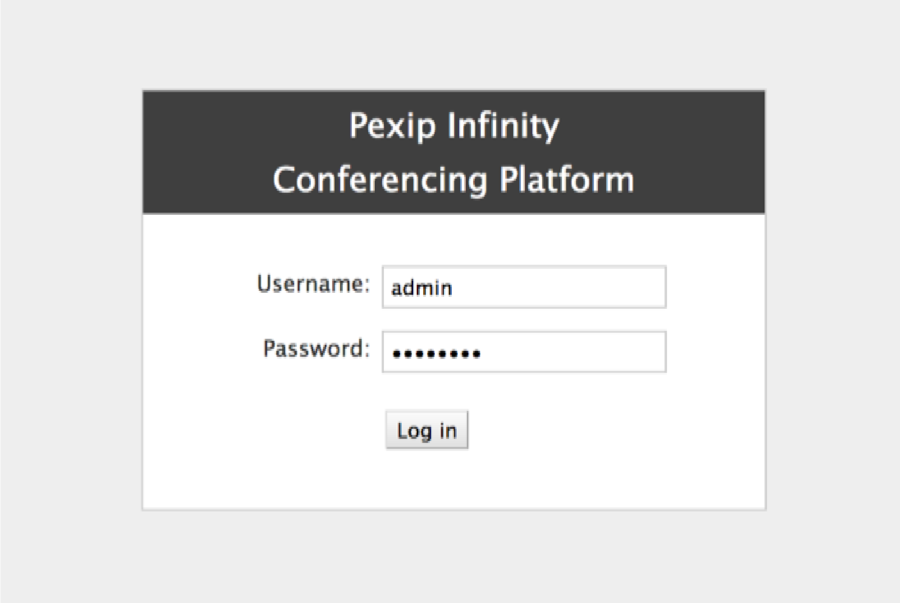
Cisco WebEx (Cloud only)	
Version	Version T28 or above
Device Access	FQDN of WebEx sites
User/Service Account	Local Site Admin - View-only WebEx account
TCP Ports	vAnalytics Data Collector to the WebEx Cloud TCP 443 (https)

9 Pexip Infinity

9.1 Validate the Service Account for Pexip Infinity

The account used by vAnalytics for connection to Pexip Infinity is the Pexip Management Node admin account that is used to log into the Pexip Management Web Portal. To verify the credentials for the Pexip Management Node, please follow these steps:

1. Open a web browser and navigate to the domain name or IP address of the Pexip Management Node.
2. Enter the admin username and password for the Pexip Management Node.
3. Ensure you can successfully log into the Pexip Management Node.



Pexip Infinity
Conferencing Platform

Username: admin

Password: •••••••••

Figure 9-1: Pexip Management Node Login Page

Note: If the Pexip Management Node is LDAP-integrated ***, only a local admin account can be used*** *for the Vyopta vAnalytics Pexip Connector. If the User Authentication Source is set to LDAP database only,* ***the Pexip admin account must be used*** *.*

9.2 Add a Pexip Connector

To add a Pexip Connector requires the following:

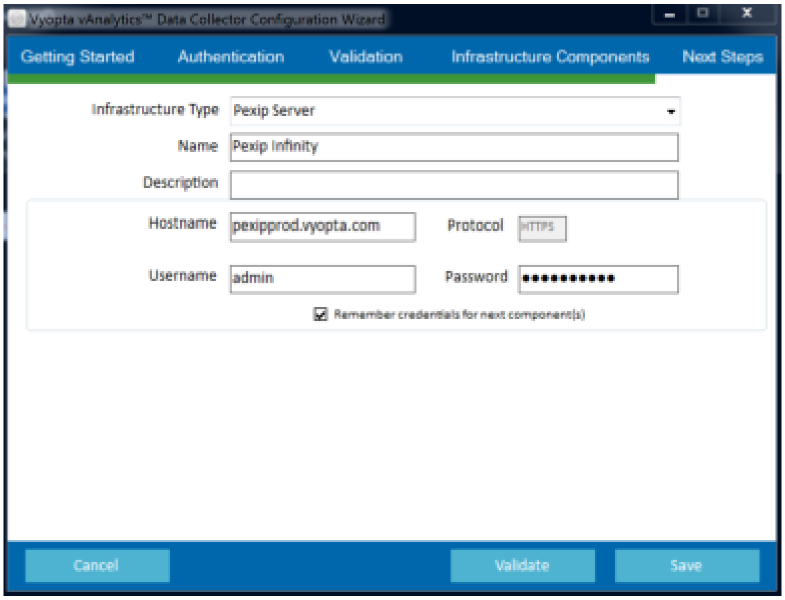
- Access through a web browser to the Pexip Node from the vAnalytics Data Collector
- Credentials for the admin account on the Pexip Management Node from the previous section

Please follow the instructions below to add a Pexip Infinity device:

1. Select *Pexip Server* in the Infrastructure Type drop-down menu.
2. Enter the infrastructure name. This will be the name displayed for the video device in the Configuration Utility and within Vyopta's Applications Management Portal.

> *Note: We recommend using hostname rather than IP as IP addresses are subject to change. It is also helpful to name the infrastructure in a 'friendly' or easily understood way.*

3. Enter the description of the video device. This can include the device type, location, and other unique identifiers.
4. Enter the Pexip Management Node hostname or IP address.
5. Enter the username and password for the administrator account.
6. Click Validate to confirm that vAnalytics can connect to the Pexip Management Node.
7. If the connection to the Pexip Node succeeded, click the Save button.


Vyopta vAnalytics™ Data Collector Configuration Wizard
Getting Started
Authentication
Validation
Infrastructure Components
Next Steps
Cancel
Validate
Save

Infrastructure Type: Pexip Server

Name: Pexip Infinity

Description:

Hostname: pexipprod.vyopta.com

Protocol: HTTPS

Username: admin

Password: ●●●●●●●●●●●

☑ Remember credentials for next component(s)

Figure 9-2: Adding Pexip infrastructure to vAnalytics

9.3 Pexip Infinity Reference Table

Pexip Infinity	
Version	Pexip Infinity 10 or above
Device Access	Server IP/FQDN of Pexip Management Node(s)
User/Service Account	Local account with full Administrator access
TCP Ports	vAnalytics Data Collector to Pexip Management Node(s) TCP 443*

10 Skype for Business (SfB)

10.1 Set up a Service Account for Skype for Business (SfB)

*Note: **Requires (at least) version 3.3.0.101 of the vAnalytics Data Collector**.*

The service account for this component will be added to two (2) SfB SQL Server databases, with read-only privileges. You must determine where the SfB SQL Server databases are located in your environment; on the SfB server(s) or elsewhere.

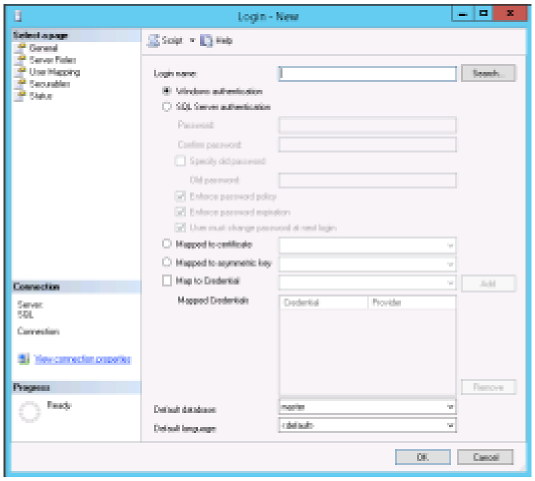
Note: The database account must be a local SQL account; AD accounts are not permitted.

Once you have identified where the SQL Server is located, you must verify that the server has Microsoft SQL Server Management Studio or download the software application to your local computer. To create a service account on the SfB SQL Server, perform the following:

1. Using SQL Server Management Studio, connect to the database used by SfB.
2. Log in with a SQL Server Administrator account or Local Administrator account.

Note: The administrator account must have write privileges to create a service account.

