Cisco TelePresence Management Suite Analytics Extension

Installation Guide

Version 1.2

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Introduction

This document specifies the system requirements and installation procedure for the Cisco TelePresence Management Suite Analytics Extension (Cisco TMSAE).

Cisco TMSAE is an online analytical processing (OLAP) system for Cisco TelePresence Management Suite (Cisco TMS) that provides advanced reporting functionality on your video network. It integrates with Business Intelligence (BI) applications, custom built applications, and other applications capable of connecting to an OLAP cube. The most communly used client is Microsoft Excel.

Cisco TMSAE consists of three elements:

- The application software, installed onto an existing Cisco TMS Server.
- The data warehouse databases, installed onto an existing Microsoft SQL Server.
- The clients used to access the data.

For a more complete technical overview, see *Cisco TelePresence Management Suite Analytics Extension Administrator Guide*.

Requirements for installation

Cisco TMS server

Cisco TMSAE must be installed onto a Cisco TMS server. The impact of the ETL (Extract, Transform, Load) job is normally insignificant and does not increase the operational requirements of Cisco TMS.

Cisco TMS	Version 12.6 to 14.2.x For compatibility with Cisco TMS 14.3, Cisco TMSAE 1.2.1 is required
Operating System	■ Windows Server 2008 (32-bit or 64-bit) ■ Windows Server 2008 R2
.NET	Version 3.5. Note that Cisco TMSAE is compatible with .NET 4.0. The installer will require .NET 3.5 be installed before proceeding.
Free disk space	20 MB for installation of the ETL (Extract, Transform, Load) service.
Other Requirements	IIS 7 Installations must have the IIS 6 Compatibility Component installed. Cisco TMS servers will already have this installed.

Analytics Extension option key

You must add an Analytics Extension option key to Cisco TMS before running the Analytics Extension installer. The option key has the format 113612XX-X-XXXXXXXX, and can be obtained by contacting your Cisco partner or reseller.

To enable the option key:

1. Open a web browser and log into your Cisco TMS website. You must have Site Administrator permissions for this procedure.
2. Navigate to **Administrative Tools > Configuration > General Settings**.
3. Click **Add Option Key** to open a prompt and add your option key.

After the option key is added, a new menu item called **Analytics Extension** appears under **Administrative Tools**.

Data warehouse SQL server

Cisco TMSAE does not impact the requirements for your existing Cisco TMS SQL server. However, some reconfiguration may be required, see Configuring Cisco TMS SQL server [p.9].

SQL Server	Microsoft SQL Server 2005 SP3 Standard Edition and Enterprise Edition Microsoft SQL Server 2008 or 2008 R2 Standard Edition and Enterprise Edition (32-Bit or 64-Bit editions supported) Note: Cisco TMSAE supports only till Cisco TMS version 15.5 as this version supports Microsoft SQL Server 2008. From Cisco TMS version 15.6, Microsoft SQL Server 2008 support has been deprecated. Hence, Cisco TMSAE will not work with Cisco TMS 15.6 and above.

Required components	■ SQL Database Services ■ Analysis Services Both components *must* use the same instance name and be on the same server. The SSAS Windows service must be configured to run as LocalSystem. If you have installed SSAS to run under another account, you must grant this account read access to the relational database (named **tmsng_dwh** by default) before you can run the ETL job.
Connections	■ TCP/IP protocol must be enabled. ■ If using a named instance, SQL Server Browser must be running.
Free disk space	150 MB for initial installation. Additional space required as data set grows; the data warehouse and cube will in most cases be about 20% of the size of the source Cisco TMS database. (This assumes that the Cisco TMS database is not purged regularly.)

The following guides by Microsoft are useful when installing and running SQL Server Analysis Services:

- *Installing SQL Server Analysis Services (SQL Server 2005)*
- *Considerations for Installing Analysis Services (SQL Server 2008)*

During installation, an SQL server is specified as the data warehouse server. We recommend not using the SQL server used by Cisco TMS.

Cisco TMS installations that use Microsoft SQL Server Express Edition cannot reuse this SQL server as their data warehouse server, and must specify another SQL server to use for their data warehouse server. Your Cisco TMS database may continue to use SQL Server Express if desired.

SQL Server Management Studio

While the desired results can also be achieved by using the command line, the instructions in Appendix: Preconfiguring the databases [p.21] assume that the administrator has access to SQL Server Management Studio.

User permissions and service user accounts

These are the minimum security permissions and service user accounts required by the installation. Note that the SQL logins and permissions must exist *prior* to running the installer:

- *Local administrator* permissions to the Cisco TMS Server.
- *Site administrator* permissions within the Cisco TMS application.
- An account with the *sysadmin* server role on the SQL server instance.
- Server-wide administrative permissions to the Analysis Services instance granted to the user account performing the installation.
- The username (domain\username format) and password of an existing Windows Domain user account that will act as the data warehouse Service User.
  - The specified account will be automatically be given the necessary rights to write and access data in the data warehouse server, Database, and cube.
  - We recommend using a dedicated non-administrator Windows service account for this purpose. As with all Windows service accounts, it should be created with the **Password never expires** option enabled.

- A valid SQL login for the Cisco TMS SQL server instance and a user with a minimum of *db_datareader* role for the Cisco TMS database.

The individual roles and servers are outlined in the Cisco TMSAE Components and Roles section of the Cisco TMSAE Administrator Guide.

SQL administrative rights can be supplied by a separate SQL Administrator if necessary. For detailed information, see Appendix: Preconfiguring the Databases.

Client software requirements

Any client that is able to connect to Microsoft SQL Server Analysis Services can be used. Microsoft supported technologies include:

- OLE DB for OLAP
- ADOMD or ADOMD.NET
- XML for Analysis

Network requirements

These are the network requirements for the Cisco TMSAE components.

Data warehouse server

SQL server

The default ports used by SQL server are destination ports TCP 1433 and UDP 1434. See Configuring Cisco TMS SQL server [p.9] for more on reconfiguring SQL server's port usage.

