



Cisco TelePresence Management Suite Analytics Extension

Installation Guide

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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 the Cisco TelePresence Management Suite (Cisco TMS) and provides advanced reporting functionality on your video network. It integrates with Business Intelligence (BI) applications, custom built applications, and other applications capable connecting to an OLAP cube such as Microsoft Excel.

Analytics Extension 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 tools clients, used to access the data

For a more complete technical overview refer to the [Cisco TMSAE Administrator Guide](#).

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

This document has three main sections and one appendix:

- Hardware and software requirements, as well as prerequisite steps that need to be performed before installation
- Installation of Cisco TelePresence Management Suite Analytics Extension
- How Cisco TMS Analytics Extension integrates with Cisco TMS
- Appendix: An alternative installation method for environments where the database and Cisco TMS must be set up independently

For further information on Cisco TMS Analytics Extension, see the [Cisco TMS Analytics Extension Administrator Guide](#).

Minimum requirements

Cisco TMS server

Cisco TMS	Version 12.6 or later
Operating System	Windows Server 2003 or Windows Server 2008 (32-bit or 64-bit)
.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 <i>IIS 6 Compatibility Component</i> installed. Cisco TMS installations will already have this installed.

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

SQL server

These are the requirements for the data warehouse server used by Analytics Extension. Analytics Extension does not impact the requirements for your existing Cisco TMS SQL server, but see [Cisco TMS SQL server configuration](#) as some reconfiguration may be required.

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)
Required components	SQL Database Services Analysis Services
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

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)

SQL Server Express Edition - While it is possible to reuse the existing Cisco TMS SQL server as your data warehouse server, 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.

Client software requirements

Any client that can connect to Microsoft SQL Server Analysis Services. 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.

Note that named instances by default can use dynamic TCP Ports, which clients discover via the SQL Browser Service. See the [Cisco TMS SQL server configuration](#) 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 – Note that named instances by default use dynamic TCP Ports, which clients discover via the SQL Browser Service.

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 – Note that named instances by default can use dynamic TCP Ports, which clients discover via the SQL Browser Service.

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.

Internet Information Server

Cisco TelePresence recommends installing Cisco TMSAE into its own application pool. Using a separate installation pool is especially important if you are using IIS 7, as the Analytics Extension installer can make changes to the application pool that may affect other, previously installed webapps.

Analytics Extension option key

You must add an Analytics Extension option key to Cisco TMS *before* running the Analytics Extension installer. An 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 will require Site Administrator user permissions.
2. Navigate to **Administrative Tools > Configuration > General Settings** and click **Add Option key** to open the **Add Option Key** prompt.

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

User permissions and service user accounts

These are the minimum security permissions required by the service user accounts that will be used in the installation.

You must have the proper security permissions and user accounts for installation:

- 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. Cisco TelePresence recommends using a non-admin 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 with at least **db_reader** role for the Cisco TMS database

Note: These SQL logins and permissions must exist prior to running the installer.

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 a separate SQL Administrator if necessary. For detailed information see [Appendix: Preconfiguring the Databases](#).

Note: We recommend using a dedicated Windows account for service users, for increased security. If necessary create an account solely for this role, and do not reuse the same account specified in step 10.

Installation guidelines

Cisco TelePresence recommends reviewing these guidelines before beginning installation to avoid potential issues.

Naming conventions

We recommend keeping the default virtual directory name. If you change it, do not use punctuation or spaces. The virtual directory name is case insensitive.

Note: Beware of case mismatches when supplying the domain and user name for the Service Users if your data warehouse SQL server is configured to be case-sensitive. SQL server installations by default are case *insensitive*.

Unlike most Windows applications, the Cisco TMSAE installer will not treat MYDOMAIN\Administrator and mydomain\administrator equally if the database engine is case-sensitive.

Data warehouse configuration

The authentication method option is used by the installer for the rest of the installation process, but not by the account used by the running application after installation.

Figure 1: Data warehouse server configuration

There are two supported methods of authentication:

Current User Context	The Windows user account you are currently logged in with. Select to use your user to complete the steps of the installation and if your Windows account has both the <i>sysadmin</i> role in the selected SQL server and administrative access to Analysis Services.
Windows Authentication	Specify another Windows username and password. Select to specify a Windows username and password to use for the installation steps. The account must have both the <i>sysadmin</i> role in the selected SQL server and administrative access to Analysis Services.