3. Navigate to the Security > Logins folder.
4. Right click on the Logins folder and choose *New Login*, which should display the following:



Login name:

● Windows authentication

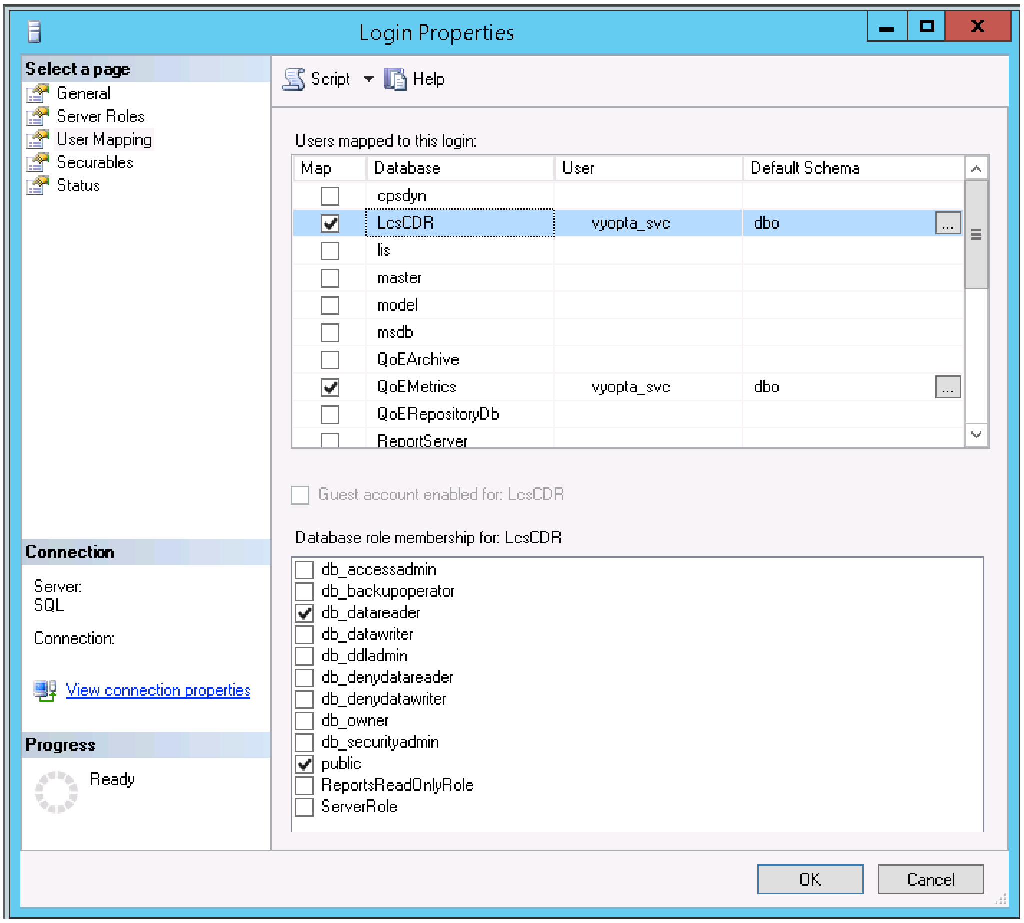
○ SQL Server authentication

Default database: master

Default language: <default>

Figure 10-1: SQL User Creation Screen

5. Create a local database user account with the following information:
6. Fill in the Login Name. We recommend using a descriptive name like *vyopta_svc*, as has been done in this example.
7. Select *SQL Server Authentication*.
8. Assign a Password and confirm the password.
9. Uncheck Enforce Password Policy.
10. Select *User Mapping* in the left-hand column.
11. Select the *LcsCDR* database to provide the account access to the database.
12. Once the database has been selected, you must identify the role membership. Select the *db_datareader* and *public* roles.
13. Repeat steps 12 and 13 for the *QoEMetrics* database in the database List.
14. Click OK to create the user.



Server:
SQL

Connection:

View connection properties

Ready

Users mapped to this login:

Map	Database	User	Default Schema
□	cpsdyn		
☑	LcsCDR	vyopta_svc	dbo
□	lis		
□	master		
□	model		
□	msdb		
□	QoEArchive		
☑	QoEMetrics	vyopta_svc	dbo
□	QoERepositoryDb		
□	ReportServer		

□ Guest account enabled for: LcsCDR

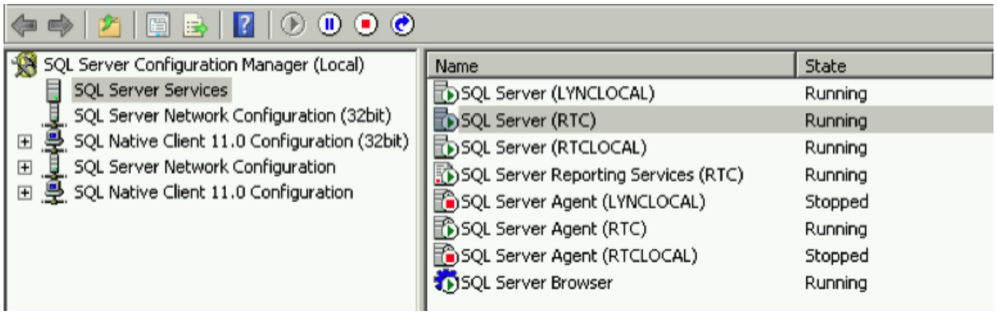
Database role membership for: LcsCDR

□ db_accessadmin
□ db_backupoperator
☑ db_datareader
□ db_datawriter
□ db_ddladmin
□ db_denydatareader
□ db_denydatawriter
□ db_owner
□ db_securityadmin
☑ public
□ ReportsReadOnlyRole
□ ServerRole

Figure 10-2: SQL User Role Mapping Screen

15. You will need to identify the Instance Name of the SQL Server hosting the Skype for Business database that will be the target of the vAnalytics Data Collector. Your database administrator may be able to provide this information directly, or you can perform the following:

a. Open the Microsoft SQL Server Configuration Manager application and select the SQL Server Services tab as displayed below:


SQL Server Configuration Manager (Local)
SQL Server Services
SQL Server Network Configuration (32bit)
SQL Native Client 11.0 Configuration (32bit)
SQL Server Network Configuration
SQL Native Client 11.0 Configuration

Name	State
SQL Server (LYNCLOCAL)	Running
SQL Server (RTC)	Running
SQL Server (RTCLOCAL)	Running
SQL Server Reporting Services (RTC)	Running
SQL Server Agent (LYNCLOCAL)	Stopped
SQL Server Agent (RTC)	Running
SQL Server Agent (RTCLOCAL)	Stopped
SQL Server Browser	Running

Figure 10-3: SQL Server Configuration Manager

b. Identify the Instance Name of the SQL Server hosting the SfB Database. In the example above the SQL Server Instance Name is RTC.

c. Document this information to use in adding the vAnalytics SfB Connector.

You have now created a new database read-only user account on the SfB database. This account is configured to be a service account for use in the vAnalytics System Configuration Utility to set up the connection to the appropriate service.

10.2 Add a Microsoft Skype for Business Connector

To add a Microsoft Skype for Business Server Connector requires the following:

- Access to the FQDN/IP address of the Server hosting the Skype for Business SQL Databases from the vAnalytics Data Collector
- Credentials for the Microsoft SQL Server service account created in the previous section
- Knowledge of the SQL port type (static or dynamic) and if dynamic, the port value defined within Microsoft SQL Configuration Manager
- TCP/IP Connectivity enabled for the SQL Server within SQL Configuration Manager

Please follow the instructions below to add Microsoft Skype for Business:

1. Select *Microsoft Skype for Business* in the Infrastructure Type drop-down menu.
2. Enter the infrastructure name. This will be the name displayed for the video device in vAnalytics.
3. Enter the description of the video device. This can include the device type, location, and other unique identifiers.
4. Click Next.
5. Enter the SQL Server Database hostname (or IP address).

Note: We recommend using hostname rather than IP as IP addresses are subject to change. It is also helpful to name the infrastructure in a 'friendly' or easily understood way.

6. Leave the Port Number of the SQL Server blank (unless changed from default value).
7. Click Validate to ensure that the vAnalytics application can connect to the host.
8. Click Next.
9. Add the **LcsCDR** SQL Server Instance Name and Database Name.
10. Enter the username and password of the Microsoft SQL Server service account created previously.
11. Click Validate to ensure that the vAnalytics application can connect to the **LcsCDR** database.
12. If the connection to the **LcsCDR** database succeeds, click the Next button.
13. Repeat steps 9 through 11 for the **QoEMetrics** database.
14. If the connection to the **QoEMetrics** database succeeds, click the Next button.
15. Enter the Front-End Server Hostname, Username, and Password.
16. Click Validate and, if successful, click the Save button.