Accessed by: Cisco TMS web server, data warehouse analytics services instance

Analysis Services

Default Ports used by Analysis Services are destination ports TCP 2383 and UDP 2382.

Accessed by: Clients, Cisco TMS web server

Cisco TMS SQL Server

Default Ports used by SQL server are destination ports TCP 1433 and UDP 1434 .

Accessed by: Data warehouse SQL server instance, Cisco TMS web server

Cisco TMS Web Server

No new connections are made to the TMS web server by Cisco TMSAE.

Windows Server 2008 firewall settings

If Cisco TMS is installed on a Windows Server 2008 machine, the Windows Firewall will interfere with SQL Server's communications. Administrators can choose to do one of the following:

- Disable the Windows firewall.
- Configure the ports required for SQL server to be opened.

Cisco TMS embedded SQL server uses a named instance. Named instances use dynamic TCP ports by default, meaning that every time the Database Engine starts, it could use a different port. This makes configuring the firewall to allow outside traffic to named instances difficult. Microsoft recommends reconfiguring the Database Engine to use a static port, see Network requirements [p.7] above.

For instructions on configuring SQL server to listen to a specific port, see the Microsoft TechNet article Configuring a Fixed Port.

To open the firewall for SQL server traffic, open the Windows Firewall with the Advanced Security application. Set up new rules that allow both inbound and outbound TCP traffic for the port that Cisco TMS' instance of SQL server uses.

For more information on configuring the Windows Firewall to allow SQL server access, see the Microsoft TechNet article Configuring the Windows Firewall to Allow SQL Server Access.

Configuring Cisco TMS SQL server

For Cisco TMSAE to work, the following must be enabled on the SQL server:

- TCP/IP connections
- Remote logins
- The SQL Service Browser Windows service

By default, all of the above will be disabled on a Cisco TMS installation that uses embedded Microsoft SQL Server Express Edition.

To enable:

1. Log in to the Cisco TMS Windows server using an administrator account.
2. Go to **Start Menu > All Programs > Microsoft SQL Server 2008 > Configuration Tools** and open SQL Server Configuration Manager.
3. Locate **SQL Server Network Configuration > Protocols for SQLTMS** in the tree view. Right click **TCP/IP** and select **Enable**. You will get a notification about changes not taking effect until the service is restarted, but do not restart the service yet.
4. Go to **SQLTMS > Database Engine > Remote Connections**, select both **Local and remote connections** and **Using both TCP/IP and named pipes**, and click **Apply**.
5. Go to **SQLTMS > Database Engine > Service**. Click **Stop**, and wait for the database engine to stop.
6. Click **Start** to restart the database engine.
7. Go to **SQL Service Browser > Service**. Set **Startup type** to *Manual*, and start the service by clicking **Start**.

Installing Cisco TMSA

Before installing Cisco TMSAE, review Requirements for installation [p.5] and ensure that all requirements are met and that the necessary permissions are available.

If the person performing the installation does not have full Active Directory and Microsoft SQL Server privileges, follow the instructions in Appendix: Preconfiguring the databases [p.21] prior to running the software installer.

Performing the installation

The installer will check that required components and permissions are present. If not, the installation will halt. See Troubleshooting installation issues [p.18] if this happens.

Where available, the **<< Discover** button can be used to automatically populate input fields during installation.

To install Cisco TMSAE:

1. Copy the archive with the installer to the Windows Server hosting Cisco TMS.
2. Close all other running programs and security/anti-virus software that may prevent the installation from completing.
3. Extract and run the **setup.exe** file. Follow the installer instructions. Click **Next** to proceed.
4. Accept the terms of the license agreement and click **Next**.
5. Modify the default destination folder if needed, then click **Next**.
6. Choose the application pool and virtual directory into which you want to install Cisco TMSAE:
   a. We recommend installing Cisco TMSAE into its own application pool. Using a separate application pool is especially important if you are using IIS 7, as the installer can make changes to the application pool that may affect other, previously installed applications.
   b. We also recommend keeping the default virtual directory name. If changing it, do not use punctuation or spaces. The virtual directory name is not case sensitive.
   c. Click **Next**.
7. Select *Configure Now* as the data warehouse installation mode to let the installer create and configure the necessary components based on the credentials of the user performing the installation, or credentials supplied during installation. (See Appendix: Preconfiguring the databases [p.21] for instructions on installing with the *Use Preconfigured* option where a database administrator has already configured a data warehouse server.) Click **Next**.
8. Provide the server name or IP address of the data warehouse server, then select how to authenticate. There are two supported methods of authentication, both of which require the user to have the *sysadmin* role on the selected SQL server and administrative access to Analysis Services: *Current User Context*—Use the Windows user account you are currently signed in as to complete the installation.*Windows Authentication*—Provide the username and password for an alternate user account to use for the installation steps.Click **Next**.
9. Specify the remaining connection details for the data warehouse server:
   a. Enter the username and password of the data warehouse database account. Make sure to include the domain and enter the credentials in the correct case should the SQL server be configured for case sensitivity.
   b. Enter the name of the database; the default name is *tmsng_dwh*. You cannot enter the name of an existing database here. Click **Next**.

10. Specify the connection details for the Cisco TMS database:
    a. Enter the server name or IP address.
    b. Enter the SQL username and password for an account with read access to the Cisco TMS database, normally called tmsng.
    c. Verify that the database name is correct or modify as appropriate.
    d. Click **Next**.
11. Set the desired ETL (Extract, Transform, Load) settings:
    a. To avoid performance issues, we recommend scheduling the ETL job for a different time of day than the Cisco TMS database re-indexing process. You will find this schedule by going to Cisco TMS, go to **Administrative Tools > TMS Server Maintenance** and seeing the **Database Maintenance** section. Also be aware of scheduling Cisco TMS database back-ups during these times.
    b. *Resolve calls to TMS systems when ETL is run for the first time*: We recommend enabling this, as it allows ETL to use current Cisco TMS system information to resolve identities in historical data. This will not affect data collected by Cisco TMS after the first ETL job. All future calls will be resolved at the time of the ETL job.
    c. Click **Next**.
12. The next dialog screen provides an overview of the settings and servers that will be used during installation. Click **Install** to initiate the installation process.
13. Click **Finish** to close the installation wizard.
14. Re-enable any security or anti-virus software that was disabled before installing.