Extract, Transform, Load (ETL)

We recommend resolving calls to Cisco TMS systems when ETL is run for the first time. This setting does not affect data collected by Cisco TMS after the first ETL job, and all future calls are resolved at the time they are logged in Cisco TMS.

The option during installation to resolve destination addresses to systems allows ETL to use current Cisco TMS system information to resolve identities in historical data.

Because the system information in Cisco TMS may change over time (IP address changes, hostnames changes, etc), current information may not match the historical (originally saved) call data. This may lead to some call records being associated with incorrect systems by the data warehouse, and affect the quality of statistics. This issue will be exaggerated in networks that use changed IP Addresses or if your aliasing/dial plan has changed since Cisco TMS was installed.

Scheduling ETL

To avoid performance issues, Cisco TelePresence recommends scheduling the Analytics Extension ETL job for a different time of day than the Cisco TMS database re-indexing process. In Cisco TMS, go to **Administrative Tools > TMS Server Maintenance** and see the **Database Maintenance** section for the re-indexing process schedule. Also be aware of scheduling Cisco TMS database back-ups during these times.

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 disable Windows Firewall or 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 the [Network requirements](#) section for further information.

For instructions 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 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](#).

Installing Cisco TMSAE

Installation prerequisites

Before installing Cisco TMS Analytics Extension, ensure that you have:

- A valid [Analytics Extension option key](#) purchased from your Cisco TMS reseller.
- Cisco TMS and SQL servers that meet the requirements outlined in the [Minimum software and hardware requirements](#) section.
- The necessary [security permissions and user accounts](#).

Note: Cisco TMSAE must be installed on a local file system; installing the software on a network file system is not supported.

Analytics Extension installer

The Analytics Extension installer gathers configuration information, creates the necessary database components, and installs the application software.

The installer will:

- Check [the IIS requirements of the Cisco TMS server](#) (installation will halt if the necessary IIS components are missing).
- Automatically run the Microsoft SQL Server 2008 ADOMD.NET component installation to ensure the necessary components are present.
- Validate the SQL server user permissions supplied (installation will halt if the server connection & authentication cannot be established).
- Check that .NET 3.5 is already installed. The installer will not proceed if .NET 3.5 is not installed.

Installation process

1. Copy your compressed version of the Analytics Extension download to the Windows Server hosting Cisco TMS.
2. Close all other running programs and security/anti-virus software that may prevent installing the software.
3. Extract and run the setup.exe file. Follow the installer instructions.

If Cisco TMS displays the error message *Exception Details: System.TypeLoadException: Could not load type 'System.ServiceModel.Activation.HttpModule'*, see [Troubleshooting installation issues](#).

Post installation steps

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** and use the orange drop down icon on the relevant group to **Set permissions**.
2. See the **Administrative Tools** panel for **Configuration** to check for **Read** and **Update** permissions.

Users need *Update* access to be able to change values on the Analytics Extension web application. For more information on managing user permissions, see [Cisco TMSAE Administrator Guide](#).

Web application configuration

Once the software installation is complete, your Cisco TMS installation will be updated with 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.
2. A new menu item will appear under **Administrative Tools > Analytics Extension** (Figure 2); select it to open the Analytics Extension web application (if you are prompted for a username and password use your Cisco TMS credentials).

If you customized the virtual directory during installation, or the [preconfiguration scripts](#), enter the full URL to the virtual directory (Example: `http://tms.company.com/analytics`) and click **Save**.

The screenshot shows the Cisco TMS web interface. The top navigation bar includes 'Portal', 'Booking', 'Monitoring', 'Systems', 'Phone Books', 'Reporting', and 'Administrative Tools'. The 'Administrative Tools' menu is open, showing options like 'Configuration', 'User Administration', 'Locations', 'Billing Codes', 'Activity Status', 'Analytics Extension' (highlighted with a red circle), 'TMS Server Maintenance', 'TMS Tickets', 'TMS Agent Diagnostics', and 'Audit Log'. The main content area displays 'Systems' with a list of components and their counts, 'Systems sorted by ticket level' with a list of systems and their ticket levels, and 'System Usage' with a line graph showing 'Booked Endpoints' and 'Endpoints in Call' over time.

Figure 2: Opening the Analytics Extension web interface

You can also change the Cisco TMSAE webapp URL in Cisco TMS at a later time. Go to **Administrative Tools > Configuration > General Settings**, and locate the **Advanced Reporting Admin URL:** field under **General Settings**.