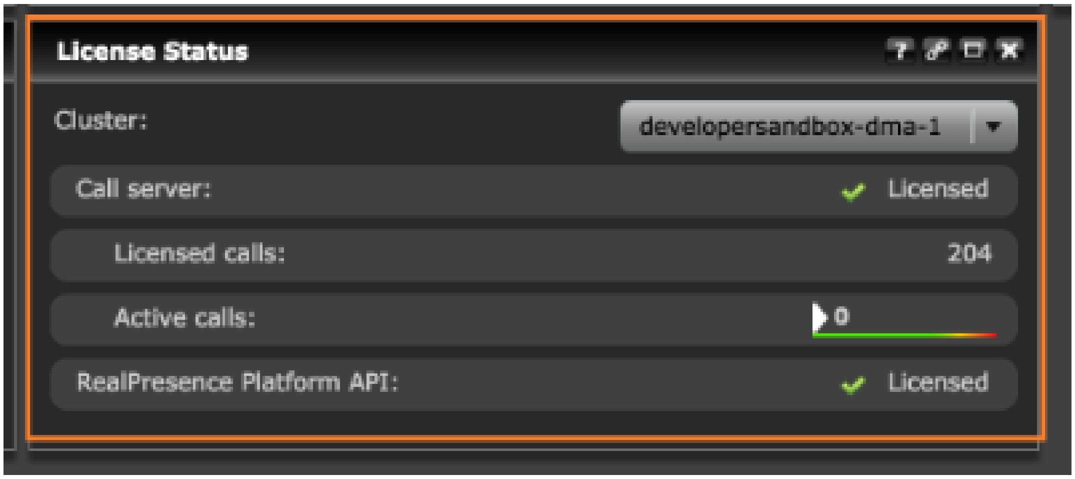
10.3 Microsoft Skype for Business

Skype for Business	
Version	Version 2015 or above
Device Access	Server IP/FQDN of S4B/Skype for Business database server/cluster responsible for reporting
User/Service Account	Local read-only database account that has access to the 'LcsCDR' and 'QoEMetrics' databases.
TCP Ports	* vAnalytics Data Collector to SQL database server/cluster TCP 1433* * Port can vary depending on customer environment; Exact port to be provided by Customer Skype for Business DBA team

11 Polycom RealPresence Distributed Media Application (DMA)

11.1 Verify API Licensing and Set up Service Account for Polycom RealPresence Distributed Media Application (DMA)

Note: The Polycom DMA must have the appropriate API License in order to activate the API for use with external applications. Confirm that the RealPresence Platform API is licensed through the DMA management interface as shown below:



License Status

Cluster: developersandbox-dma-1

Call server: ✓ Licensed

Licensed calls: 204

Active calls: 0

RealPresence Platform API: ✓ Licensed

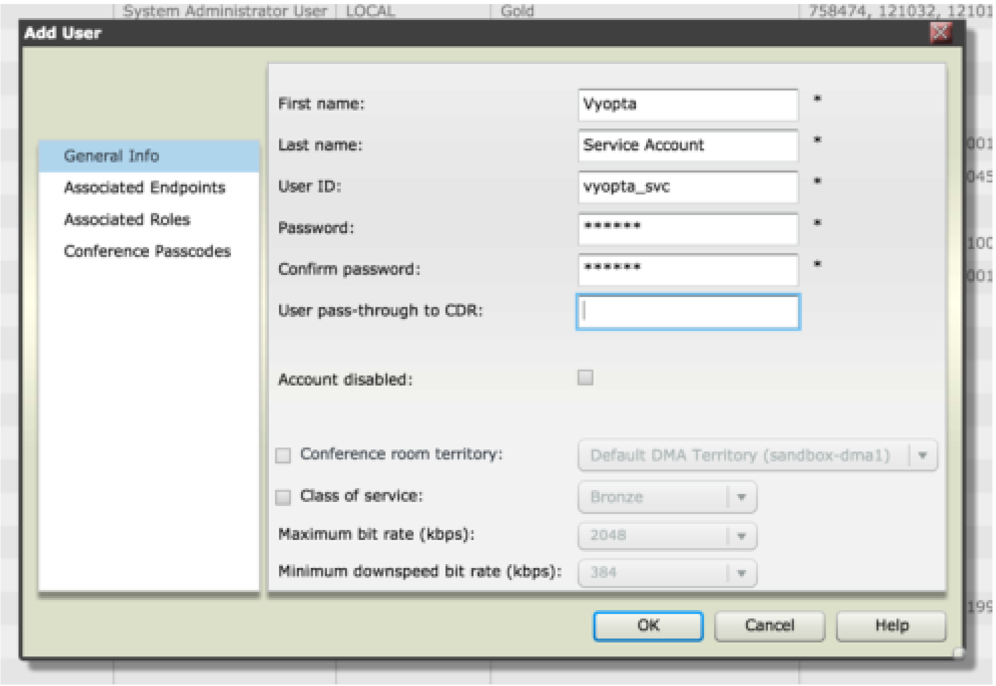
Figure 11-1: Polycom API Licensing

To confirm that the RealPresence Platform API is licensed, please complete the following:

1. Log into the DMA Management Interface.
2. Navigate to the Dashboard.
3. Add the License Status Panel (not added by default).
4. Ensure that the RealPresence Platform API displays *Licensed*.

Once the API has been verified or activated, a service account, which must be a local account with administrator credentials, is required. To add and verify the credentials for Polycom DMA, complete the following:

1. Open a web browser and navigate to the domain or IP address of the Polycom DMA.
2. Log in as an administrator using your username and password.
3. Navigate to the User > Users tab to open up the User Administration Panel.
4. Select Add to add the required user vAnalytics service account.
5. Enter the Name, User ID, and Password for the service account.
6. Select the Associated Roles tab and add the Administrator role.
7. Click OK to add the user account.
8. Log out of the Polycom DMA and verify that you can successfully log in using the service account credentials.



First name: Vyopta *
Last name: Service Account *
User ID: vyopta_svc *
Password: ****** *
Confirm password: ****** *
User pass-through to CDR:
Account disabled: □
□ Conference room territory: Default DMA Territory (sandbox-dma1)
□ Class of service: Bronze
Maximum bit rate (kbps): 2048
Minimum downspeed bit rate (kbps): 384

Figure 11-2: Polycom DMA Add User Menu

11.2 Add a Polycom DMA Connector

To add a Polycom DMA Connector requires the following:

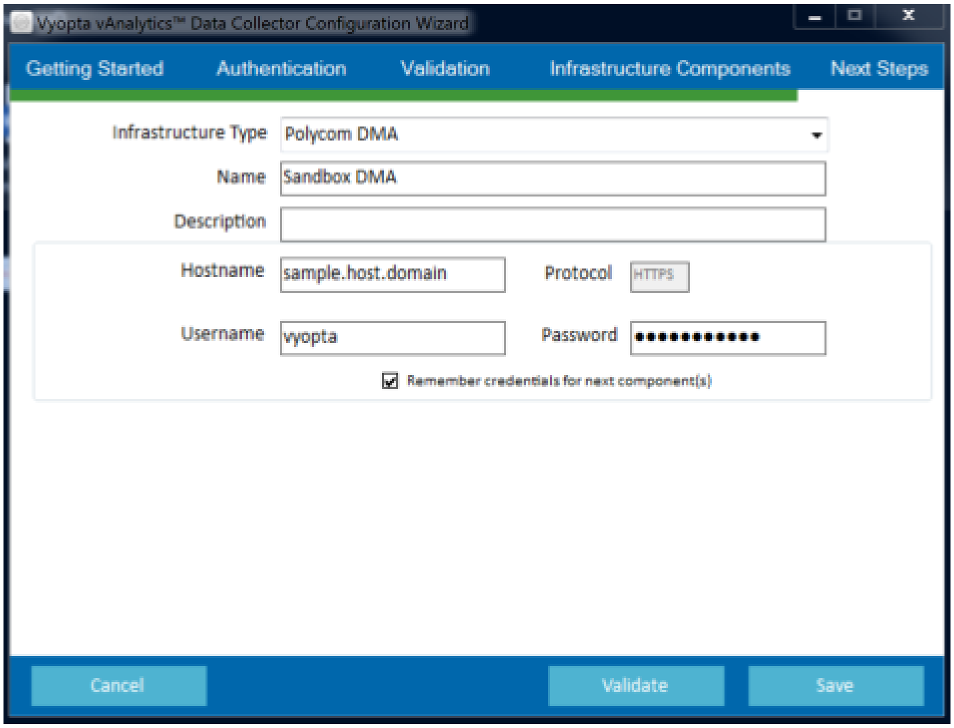
- Access to the FQDN/IP address of the DMA from the vAnalytics Data Collector
- Port 8443 must be open between the vAnalytics Data Collector and the Polycom DMA
- Credentials for the user service account on the Polycom DMA
- Registered and operating Polycom API License for each DMA

Please follow the instructions below to add each DMA instance:

1. Select *Polycom DMA* from the Infrastructure Type drop-down menu.
2. Enter the infrastructure name. This will be the name displayed for the video device in the Configuration Utility and within Vyopta's Applications Management Portal.

Note: We recommend using hostname rather than IP as IP addresses are subject to change. It is also helpful to name the infrastructure in a 'friendly' or easily understood way.

3. Enter the description of the device. This can include the device type, location, and other unique identifiers.
4. Enter the hostname or IP address followed by `:8443`
5. Enter the username and password for the user service account.
6. Click Validate to ensure that the vAnalytics application can connect.
7. If the connection to the Polycom device succeeds, click the Save button.