Configuring Cisco TMSAE

After installation, perform the configuration and verification procedures below.

Setting up user and group permissions

User and group permissions must be configured after Analytics Extension is installed. Users are granted access to the data warehouse cube via a special role in **tmsng_dwhAsDb** in order to access the data provided by Cisco TMSAE.

1. Open Microsoft SQL Server Management Studio, and connect to Analysis Services.
2. Locate **Databases > tmsng_dwhAsDb > Roles**, and open **Reader**.
3. Go to **Membership**, and add the accounts that are allowed to connect.

Access to the Analytics Extension web interface is limited to Cisco TMS users with a Configuration access to Administrative Tools:

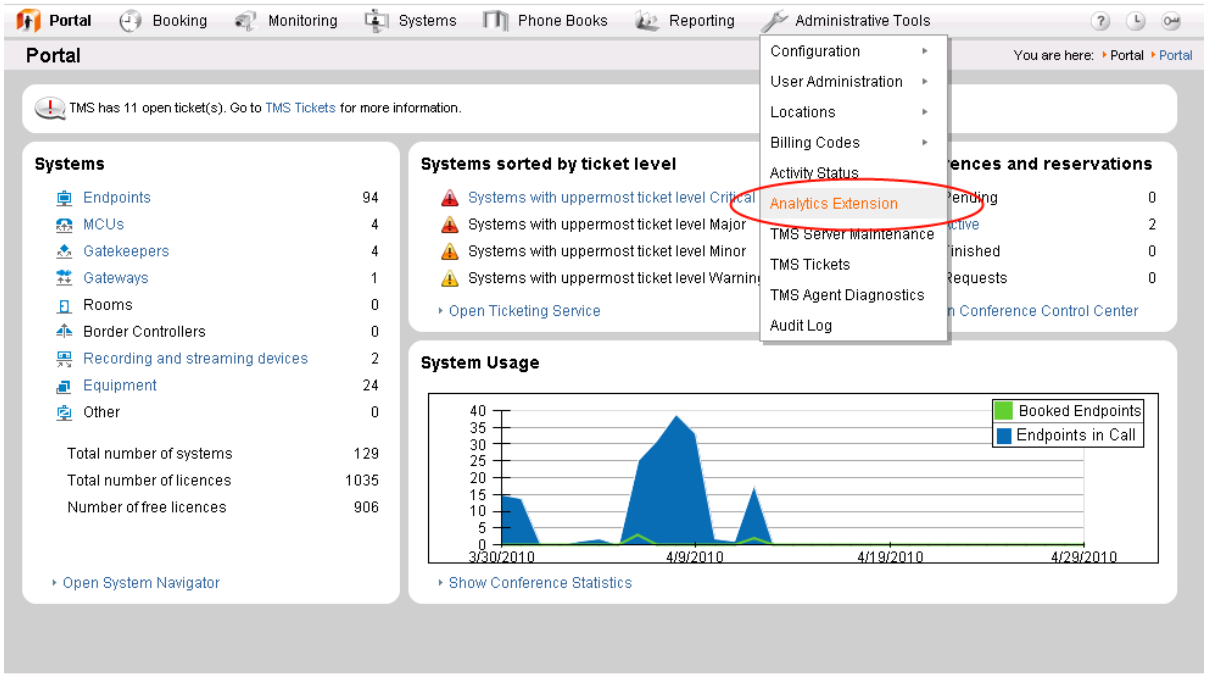
1. In Cisco TMS go to **Administrative Tools > User Administration > Groups**, hover over the group you want to change permissions for, click the dropdown button and select **Set permissions**.
2. In the **Administrative Tools** section, see **Configuration**, and make sure both *Read* and *Update* are checked.
3. If you have made any modifications, click **Save**.

Users need *Update* access to be able to change values in the Analytics Extension web application and initiate the ETL job. For more information on managing user permissions, see *Cisco TelePresence Management Suite Analytics Extension Administrator Guide*.

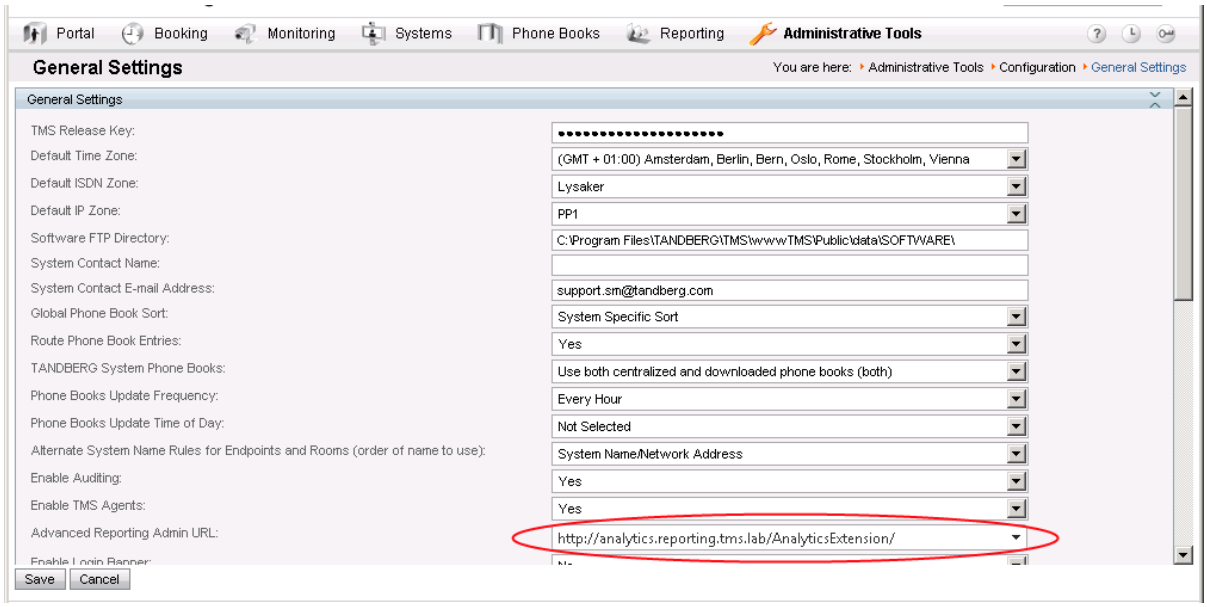
Web application configuration

Once the software installation is complete, your Cisco TMS installation will be updated to include the Cisco TMSAE web interface.