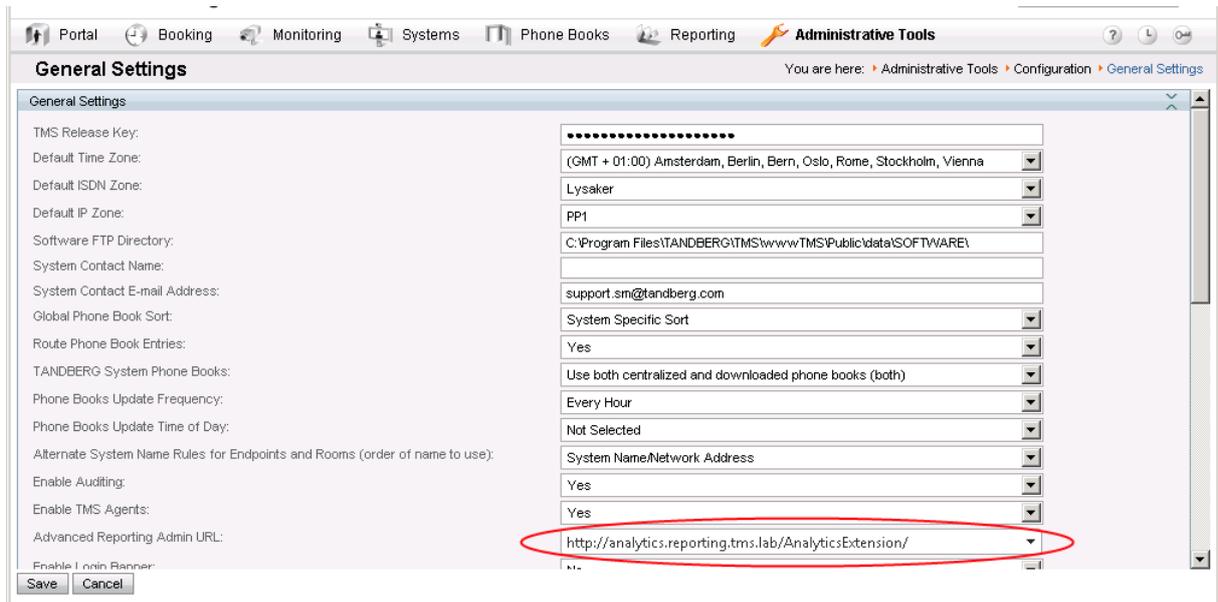


Figure 3: Changing the Cisco TMS Analytics Extension URL in Cisco TMS

Cisco TMS SQL server configuration

A Cisco TMS installation that uses embedded Microsoft SQL Server Express Edition will by default have both local TCP/IP connections and remote logins disabled. Also, the 'SQL Service Browser' windows service will be disabled. These must be enabled for Analytics Extension to work.

1. Log in to the Cisco TMS Windows server using an administrator account.
2. Open **SQL Server Configuration Manager** (found under **Start Menu > All Programs > Microsoft SQL Server 2005 > Configuration Tools**).
3. Locate **SQL Server 2005 Network Configuration > Protocols for MSSQLSERVER** in the tree view. Right click TCP/IP and select "Enable". You will get a warning about changes not taking effect until the service is restarted; ignore this for now.
4. Open **SQL Server Surface Area Configuration** (found under **Start Menu > All Programs > Microsoft SQL Server 2005 > Configuration Tools**).
5. Click **Surface Area Configuration for Services and Connections**.
6. Go to **SQLTMS > Database Engine > Remote Connections**. Select both **Local and remote connections** and **Using both TCP/IP and named pipes**. Click **Apply**.
7. Go to **SQLTMS > Database Engine > Service**. Click **Stop**, and wait for the database engine to stop. Click **Start** to restart it.
8. Go to **SQL Service Browser > Service**. Set **Startup type** to Manual, and start the service by clicking **Start**.

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 a time specified during the 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.

1. To verify that the ETL task can run properly, open a web browser and log into Cisco TMS as a user with Site Administrator permissions.
2. Open the Analytics Extension web interface by selecting **Administrative Tools > Analytics Extension**.
3. Click the **Run ETL Job Now** button to start the ETL task (Figure 4). 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 information on why the task failed. See the [Cisco TMSAE Administrators Guide](#) for troubleshooting information.