Vyopta vAnalytics™ Data Collector Configuration Wizard

Infrastructure Type: Polycom DMA
Name: Sandbox DMA
Description:
Hostname: sample.host.domain
Protocol: HTTPS
Username: vyopta
Password: ●●●●●●●●●●●●
☑ Remember credentials for next component(s)

Figure 11-3: Polycom DMA Configuration Example

11.3 Polycom RealPresence Distributed Media Application (DMA) Reference Table

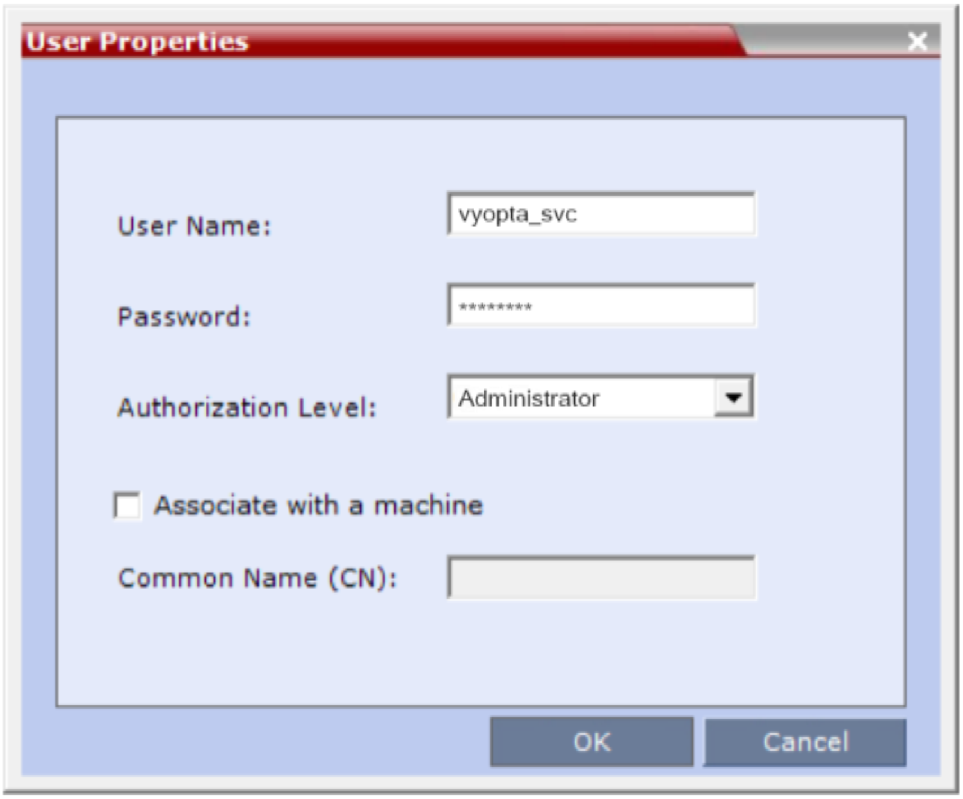
Polycom RealPresence Distributed Media Application (DMA)	
Version	DMA version 6.2 or above
Device Access	Server IP/FQDN
User/Service Account	Local account with full Administrator read/write or Provisioner privileges.
TCP Ports	vAnalytics Data Collector to the DMA device(s) TCP 8443
API License	Note: Requires the RealPresence Platform API license per DMA device

12 Polycom RealPresence Collaboration server (RMX)

12.1 Set up a Service Account for Polycom RealPresence Collaboration server (RMX)

The required service account must be an account with full read/write administrator credentials. The Polycom API will not allow an administrator account with read-only privileges to retrieve CDR data. To add and verify the credentials for the Polycom RMX, complete the following:

1. In the Polycom RMX Manager application click Users.
2. Click New User to open the User Properties dialog box.
3. Enter the username `vyopta_svc` in the User Name field for the vAnalytics user service account.
4. Enter the password in the Password field.
5. Select *Administrator* in the Authorization Level drop-down field.
6. Click OK to add the user account.
7. Log out of the Polycom RMX Manager application and verify that you can successfully log in using the service account credentials.



User Name: vyopta_svc

Password: *********

Authorization Level: Administrator

□ Associate with a machine

Common Name (CN):

Figure 12-1: Polycom RMX Add User Menu

12.2 Add a Polycom RMX Connector

To add a Polycom RMX Connector requires the following:

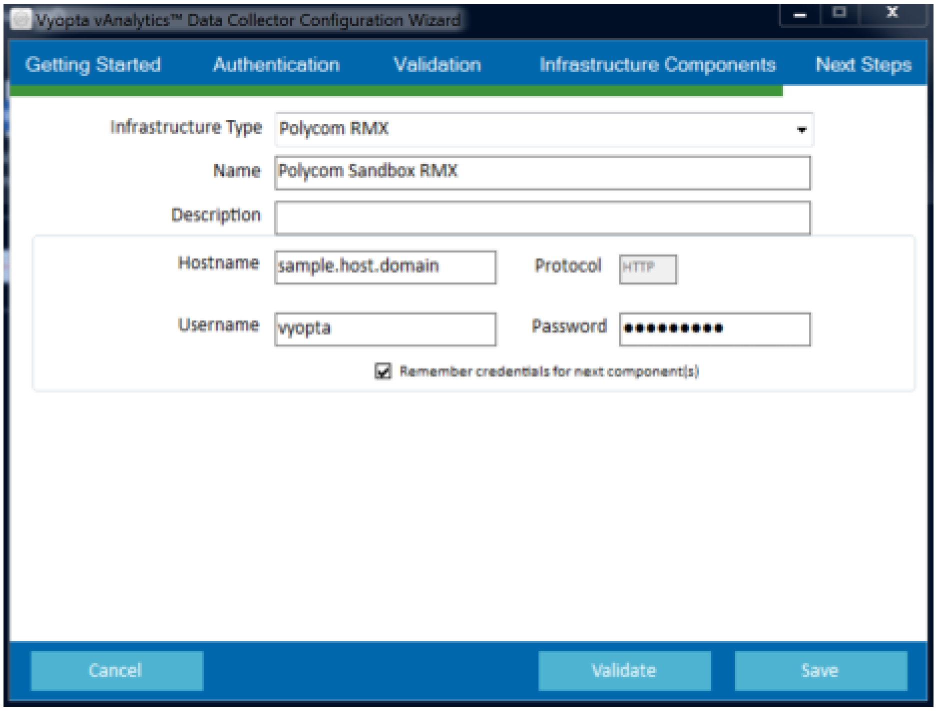
- Access to the FQDN/IP address of the RMX from the vAnalytics Data Collector
- Port 80/443 must be open between the vAnalytics Data Collector and the Polycom RMX
- Credentials for the user service account on the Polycom RMX

Please follow the instructions below to add each RMX instance:

1. Select *Polycom RMX* from the Infrastructure Type drop-down menu.
2. Enter the infrastructure name. This will be the name displayed for the video device in the Configuration Utility and within Vyopta's Applications Management Portal.

Note: We recommend using hostname rather than IP as IP addresses are subject to change. It is also helpful to name the infrastructure in a 'friendly' or easily understood way.

3. Enter the description of the device. This can include the device type, location, and other unique identifiers.
4. Enter the hostname or IP address.
5. Enter the username and password for the user service account.
6. Click Validate to ensure that the vAnalytics application can connect.
7. If the connection to the Polycom RMX device succeeds, click the Save button.


Vyopta vAnalytics™ Data Collector Configuration Wizard
Getting Started
Authentication
Validation
Infrastructure Components
Next Steps
Cancel
Validate
Save

Infrastructure Type: Polycom RMX

Name: Polycom Sandbox RMX

Description:

Hostname: sample.host.domain

Protocol: HTTP

Username: vyopta

Password: ●●●●●●●●●●

☑ Remember credentials for next component(s)