1. To verify that the web site is running properly, open a web browser and log into Cisco TMS as a user with Site Administrator permissions.
   - If Cisco TMS displays the following error message, follow the link for details.
     System.TypeLoadException: Could not load type 'System.ServiceModel.Activation.HttpModule' [p.18]
     .
   - If all components have been correctly installed, you can use the new menu item **Administrative Tools > Analytics Extension** to open the Analytics Extension web application.
2. If prompted for a username and password, use your Cisco TMS credentials.
3. If you modified the virtual directory name during installation or in the preconfiguration scripts, Cisco TMS will prompt you for the full URL to the virtual directory (for example, http://tms.example.com/analytics). Enter the URL and click **Save**.



You can also change the Cisco TMSAE web application URL in Cisco TMS at a later time. Go to **Administrative Tools > Configuration > General Settings**, and locate the **Analytics Extension Admin URL** field.



Verifying the ETL task

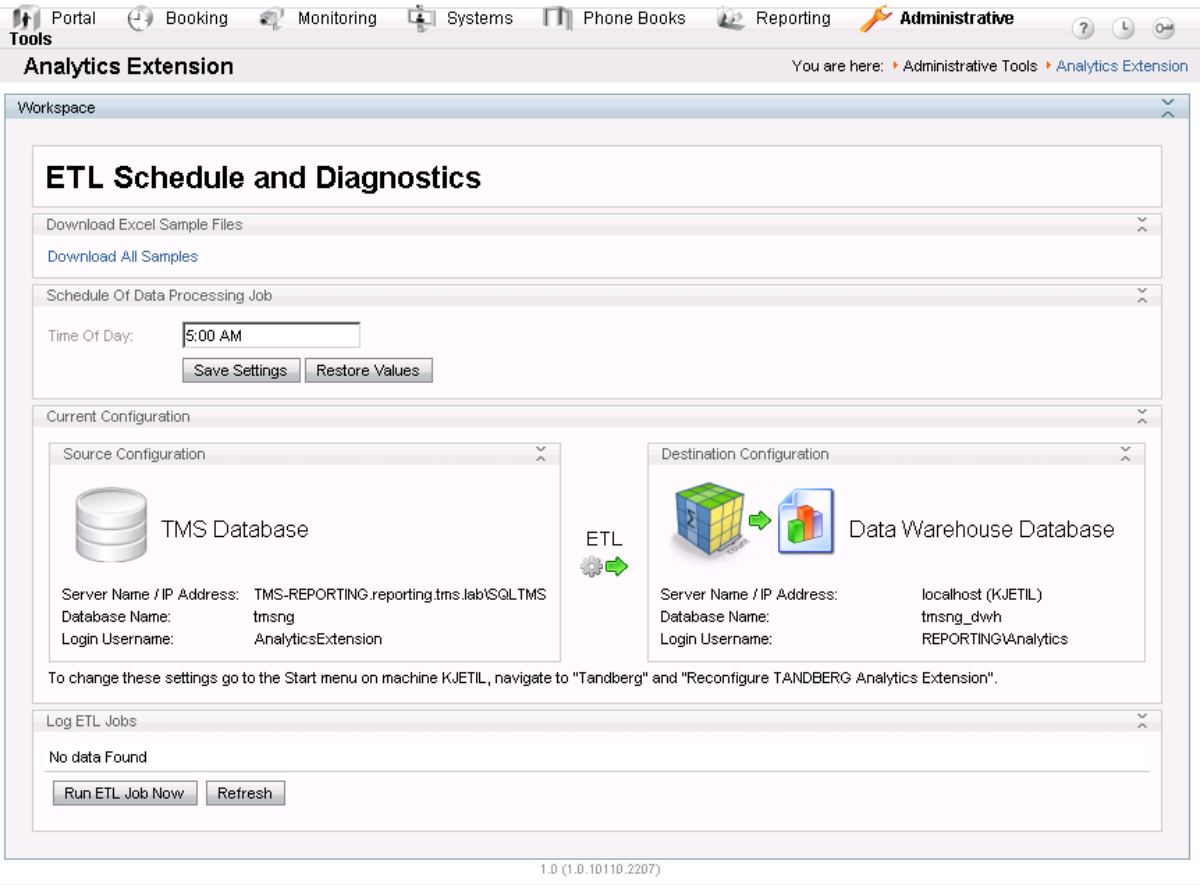
The ETL task can be started manually via Cisco TMS, and the logs can be used to verify success. Normally the ETL task runs daily at the time specified during installation.

Note that due to the large size of the initial data load, the first ETL job run may take a long time to execute and put a high load on the Cisco TMS SQL server and the data warehouse server. On very active installations with a long history in Cisco TMS, the initial ETL task may take several hours to complete.

We recommend against starting this task when normal operations could be affected. Later runs will not take as long as they only process data captured since the last ETL task run.

To verify that the ETL task can run properly:

1. Open a web browser and log into Cisco TMS as a user with Site Administrator permissions.
2. Open the Cisco TMSAE web interface by selecting **Administrative Tools > Analytics Extension**.



3. Click the **Run ETL Job Now** button to start the ETL task. The Log ETL Jobs panel will show logs for the ETL task. Click **Refresh** to see the latest changes.
   - When the task is complete, the log table will update to show a green checkmark and total duration of the task.
   - If the task fails, the log table will provide details. For troubleshooting information, see *Cisco TelePresence Management Suite Analytics Extension Administrator Guide*.

Upgrading Cisco TMSAE

This section describes how to upgrade to the latest version of Cisco TMSAE.