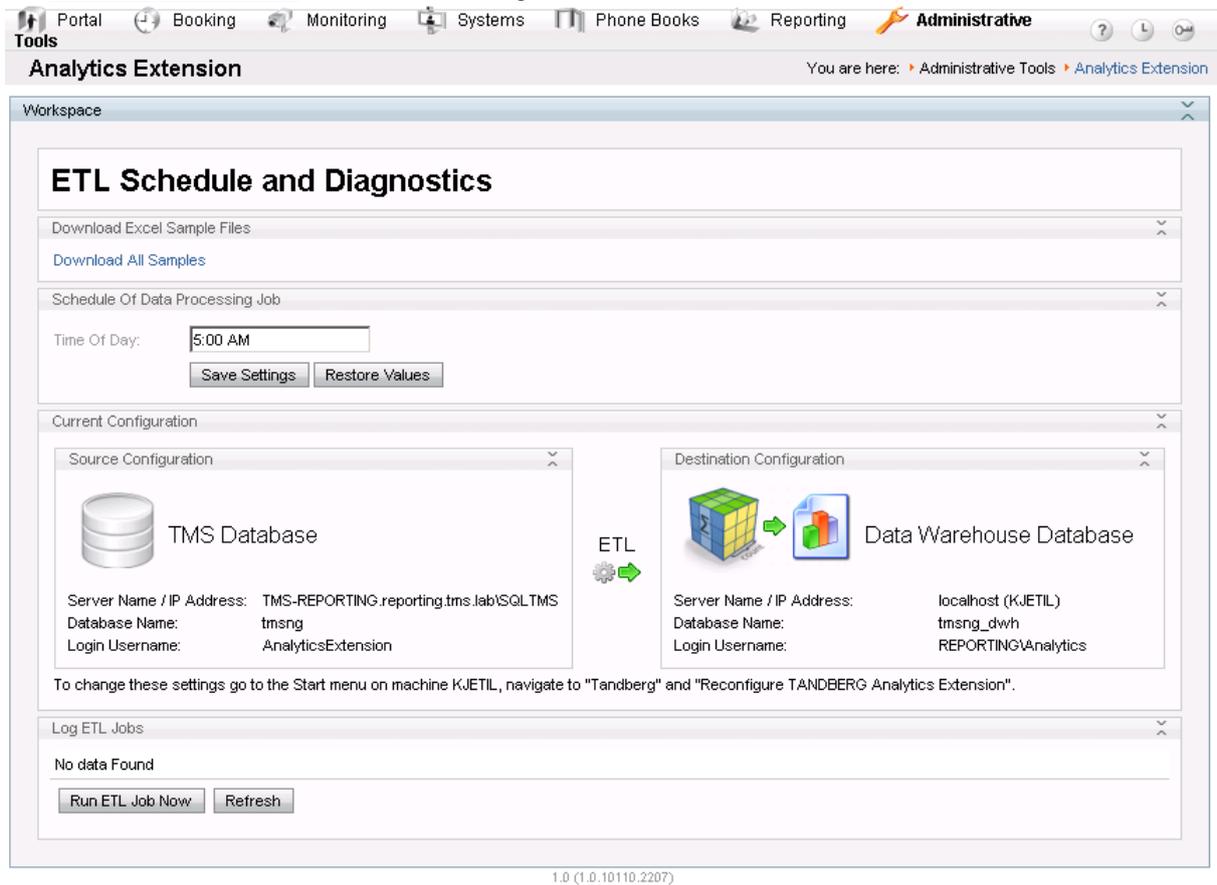


Figure 4: The Cisco TMS Analytics Extension web interface

Verifying the CUBE connection to Microsoft Excel

Microsoft Excel is a widely deployed tool capable of reading the CUBE. The following section describes how to connect to the CUBE using Excel.

Before connecting, make sure that the client is in the same domain as the data warehouse server, and that the data warehouse server [Windows Firewall](#) is not blocking connections to Analysis Services.

Microsoft SQL Server Analysis Services OLE DB Provider

For Excel 2003 users, *Microsoft SQL Server Analysis Services OLE DB Provider* must be installed on the client computer before trying to connect. This component exists in two versions, one for SQL Server 2005 and one for SQL Server 2008. These can be downloaded from Microsoft from the following locations:

- [Microsoft SQL Server 2005 Analysis Services 9.0 OLE DB Provider](#)
- [Microsoft SQL Server 2008 Analysis Services 10.0 OLE DB Provider](#)

Sample Excel files

Open the Analytics Extension web interface (Figure 2), locate the **Download Excel Sample Files** panel and click the **Download all samples** link. This will download a ZIP archive containing five sample files.