Figure 12-2: Polycom RMX Configuration Example

12.3 Polycom RealPresence Collaboration server (RMX) Reference Table

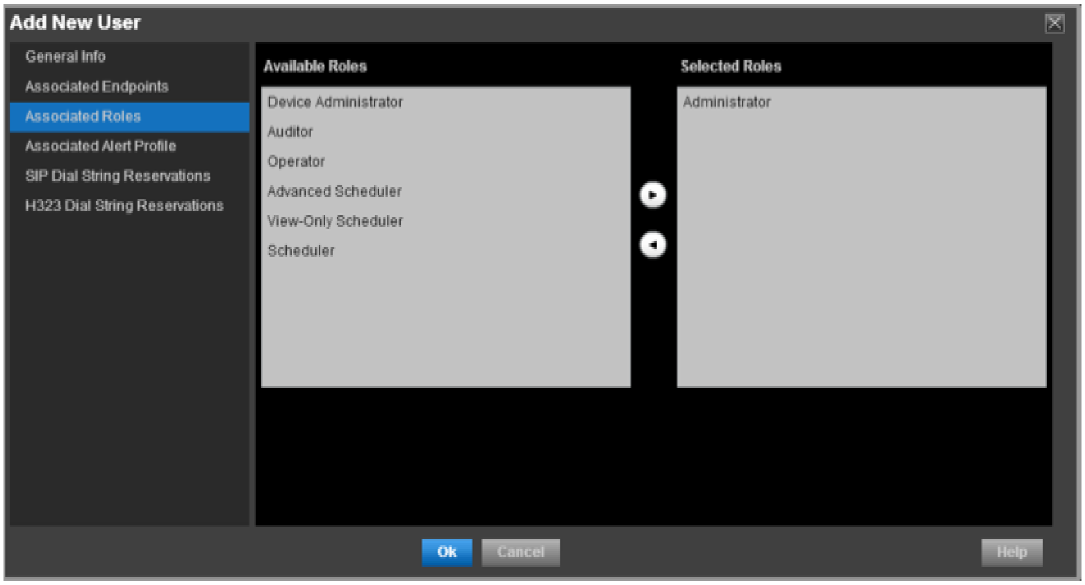
Polycom RealPresence Collaboration server (RMX)	
Version	RMX 8.5 or above
Device Access	Server IP/FQDN
User/Service Account	Local account with full Administrator read/write or privileges. Note: unable to use RMX read-only administrator due to limitation with API for CDR access.
TCP Ports	vAnalytics Data Collector to the RMX device(s) TCP 80/443

13 Polycom RealPresence Resource Manager (RPRM)

13.1 Verify API Licensing and Set up a Service Account for Polycom RealPresence Resource Manager (RPRM)

Similar to Polycom DMA (see *Section 11.1 - Verify API Licensing and Set up a Service Account for Polycom RealPresence Distributed Media Application (DMA)*), the Polycom RPRM must have the appropriate API license in order to activate the API for use with external applications. Once the API has been verified or activated, a service account, which must be a local account with administrator credentials, is required. To add and verify the credentials for Polycom RPRM complete the following:

1. Open a web browser and navigate to the domain or IP address of the Polycom RPRM.
2. Log in as an administrator using your username and password.
3. Navigate to the User > Users tab to open up the User Administration Panel.
4. Select Add to add the required vAnalytics user service account.
5. Enter the Name, User ID, and Password for the service account.
6. Select the Associated Roles tab and add the Administrator role.
7. Click OK to add the user account.
8. Log out of the Polycom RPRM and verify that you can successfully log in using the service account credentials.



Selected Roles
Administrator

Figure 13-1: Polycom RPRM Add User Associated Roles Menu

13.2 Add a Polycom RPRM Connector

To add a Polycom RPRM Connector requires the following:

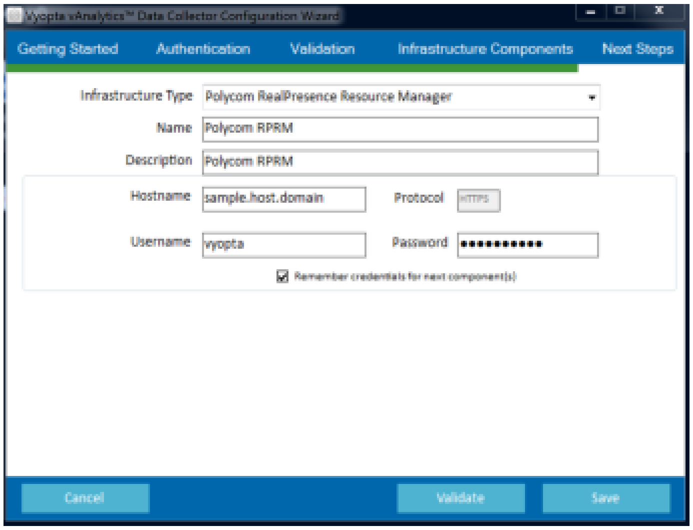
- Access to the FQDN/IP address of the RPRM from the vAnalytics Data Collector
- Port 8443 must be open between the vAnalytics Data Collector and the Polycom RPRM
- Credentials for the user service account on the Polycom RPRM
- Registered and operating Polycom API License for each RPRM

Please follow the instructions below to add each RPRM instance:

1. Select *Polycom RealPresence Resource Manager* from the Infrastructure Type drop-down menu.
2. Enter the infrastructure name. This will be the name displayed for the video device in the Configuration Utility and within Vyopta's Applications Management Portal.

> *Note: We recommend using hostname rather than IP as IP addresses are subject to change. It is also helpful to name the infrastructure in a 'friendly' or easily understood way.*

3. Enter the description of the device. This can include the device type, location, and other unique identifiers.
4. Enter the hostname or IP address followed by `:8443`
5. Enter the username and password for the user service account.
6. Click Validate to ensure that the vAnalytics application can connect.
7. If the connection to the Polycom device succeeds, click the Save button.


Vyopta vAnalytics™ Data Collector Configuration Wizard
Getting Started
Authentication
Validation
Infrastructure Components
Next Steps
Cancel
Validate
Save

Infrastructure Type: Polycom RealPresence Resource Manager

Name: Polycom RPRM

Description: Polycom RPRM

Hostname: sample.host.domain

Protocol: HTTPS

Username: vyopta

Password: ●●●●●●●●●●●

☑ Remember credentials for next component(s)

Figure 13-2: Polycom RPRM Configuration Example

13.3 Polycom RealPresence Resource Manager (RPRM) Reference Table

Polycom RealPresence Resource Manager (RPRM)	
Version	RPRM version 8.2 or above
Device Access	Server IP/FQDN
User/Service Account	Local account with full Administrator read/write, device administrator or Operator privileges
TCP Ports	vAnalytics Data Collector to RPRM TCP 8443
API License	Note: Requires the RealPresence Platform API license

14 Vidyo Management Portal

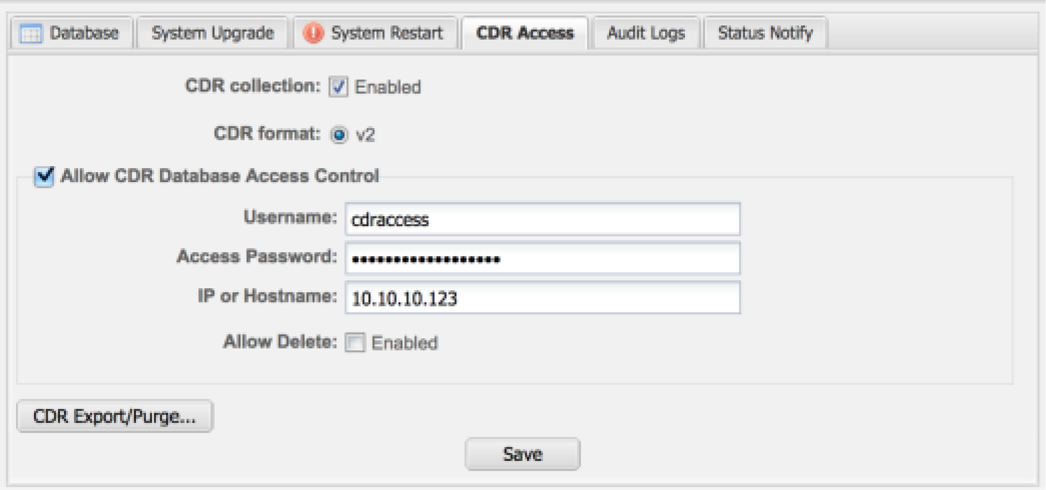
14.1 Enabling CDR Access in the Vidyo Management Portal

CDR Access for the vAnalytics Data Collector must be enabled using a Super Admin account as outlined below:

1. Open a web browser and navigate to the domain or IP address of the Vidyo Router Super Admin portal.
2. Log in with a Super Admin account.
3. Select Settings > Maintenance > CDR Access.
4. Perform the following to configure the **cdraccess** account for CDR collection:

   a. Ensure the CDR Collection is *Enabled.*
   b. Set the Access Password to the cdraccess account.
   c. Enter the IP address or Hostname of the vAnalytics Data Collector in your environment.
   d. Verify that the “Allow Delete” is not Enabled (i.e., the checkbox is unchecked).