Upgrading Cisco TMSAE requires the previous version to be uninstalled first.

CAUTION: Upgrading directly from version 1.0 to 1.2 is not supported. Any customers still running 1.0 must upgrade to 1.1 before following the procedure to install 1.2. To get access to version 1.1, contact your Cisco partner or support representative.

Upgrading from 1.1 to 1.2

Before starting, note the names of the data warehouse database and Analytics Extension Windows service account. You will need to provide these names during re-installation.

To upgrade:

1. Uninstall the old software version, following the instructions in Uninstalling Cisco TMSAE [p.16]. Do *not* proceed to remove the data warehouse components, as the data warehouse database must be kept intact to successfully upgrade.
2. Verify that the **TANDBERG Analytics Extension Windows** service has been properly removed. If it is left in a *Disabled* state, reboot your Cisco TMS server to completely remove the service software.
3. Run the installer as described in the sectionPerforming the installation [p.10] and select the *Use Preconfigured* option.
4. Continue the installation, see the Running the software installer [p.24] section of Appendix: Preconfiguring the databases [p.21].

You can now run the ETL job to verify the installation, see Verifying the ETL task [p.13].

Uninstalling Cisco TMSAE

We recommend manually stopping the Analytics Extension Windows service before uninstalling. Failure to stop the service before uninstalling might make the uninstaller unable to remove it. If the uninstaller was unable to remove the service, you will need to reboot of the server after uninstallation.

On the server where Cisco TMSAE is installed:

1. Use the **Start menu > Administrative Tools > Services** and locate the service called **TANDBERG Analytics Extension Service**.
2. Click **Stop the service**.
3. Go to the **Start menu > Control Panel > Add/Remove programs**, select TANDBERG Analytics Extension and click **Remove**.
4. Confirm that you want to uninstall the product.

Note that the uninstallation will not remove the data warehouse database, data warehouse cube, or associated server objects.

Complete removal of Cisco TMSAE

Removal from the database server

This process will destroy all data stored in the data warehouse, but will not affect any data retained by the Cisco TMS Database. Older call data, that is no longer in the Cisco TMS Database, will not be recovered by future installations of Cisco TMSAE.

1. Open SQL Server Management Studio and set the **Server type** to **Database Engine** and connect to the data warehouse SQL server instance.
2. Under **Databases**, delete the data warehouse database, default name is **tmsng_dwh**.
3. Under **Server Objects > Linked Servers**, find the linked server entry that starts with **TMSREPORTING_SRC**. Delete the entry.
4. Using SQL Management Studio, now set the **Server type** to **Analysis Services** and connect to the data warehouse Analysis Services instance.
5. Under Databases, delete the **tmsng_dwhAsDb** database.

Removal from the Cisco TMS server

On the Cisco TMS Server where Cisco TMSAE is installed, open the Registry Editor and delete the relevant registry key hives.

When removing version 1.1:

- **HKEY_LOCAL_MACHINE\SOFTWARE\Tandberg\TANDBERG Management Suite\Reporting**
- **HKEY_LOCAL_MACHINE\SOFTWARE\Tandberg\TANDBERG Analytics Extension**

When removing version 1.2:

- **HKEY_LOCAL_MACHINE\SOFTWARE\Tandberg\Cisco TMSAE**
- **HKEY_LOCAL_MACHINE\SOFTWARE\Tandberg\Cisco TMSAE**

To remove **Analytics Extension** from the **Administrative Tools** menu in Cisco TMS, you will need to delete the relevant option key.

1. Log in to Cisco TMS's SQL Server Database Engine using an administrator account
2. Locate **Databases > tmsng > Tables > dbo.OptionKeys**. Open the table, and delete the Analytics Extension option key.

Due to Cisco TMS caching of option keys, you must restart the Cisco TMS application pool **TMSNet20AppPool** if you want the changes to take effect immediately.

Troubleshooting installation issues

System.TypeLoadException: Could not load type 'System.ServiceModel.Activation.HttpModule'

If Cisco TMS displays an unhandled exception with the error message System.TypeLoadException: Could not load type 'System.ServiceModel.Activation.HttpModule' .NET 3.5 has been installed after .NET 4.0.

To solve the issue:

1. Open a Windows command prompt as an administrator.
2. Change directory to the folder where aspnet_regiis.exe is located:
   - 32-bit server: **%windir%\Microsoft.NET\Framework\v4.0.30319**
   - 64-bit server: **%windir%\Microsoft.NET\Framework64\v4.0.30319**
3. Run the following command: **`aspnet_regiis.exe /iru`**

Could not connect to specified server

Possible reasons include:

- Incorrect Instance Names – verify whether your SQL server is running on a named instance and that you are supplying the full server\instance name. Using a copy of SQL Server Management Studio is a convenient way to verify your connection information by using it to attempt to log into the server. The server name and instance name can also be identified using the SQL Server Configuration Manager utility installed on the SQL server.
- SQL Server Analysis Services and SQL Server Database Engine instance name mismatch – verify that Analysis Services and the Database Engine have the same instance name.
- Remote Connections not enabled – ensure your SQL servers are configured to allow remote SQL connections. See Microsoft KB http://support.microsoft.com/kb/914277 for more information
- Firewall blocking – ensure that a firewall on the servers or network between the servers is not blocking SQL or SSAS traffic. SQL Server and SSAS traffic by default use TCP ports 1433 and 2383. Named instances may use dynamic TCP ports.
- Incorrect user account information supplied – check your credentials by using SQL Server Management Studio, or the osql command line, to attempt to log into the specified server.
- The "SQL Server Browser" windows service may not be running – this utility can be started by opening SQL Server 2005 Surface Area Configuration Manager on your Cisco TMS server and go to **Surface Area Configuration for Services and Connections**.

Could not connect to specified server. Please verify that specified server name or IP address is correct, that the server is accessible using a fully qualified domain name and that the specified user has the required permissions

Review the Cisco TMS SQL server configuration section.

Cisco TMS server appliance boxes and Cisco TMS installations using the express edition of SQL server included will need additional configuration for Analytics Extension to work.