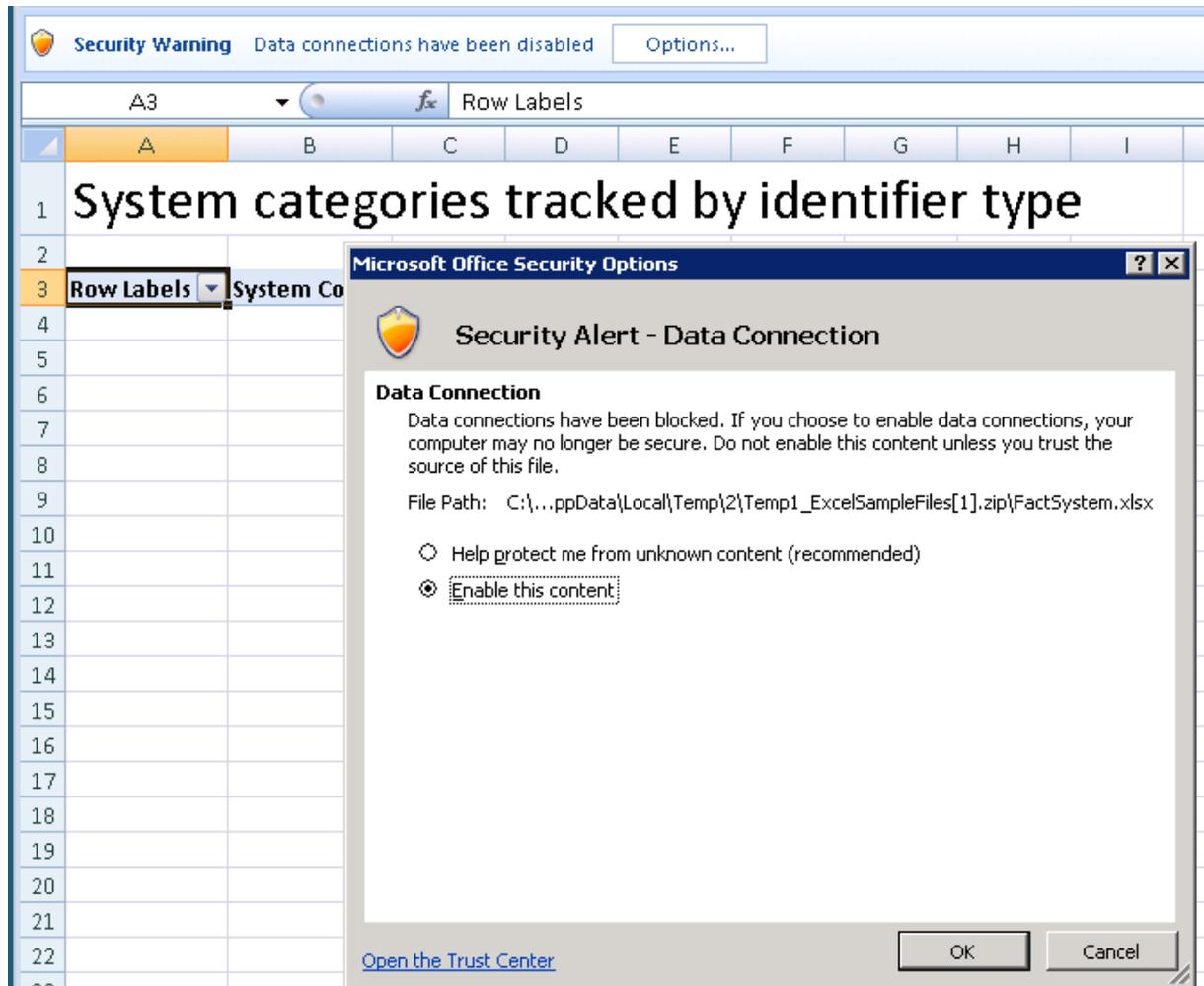


Figure 5: A security alert could appear when opening the sample files into Excel

Depending on your local security settings, the tables in the sample files may appear to be empty. If so, a Security Warning will appear above the sheet. Click the **Options...** button, and enable data connections (Figure 5).

Setting up connections in Excel 2003

The following steps describe how to connect to the CUBE *after* the OLE DB provider is installed.