5. Select Save to finish the CDR Account configuration.
6. Log out of the Vidyo Management Portal.



CDR collection: ☑ Enabled

CDR format: ● v2

☑ Allow CDR Database Access Control

Username: cdraccess

Access Password: ••••••••••••••••••

IP or Hostname: 10.10.10.123

Allow Delete: □ Enabled

Figure 14-1: CDR Account Configuration Settings

14.2 Add a Vidyo Management Portal Connector

To add a Vidyo Management Portal Connector requires the following:

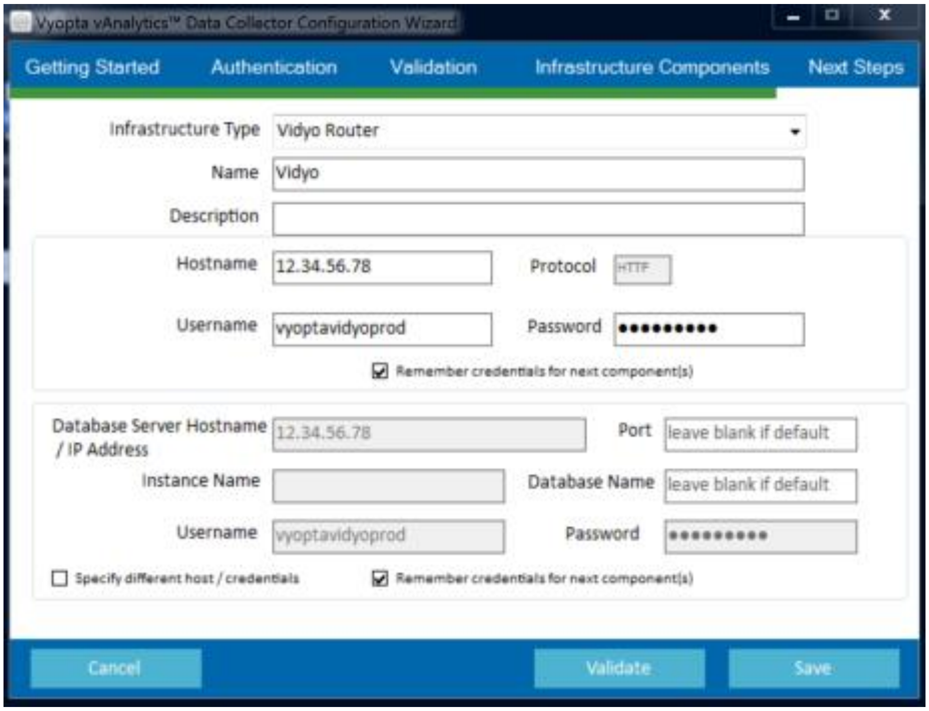
- Access to the Vidyo Management Portal and database from the vAnalytics Data Collector
- Credentials for the cdraccess account on the Vidyo Management Portal

Please follow the instructions below to add the video appliance:

1. Select *Vidyo Router* in the Infrastructure Type drop-down menu.
2. Enter a suitable name and description into the appropriate fields.

Note: We recommend using hostname rather than IP as IP addresses are subject to change. It is also helpful to name the infrastructure in a 'friendly' or easily understood way.

3. Enter the Vidyo Management Portal IP address or Hostname.
4. Enter `cdraccess` for the Username and the appropriate Password for the Account.
5. Click Validate to ensure that the vAnalytics application can connect.
6. If the connection to the video component succeeded, click the Save button.


Vyopta vAnalytics™ Data Collector Configuration Wizard
Getting Started
Authentication
Validation
Infrastructure Components
Next Steps
Cancel
Validate
Save

Infrastructure Type: Vidyo Router
Name: Vidyo
Description:
Hostname: 12.34.56.78
Protocol: HTTP
Username: vyoptavidyoprod
Password: ●●●●●●●●●
☑ Remember credentials for next component(s)

Database Server Hostname / IP Address: 12.34.56.78
Port: leave blank if default
Instance Name:
Database Name: leave blank if default
Username: vyoptavidyoprod
Password: ●●●●●●●●●
□ Specify different host / credentials
☑ Remember credentials for next component(s)

Figure 14-2: Vidyo Infrastructure Information Example

14.3 Vidyo Management Portal Reference Table

VIDYO Management Portal	
Version	Vidyo version 3.1 or above
Device Access	Server IP/FQDN of Vidyo Management Portal
User/Service Account	Local read-only account named ‘cdraccess’
TCP Ports	vAnalytics Data Collector to Vidyo Management Portal TCP 443 & 3306

15 Zoom Server

15.1 Create API Key and API Secret

To create an API Key and API secret for Zoom, login as an administrator and perform the following:

1. Login to Zoom using an existing administrator account (must be an admin account).
2. Select 'Zoom for Developers' under the 'Advanced' heading.
3. In the new window that opens (Zoom for Developers), select the **REST APIs** button.
4. Select the ‘Credential’ tab.

Note: From the ‘Credential’ tab, you can verify whether the Zoom API Key is enabled. If you see ‘Disable API Integration’, proceed using the API credentials already generated.

5. From the credential tab, click [**Enable API Integration**].

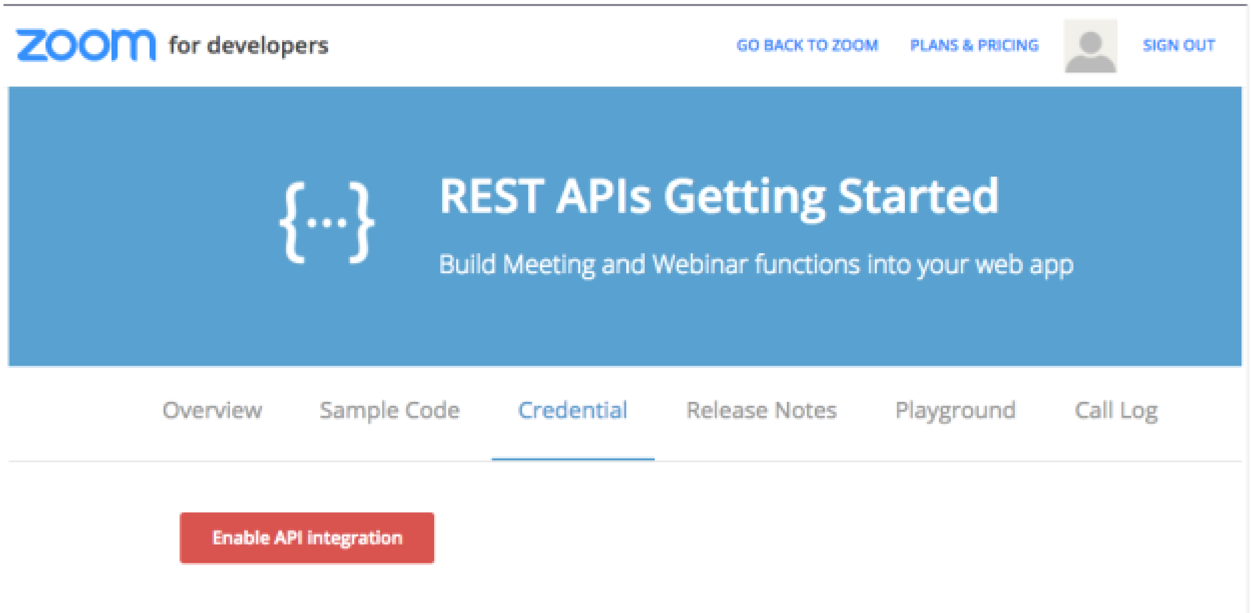


Figure 15-1: Enabling API Integration for Zoom

That’s it! You should now have your API Key and API Secret, with which Zoom can be added to the vAnalytics Data Collector.

*Note: **Make sure to record your API Key and API Secret** as they will be used to connect Zoom via API.*

15.2 Add a Zoom Connector

To add a Zoom Connector requires the following:

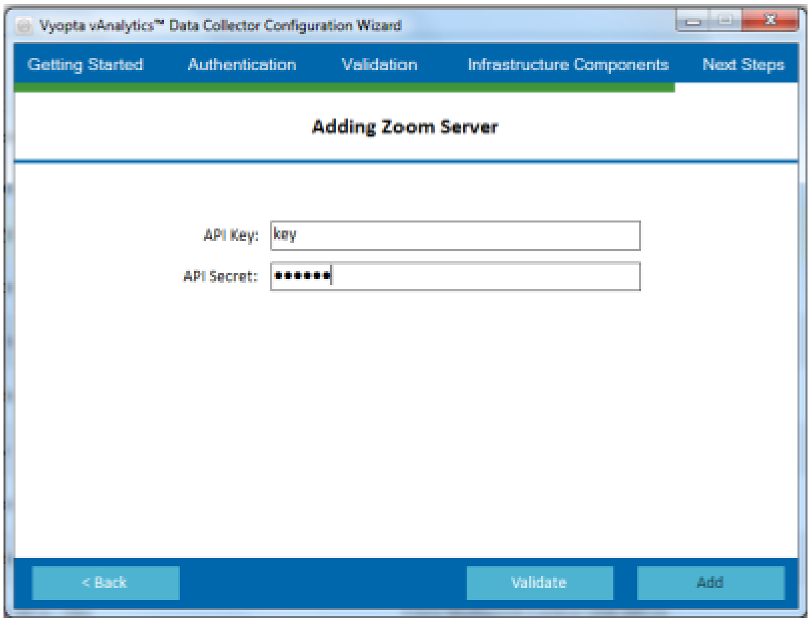
- Access to your organization's Zoom API URL
- Credentials for your API Key and API Secret
- Vyopta Data Collector version 3.4.1 or higher

Please follow the instructions below to add your Zoom instance to Data Collection:

1. Select *Zoom Server* in the Infrastructure Type drop-down menu.
2. Enter the Zoom name and description as desired.
3. Next, enter the default API URL and make sure SSL is checked.
4. Click Validate and Next if the API URL passes validation.