Could not verify the specified account exists

Incorrect user account information supplied. Check your credentials by using SQL Server Management Studio, or the osql command line, to attempt to log into the specified server.

Error 2318

This error is sometimes seen when attempting to install again after a failed installation or uninstallation. Reboot the server and run the installer again.

Insufficient privileges

MSI (s) (48:B0) [10:07:28:305]: Product: TANDBERG Analytics Extension -- Error 1923. Service 'TANDBERG Analytics Extension Service' (TandbergAnalyticsExtensionService) could not be installed. Verify that you have sufficient privileges to install system services.

This error message can occur if Analytics Extension Windows Service has not been completely removed by a previous uninstallation. To verify this problem:

1. On the Cisco TMS server, use the **Start menu** to open **Administrative Tools > Services**. If a service called Cisco TMS Analytics Extension is present, the uninstaller was unable to properly remove the service from your previous installation.
2. Reboot your Cisco TMS server to fix the issue.

Connection timeouts

System.Reflection.TargetInvocationException: Exception has been thrown by the target of an invocation. ---> System.Transactions.TransactionAbortedException: The transaction has aborted. ---> System.TimeoutException: Transaction Timeout

.NET connection timeouts may cause the installer to fail. The default transaction timeout is one minute. This can happen if your Cisco TMS server is very slow. When this happens, the installer fails with a generic error message, and the message above is displayed in the install log file. The default transaction timeout value can be increased in the **machine.config** file on the Cisco TMS server.

1. Open **C:\Windows\Microsoft.NET\Framework\v2.0.50727\CONFIG\machine.config** in a text editor.
2. Within the <configuration> element, add the following:
```
<system.transactions>
        <defaultSettings timeout="00:05:00" />
<system.transactions>
```
3. Save and close the file.

Unknown errors

If the installer fails to complete, hangs, or shows any other indeterminate error, locate the installer logs to look for more clues.

Installer logs

The installer automatically creates installation log files. These files are located in the Analytics Extension directory, by default **C:\Program Files\Cisco\TMSAE**.

If the installer fails during installation, these installation logs can be found in the hidden temp folder **C:\Users\{USERNAME}\AppData\Local\Temp**.

The main log file is called **AnalyticsExtension_v1.100001.log**. Depending on the operating system used, a file called **AnalyticsExtension_v1.100001_UI.log** may also have been created. This file can be ignored, as its content is also written to the main log.

Appendix: Preconfiguring the databases

The data warehouse used by the Cisco TMSAE application can be pre-configured. This is useful in organizations where the video administrator does not have full Active Directory administrative privileges or administrative privileges in Microsoft SQL Server.

Along with the **setup.exe** installer, additional files are supplied to facilitate preconfiguration:

- **PrepareDatabase.sql** is a Microsoft SQL Server Query file
- **PrepareAnalysisServiceDatabase.xmla** is an XML for Analysis File

Using these files to preconfigure the databases will give database administrators an opportunity to review all changes made by the installer before creating and modifying the data warehouse server.

The scripts are designed to be customized with the information specific to your organization, and then used with the instructions below to setup the data warehouse server used by Analytics Extension.

Note that they must be customized and run before **setup.exe**.

Designating the Service User Accounts

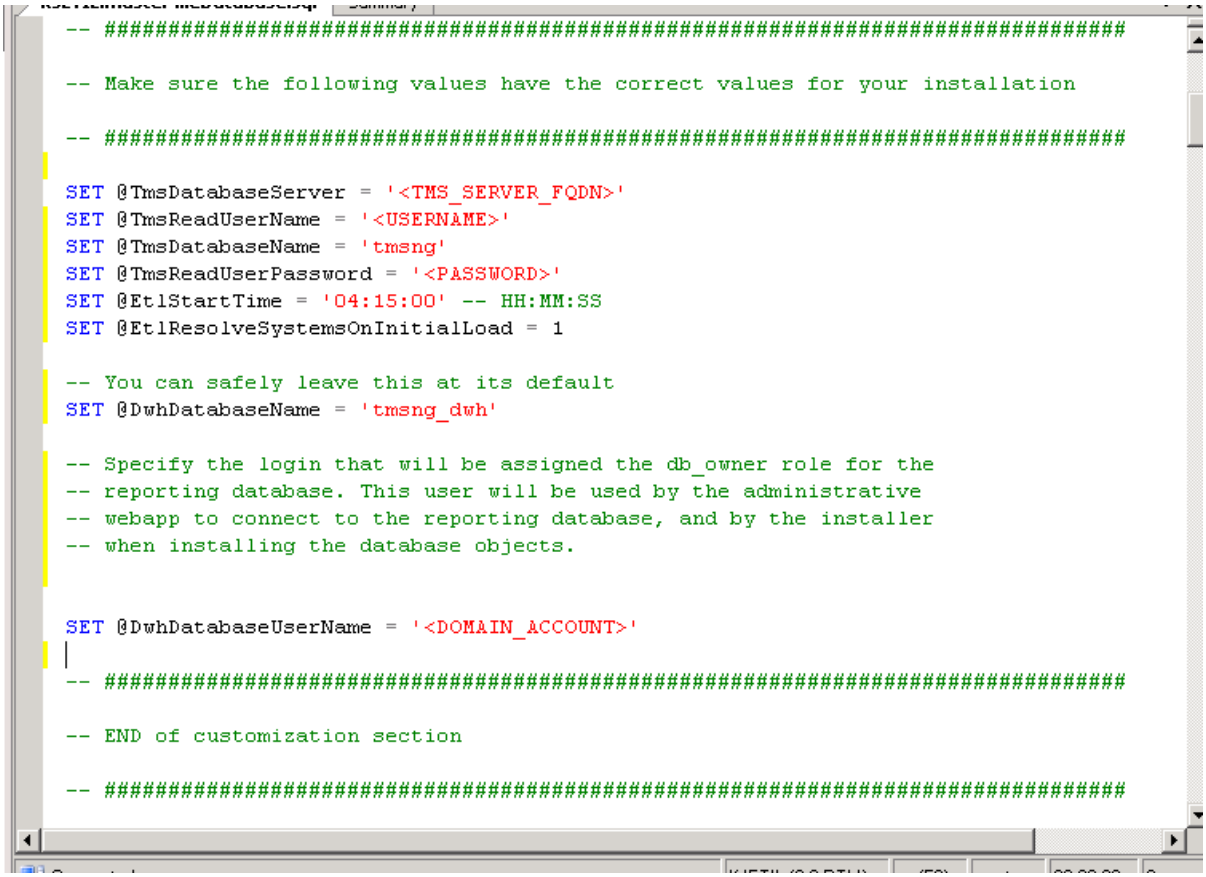
The DWH Service User and DWH TMS Service User accounts must be implemented before preconfiguring the data warehouse server.