1. Open Microsoft Excel, and open the **Data > Import External Data > Import Data ...** menu.
2. In the **Select Data Source** window, click **New Source...** To open the Data Connection Wizard.
3. Select **Microsoft SQL Server OLAP Services**. Click **Next**.
4. You will now be prompted for a server name (Figure 6). This must be the data warehouse server. Add an instance name if applicable.

Note: As described in the [Cisco TMS Analytics Extension Administrator Guide](#), a bug in Excel can prevent Windows Impersonation from working properly. Ensure that *Use Windows Authentication* is selected to avoid this issue.

Data Connection Wizard

Connect to Database Server
Enter the information required to connect to the database server.

1. Server name:

2. Log on credentials

Use Windows Authentication

Use the following User Name and Password

User Name:

Password:

Buttons: Cancel, < Back, Next >, Finish

Figure 6: The Data Connection Wizard

5. Select the database that contains the CUBE (Figure 7). The default database name is “**tmsng_dwhAsDb**”. This database will contain a single CUBE, called “**TMS_Cube_1_0**”. Select this CUBE, and click **Finish**.

Data Connection Wizard

Select Database and Table
Select the Database and Table/Cube which contains the data you want.

Select the database that contains the data you want:

Connect to a specific cube or table:

Name	Description	Modified	Created	Type
TMS_Cube_1_0		5/10/2010 10:22:38 AM		CUBE

Buttons: Cancel, < Back, Next >, Finish

Figure 7: Selecting a CUBE

6. Back in the **Select Data Source** window, select the source you just created, and click **Open**.
7. Using the **Pivot Table and PivotChart Wizard**, accept the default values and click **Finish**.
8. The Pivot Table is now ready to use (Figure 8).

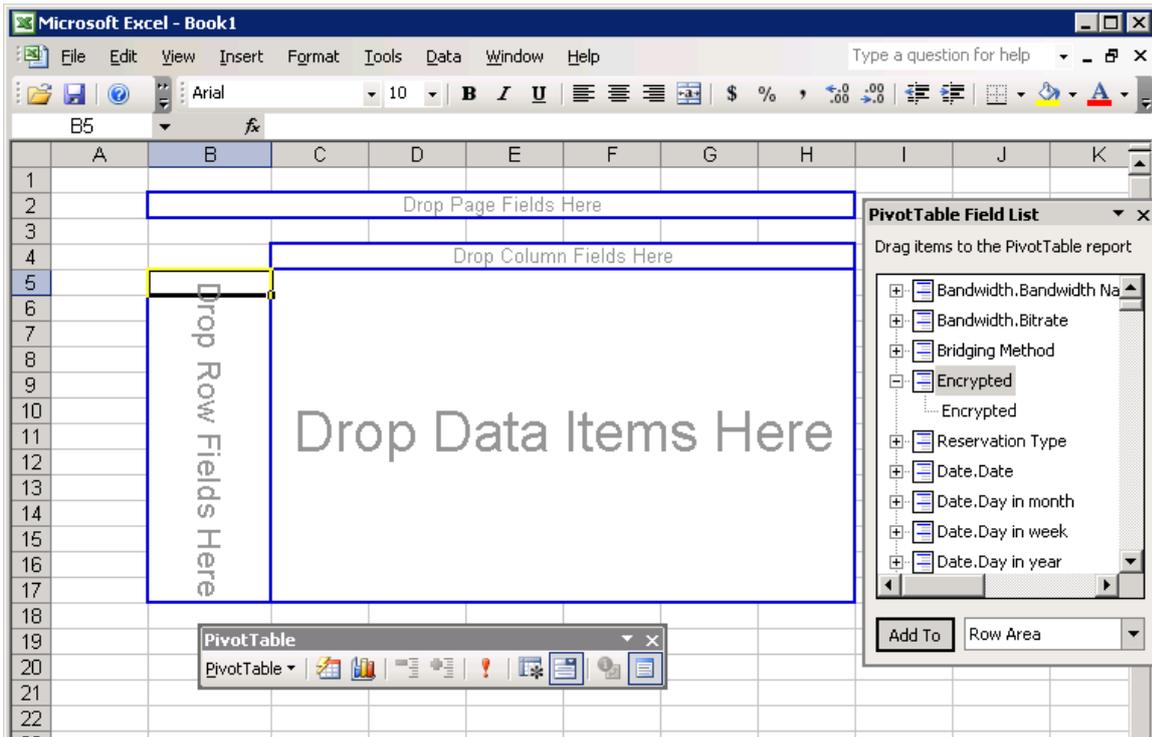


Figure 8: A Pivot Table ready for use in Excel 2003

Setting up connections in Excel 2007 and 2010

The instructions below are tested in Excel 2007 and 2010.