*Note: **The default Zoom API URL is "api.zoom.us", however this** should reflect the URL of the Zoom infrastructure and **may vary for on-premise deployments**..*

5. After that, enter the API Key and API Secret.
6. Click Validate to ensure that the vAnalytics application can connect.
7. If the connection succeeded, click the Save button.


Vyopta vAnalytics™ Data Collector Configuration Wizard
Getting Started
Authentication
Validation
Infrastructure Components
Next Steps
< Back
Validate
Add

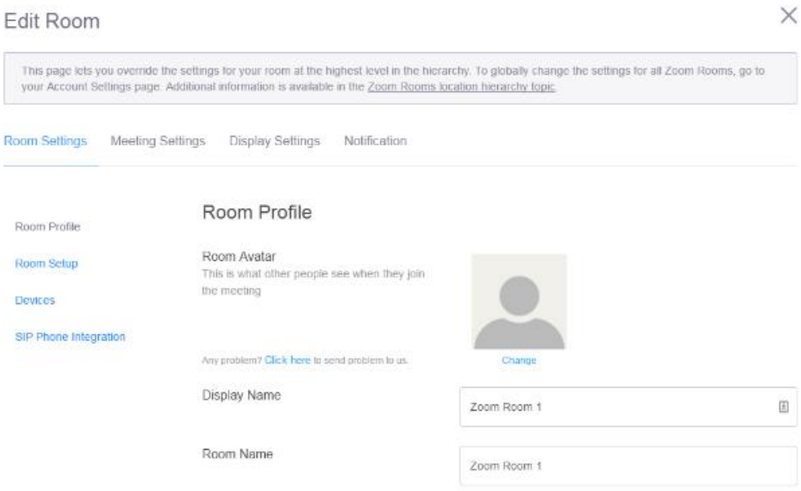
Adding Zoom Server

API Key: key

API Secret: ••••••

Figure 15-2: Adding a Zoom Server

Note: Enabling Zoom Rooms for data collection may require adjustments in the Zoom Room name and display name used by your organization. ***To enable Zoom Room tracking and matching, please note that all Zoom Room names and display names must be identical.*** *Additionally, all Room Names must be unique.*



Edit Room

This page lets you override the settings for your room at the highest level in the hierarchy. To globally change the settings for all Zoom Rooms, go to your Account Settings page. Additional information is available in the Zoom Rooms location hierarchy topic.

Room Profile

Room Avatar

This is what other people see when they join the meeting

Any problem? Click here to send problem to us.

Display Name: Zoom Room 1

Room Name: Zoom Room 1

Figure 15-3: Setting up matching Zoom Room name and display name

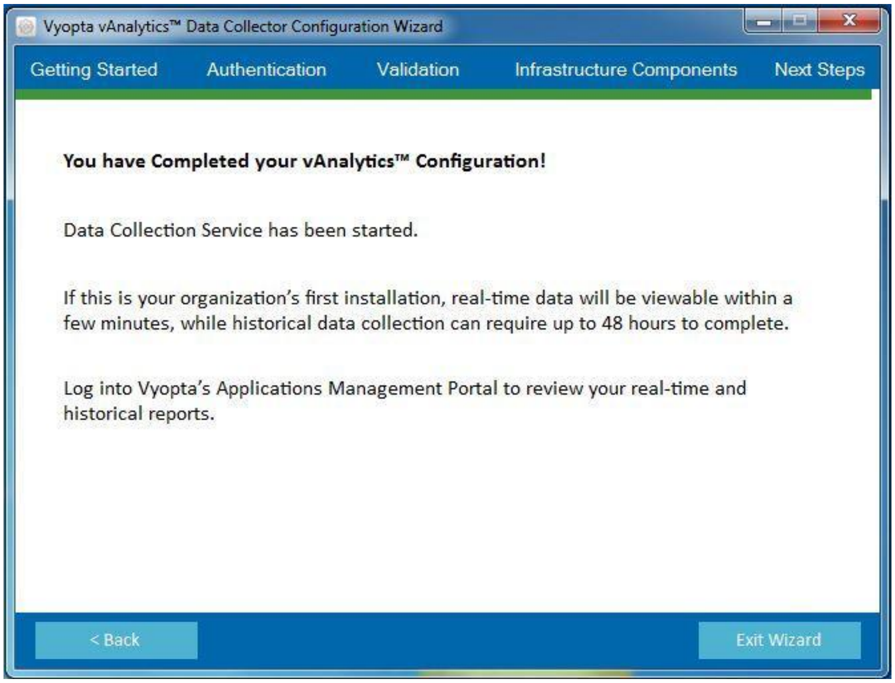
15.3 Zoom Server Reference Table

Zoom Server	
Data Collector	Vyopta Data Collector 3.4.1 or higher
User/Service Account	Zoom admin account with full Administrator privileges. Please note that admin rights are required to generate API key and shared secret.
TCP Ports	vAnalytics Data Collector to the Zoom Server TCP 443 (https)

16 Saving the vAnalytics™ Configuration and Starting the vAnalytics™ Service

16.1 Saving the vAnalytics™ Configuration and Starting the vAnalytics™ Service

After you have successfully added all of your video devices into the vAnalytics Configuration Utility, click the Next button and you will see the wizard starting the vAnalytics Service.


Vyopta vAnalytics™ Data Collector Configuration Wizard
Getting Started
Authentication
Validation
Infrastructure Components
Next Steps
< Back
Exit Wizard

You have Completed your vAnalytics™ Configuration!

Data Collection Service has been started.

If this is your organization's first installation, real-time data will be viewable within a few minutes, while historical data collection can require up to 48 hours to complete.

Log into Vyopta's Applications Management Portal to review your real-time and historical reports.

Figure 16-1: Vyopta vAnalytics Configuration Wizard

Congratulations! You have now installed and configured Vyopta's vAnalytics Data Collector within your video collaboration environment. It will take approximately 2 days to populate historical data in vAnalytics™, but you should be able to start seeing real-time data immediately, so go ahead and log in at http://vanalytics.vyopta.com now! If you have any questions or require assistance, please contact support@vyopta.com.

16.2 Troubleshooting a Failed Connection

If you receive an error while adding a video infrastructure device, there are a number of components that could be the result of the issue. Depending on your IT Organization, this typically requires involvement from your Network Administrator. There are, however, steps that you can use to troubleshoot your network connection.

Attempting to connect to the video device from a web browser will determine if the issue is with the connection to the infrastructure, a problem with the account on the video device, or information entered while adding the video device to the vAnalytics Configuration Utility. Please try the following steps to resolve these issues:

1. Open a web browser such as Chrome, Firefox, or Internet Explorer.
2. In your browser, type in the host name or IP address of the video device, then press enter. Wait for the webpage to load.
3. If you are unable to connect to the video device through a web browser, please verify that you are using the proper protocol (HTTP or HTTPS).
4. If you are able to connect to the video device through a web browser, verify that the web protocol matches the protocol used while adding the infrastructure.
5. Log into the video device using the configured username and password on the video device that was set up as part of the configuration process.
6. If you are unable to log in, ensure that you have the proper credentials for the account on the video device.
7. If you are able to log into the video device with the account credentials, ensure that the account is properly configured on the device.

If you continue to have issues connecting to the video device, you may have a network configuration issue or network proxy in place that needs to be addressed in the vAnalytics configuration. Please reach out to your network administrator to troubleshoot the network connection or contact **support@vyopta.com** for further assistance.