1. Have an Active Directory administrator create a Windows Domain account suitable for use as a DWH Service User, if one does not already exist in the domain. The account must have the necessary permissions it needs in the data warehouse server Instances added by the script files.
2. Have an SQL Administrator create an SQL login to be used as the DWH TMS Service User if this account does not yet exist on the Cisco TMS SQL Server. The user account must have a minimum of *db_datareader* permission.

Customizing and executing the SQL configuration script file

Requires an Administrator with a sysadmin role on the SQL (and SSAS) Server to be used as the data warehouse server. The steps are described using Microsoft SQL Server Management Studio.

1. Open Microsoft SQL Server Management Studio.
2. Open **PrepareDatabase.sql**. When prompted for which connection to use, be sure to specify the database instance you wish to use as the data warehouse SQL server and log in as a user with the *sysadmin* role.
3. Do not make any changes in this script except in the section starting with "Make sure the following values have the correct values for your installation" and ending with "END of customization section".



```
-- ###########################################################################################

-- Make sure the following values have the correct values for your installation

-- ###########################################################################################

SET @TmsDatabaseServer = '<TMS_SERVER_FQDN>'
SET @TmsReadUserName = '<USERNAME>'
SET @TmsDatabaseName = 'tmsng'
SET @TmsReadUserPassword = '<PASSWORD>'
SET @EtlStartTime = '04:15:00' -- HH:MM:SS
SET @EtlResolveSystemsOnInitialLoad = 1

-- You can safely leave this at its default
SET @DwhDatabaseName = 'tmsng_dwh'

-- Specify the login that will be assigned the db_owner role for the
-- reporting database. This user will be used by the administrative
-- webapp to connect to the reporting database, and by the installer
-- when installing the database objects.


SET @DwhDatabaseUserName = '<DOMAIN_ACCOUNT>'

-- ###########################################################################################

-- END of customization section

-- ###########################################################################################
```

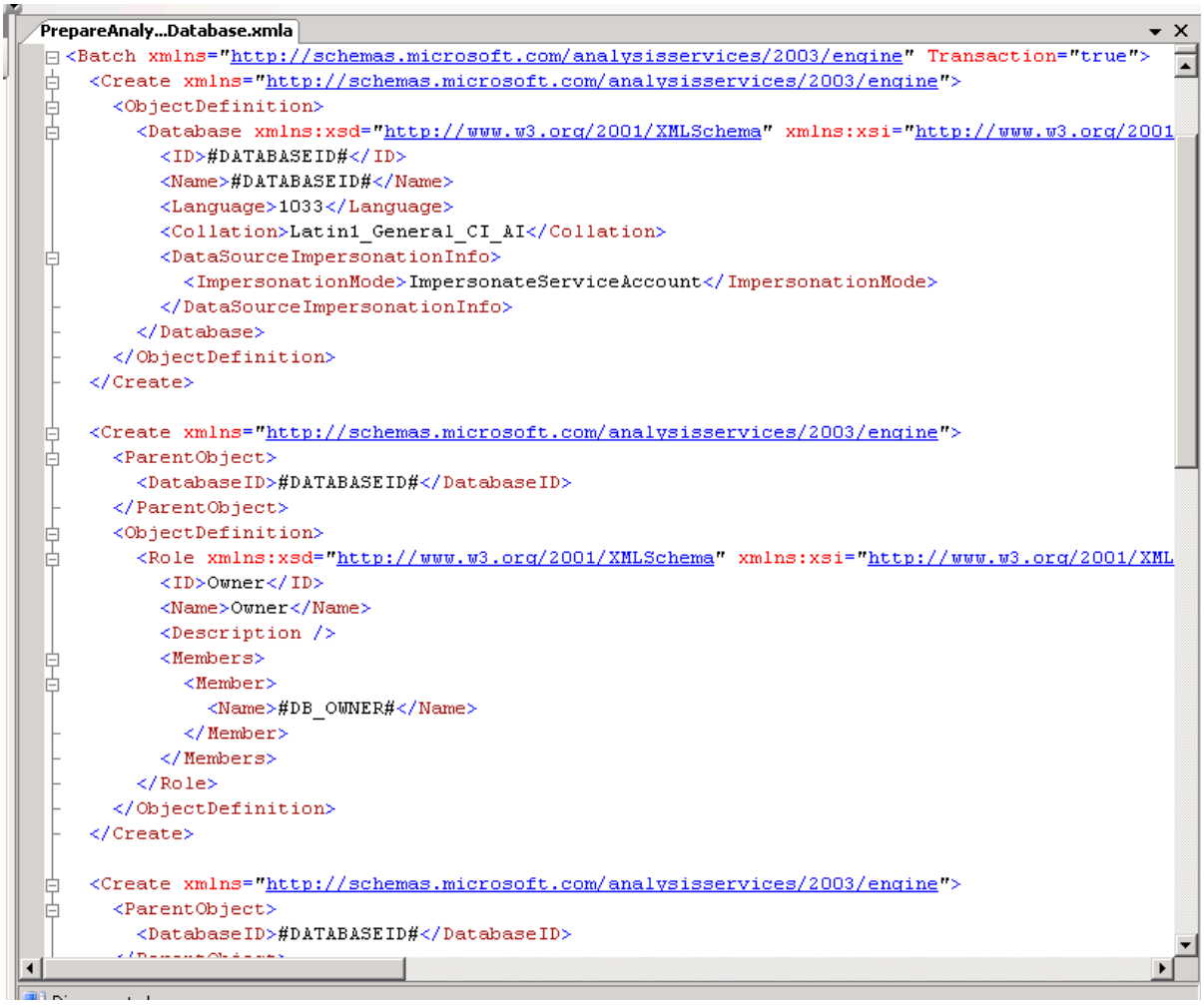
The customizable part of the script consists only of SET-commands, and each line sets a previously declared local variable to a value of your choice.