1. Open Microsoft Excel, and go to the **Insert** ribbon. Select either a Pivot Table or a Pivot Chart by clicking the leftmost item (Figure 9). Note that a cell (any cell) must be selected for this menu option to be active.

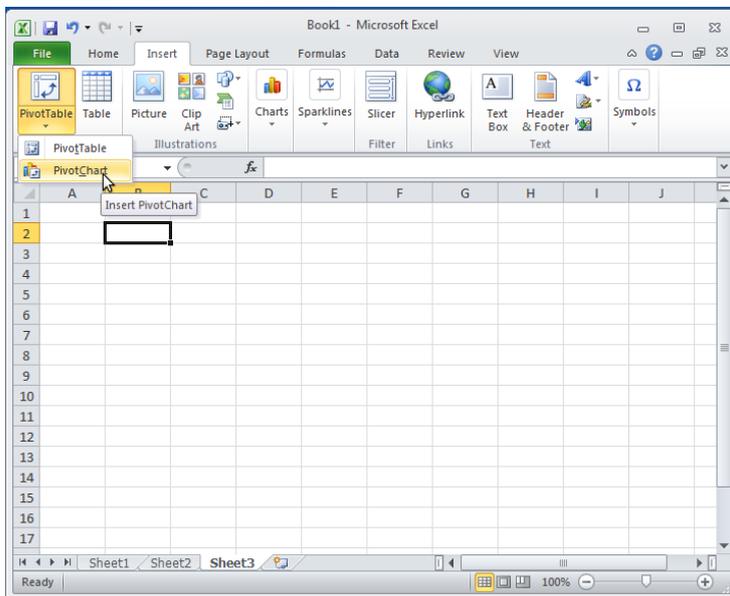


Figure 9: The "Insert" ribbon in Excel 2010

2. Select the **Use an External data source** radio button and click **Choose Connection**.
3. In the **Existing Connections** window, click **Browse for more...**
4. In the **Select Data Source** window, click **New Source...** to open the Data Connection Wizard.
5. Select **Microsoft SQL Server OLAP Services**. Click **Next**.
6. You will now be prompted for a server name (Figure 6). This must be the data warehouse server.

7. Add an instance name if applicable. Click **Next**.
8. Accept the default values and click **Finish**.
9. The Pivot Table/Chart is now ready to use (Figure 10).