17 SolarWinds Integration

The Vyopta SolarWinds Integration allows you to monitor video conferences in coordination with your SolarWinds environment by enabling single click access to the network interface from video endpoints in Vyopta vAnalytics. This in turn enables faster resolutions to video issues by equipping UC managers and video team engineers with the ability to jump directly from real-time video issues to underlying network data. **Please note that there must be at least one Cisco switch in your environment to proceed.**

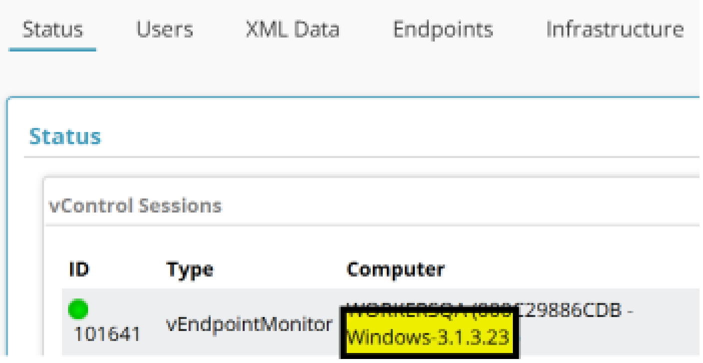
17.1 Requirements

To begin setup for the SolarWinds integration, please have:

- Credentials for a local SolarWinds account with Read Only Access (without account restrictions).
- The IP of the SolarWinds server:8787

Please also note the following prerequisites:

1. Interfaces on Cisco switches must be enabled.
2. CDP must be enabled on switches and endpoints.
3. Endpoint Monitor Software version must be version 3.1.3.15 or higher.



Status

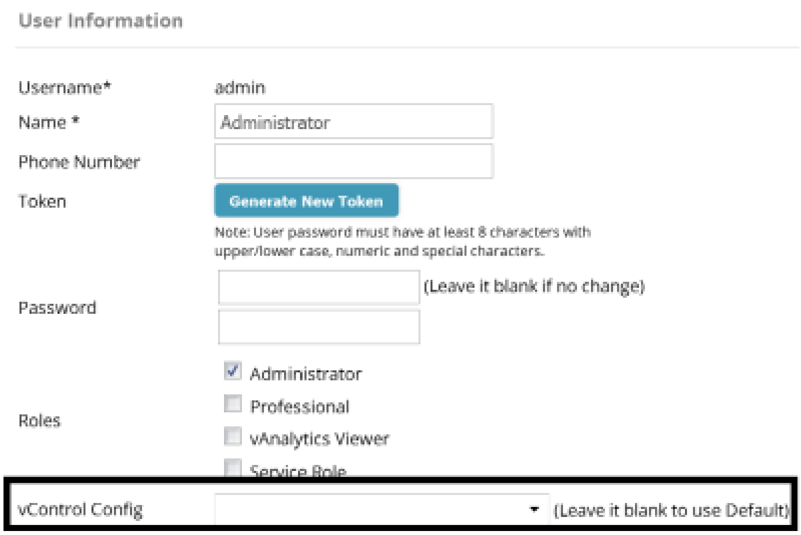
vControl Sessions

ID	Type	Computer
● 101641	vEndpointMonitor	WORKERSQA1(888C29886CDB - Windows-3.1.3.23

Figure 17-1: The Endpoint Monitor Version as seen in Status tab

> ***Note:*** *To verify Endpoint Monitor version, log into **apps.vyopta.com** and check Admin → Status. If you need to upgrade Endpoint Monitor, or do not have Endpoint Monitor, please contact **support@vyopta.com** for assistance.*

4. Endpoint Monitor service should have the **vControl Config** left blank



User Information

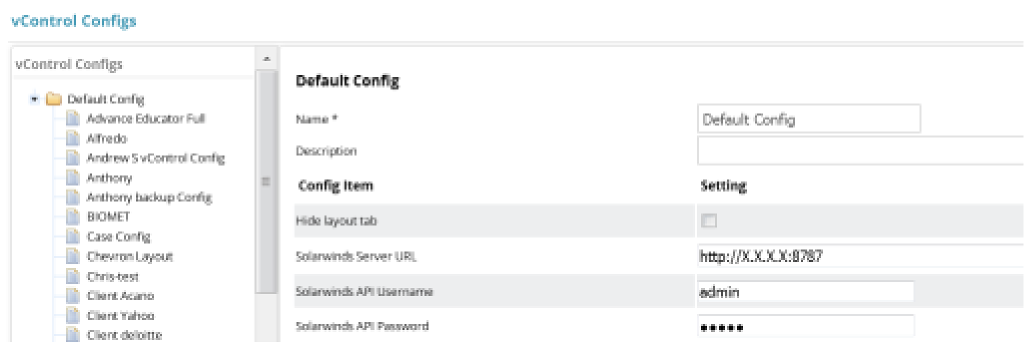
Username*	admin
Name *	Administrator
Phone Number	
Token	Generate New Token
	Note: User password must have at least 8 characters with upper/lower case, numeric and special characters.
Password	(Leave it blank if no change)
Roles	☑ Administrator □ Professional □ vAnalytics Viewer □ Service Role
vControl Config	(Leave it blank to use Default)

Figure 17-2: The Endpoint Monitor Version as seen in Status tab

17.2 Configuration

Configuring and enabling the SolarWinds integration can be accomplished by doing the following:

1. Log **into** apps.vyopta.com **with an account provisioned for Administrator access**
2. Navigate to vControl→ vControl Configs→ Default Config→ Config Item
3. Enter the SolarWinds Server URL/IP:8787, Username, and Password as indicated below



vControl Configs

vControl Configs

- Default Config
  - Advance Educator Full
  - Alfredo
  - Andrew S vControl Config
  - Anthony
  - Anthony backup Config
  - BIOMET
  - Case Config
  - Chevron Layout
  - Chris-test
  - Client Acano
  - Client Yahoo
  - Client deloitte

Default Config

Name *	Default Config
Description	

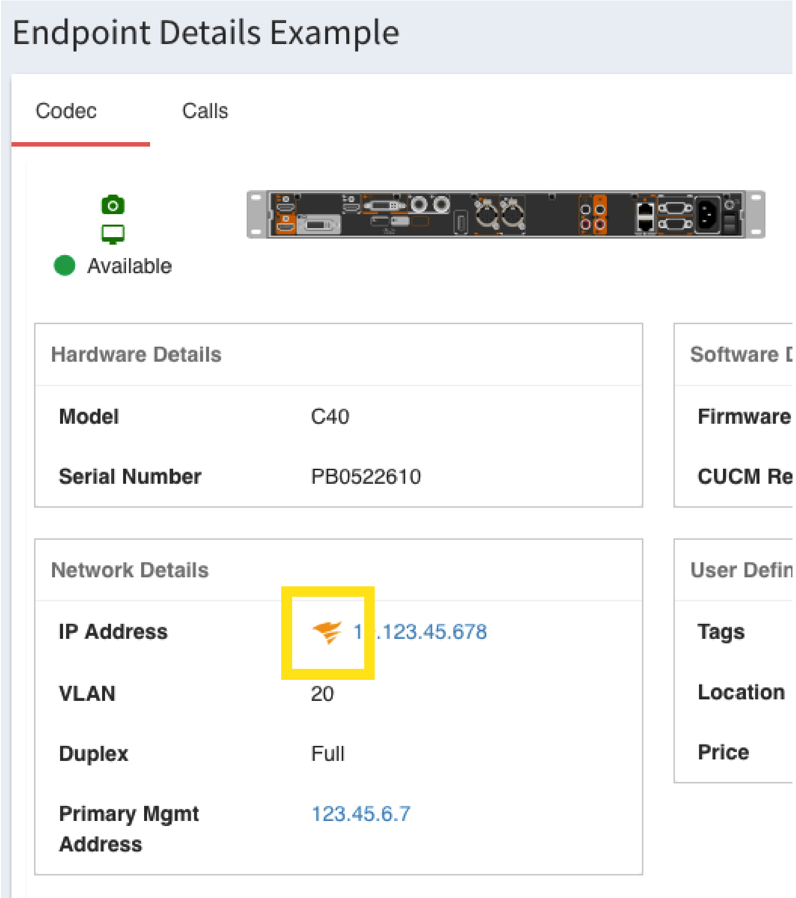
Config Item	Setting
Hide layout tab	□
Solarwinds Server URL	http://X.X.X.X:8787
Solarwinds API Username	admin
Solarwinds API Password	●●●●●

Figure 17-3: View of vControl configuration

Note: For the SolarWinds URL, it should have the default SolarWinds Information Service port in the url(SWIS): 8787

17.3 Verification

The integration should now be configured and should sync within a few hours. Once it has, it can be verified by logging into vAnalytics Realtime and navigating to the **Endpoints** tab. From there, you should be able to select a SolarWinds connected device by clicking on it. Then you can verify that the SolarWinds icon is shown in the Endpoint Details.



Endpoint Details Example

Codec Calls

Available

Hardware Details

Model	C40
Serial Number	PB0522610

Software D

Firmware

CUCM Re

Network Details

IP Address	1 .123.45.678
VLAN	20
Duplex	Full
Primary Mgmt Address	123.45.6.7

User Defin

Tags

Location

Price

Figure 17-4: SolarWinds icons in *Endpoint Details* of vAnalytics Realtime-> Endpoints tab

The icon will only be visible for SolarWinds connected devices from the Endpoint Details tab. However, if the SolarWinds icon does not appear by the following day, reach out to support@vyopta.com for further assistance. If you can see the SolarWinds logo, the integration is now ready to go!