4. Replace **<TMS_SERVER_FQDN>** with the fully qualified name or IP Address of the Cisco TMS database server. Include the instance name if applicable.
   Example: **`SET @TmsDatabaseServer = 'tms-reporting.reporting.example.com\sqltms'`**
5. Replace **<USERNAME>** with the name of the SQL Login to be used for the DWH TMS Service User.
   Example: **`SET @TmsReadUserName = 'AnalyticsExtension'`**
6. Replace **<PASSWORD>** with the password of the designated DWH TMS Service user.
7. Choose a time of day for the ETL job to run.
   To avoid performance issues, we recommend scheduling the ETL job for a different time of day than the Cisco TMS database re-indexing process. You will find this schedule by going to Cisco TMS, go to **Administrative Tools > TMS Server Maintenance** and seeing the **Database Maintenance** section. Also be aware of scheduling Cisco TMS database back-ups during these times.
8. Set **EtlResolveSystemsOnInitialLoad** to 1 (enable) or 0 (disable) to control whether the ETL task will resolve Cisco TMS systems on its first run.
   We recommend enabling this, as it allows ETL to use current Cisco TMS system information to resolve identities in historical data. This will not affect data collected by Cisco TMS after the first ETL job. All future calls will be resolved at the time of the ETL job.
9. If you wish to customize the name of the data warehouse database, replace **tmsng_dwh**. Do not use a name that conflicts with any existing databases on the data warehouse server.
10. Replace **<DOMAIN ACCOUNT>** with the Windows Domain and user name that will be used as the DWH Service User.
    Example: SET @DwhDatabaseUserName = 'REPORTING\Analytics'

11. Review all your changes for accuracy and syntax.
    Make sure that all strings are enclosed in single quotes. Note that SQL Server Management Studio will not detect all possible errors if you enter incorrect information—it will only check SQL Syntax. Ensure that all user and address information is correct before proceeding.
12. Execute the script by right-clicking in the script window and selecting **Execute**.
    - If the databases configure correctly, a confirmation message will appear below the script after a few seconds.
    - If an error occurs, all changes will be rolled back, and an appropriate error message will be displayed. See Cisco TelePresence Management Suite Analytics Extension Administrator Guide for troubleshooting the error messages.

Customizing and executing the analysis services configuration script file

1. Open Microsoft SQL Server Management Studio and connect to Analysis Services.
2. Open **PrepareAnalysisServiceDatabase.xmla**. When prompted for which connection to use, specify the data warehouse server name.



3. Use "Find and Replace" to replace all instances of **#DATABASEID#** with the name of the data warehouse database with **AsDb** appended to the name.
   Example: if you used the default name of 'tmsng_dwh', replace

`<DatabaseID>#DATABASEID#</DatabaseID>`
with
`<DatabaseID>tmsng_dwhAsDb</DatabaseID>`

4. Replace **#DB_OWNER#** with the Windows Username of the DWH service user account
   Example: if using the same domain and account as in the example above, this will be
   `<Name>REPORTING\Analytics</Name>`
5. Execute the script by right-clicking in the script window and selecting **Execute**.
   - If the script executes correctly, a message window appears below the script after a few seconds saying "empty" in an XML format.
   - If an error occurs, all changes will be rolled back, and an appropriate error message will be displayed. Please refer to *Cisco TelePresence Management Suite Analytics Extension Administrator Guide* for troubleshooting the error messages.

Running the software installer

Once the preconfiguration scripts have been completed, run the Cisco TMSAE software installer:

1. Close all other running programs and security/anti-virus software that may prevent the installation from completing.
2. Extract and run the **setup.exe** file. Follow the installer instructions. Click **Next** to proceed.
3. Accept the terms of the license agreement and click **Next**.
4. Modify the default destination folder if needed, then click **Next**.
5. Choose the application pool and virtual directory into which you want to install Cisco TMSAE:
   a. We recommend installing Cisco TMSAE into its own application pool. Using a separate application pool is especially important if you are using IIS 7, as the installer can make changes to the application pool that may affect other, previously installed applications.
   b. We also recommend keeping the default virtual directory name. If changing it, do not use punctuation or spaces. The virtual directory name is not case sensitive.
   c. Click **Next**.
6. Select *Use Preconfigured* as the data warehouse installation and click **Next**.
7. Specify the connection details for the data warehouse server, taking care to enter the exact same values used in the **PrepareDatabase.sql** file.
8. The installer will ask for ETL job settings. However, these settings will be overridden by the preconfiguration scripts on installation and therefore do not need to be modified here. Click **Next**.
9. The next dialog screen provides an overview of the settings and servers that will be used during installation. Click **Install** to initiate the installation proces
10. Click **Finish** to close the installation wizard.

Bibliography

All documentation for the latest version of Cisco TMSAE can be found at http://www.cisco.com/en/US/products/ps11472/tsd_products_support_series_home.html.

Title	Reference	Link
Cisco TelePresence Management Suite Analytics Extension Release Notes (1.2)	D14984	http://cisco.com
Cisco TelePresence Management Suite Analytics Extension Administrator Guide	D14668	http://cisco.com
Cisco TelePresence Management Suite Analytics Extension Reference Guide	D14701	http://cisco.com
Configuring the Windows Firewall to Allow SQL Server Access		http://technet.microsoft.com
Configuring a Fixed Port		http://technet.microsoft.com
Installing SQL Server Analysis Services (SQL Server 2005)		http://technet.microsoft.com/
Considerations for Installing Analysis Services (SQL Server 2008)		http://msdn.microsoft.com/

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