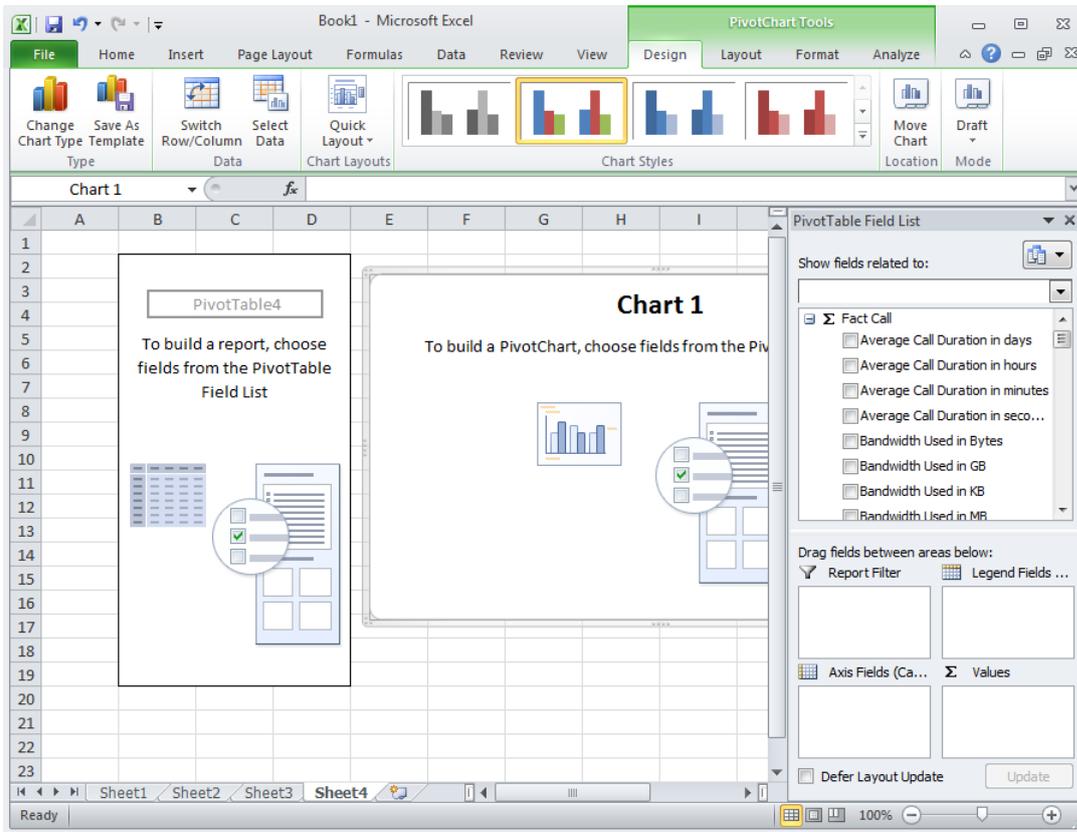


Figure 10: A Pivot Chart ready for use in Excel 2010

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.
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 if 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.
- **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.
- **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.

Note: 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 install or uninstall. 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\TANDBERG\Analytics Extension`).

Note: 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* might also have been created. The latter can safely be ignored, as its content is also written to *AnalyticsExtension_v1.100001.log*.

AnalyticsExtension_v1.100001.log can often be several megabytes in size, and is therefore not easily readable. In *AnalyticsExtension_v1.100001.log*, the lines following the "Exception thrown by ..." message are usually the most relevant to solving installation problems.

Upgrading Cisco TMSAE

This section describes how to upgrade from version 1.0 to version 1.1 of Cisco TMSAE. The procedure differs between Windows Server 2003 and 2008.

Windows Server 2003

Upgrading the Cisco TMS Analytics Extension on Windows Server 2003 requires version 1.0 to be uninstalled first.

Caution: Do not remove the data warehouse components as specified in the [Complete Removal of Product](#) section, as the data warehouse database must be kept intact to successfully upgrade.

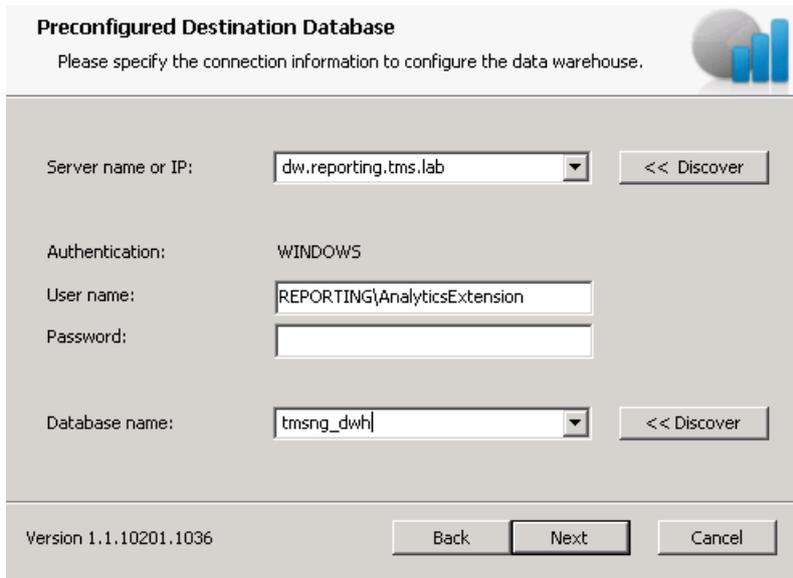
1. Note the names of the data warehouse database and Analytics Extension windows service account. You will need to provide these names during un-installation.
2. Follow the instructions in the [Uninstall](#) section of this document to uninstall version 1.0 of Analytics Extension.
3. After uninstalling version 1.0, check 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.
4. Run the installer as described in the section [Installation process](#) and use the **Use Preconfigured** option (Figure 11).
5. Continue the installation as described in the [Running the Software Installer](#) section of [Appendix: Preconfiguring the Databases](#).

You can now run the ETL job (as described in the [Verifying the ETL task](#) section above) to verify the installation.

Windows Server 2008

To upgrade your installation you will need:

- Local administrator permissions to run the setup file
 - The password of the Cisco TMSAE Windows service account (Figure 11)
1. Copy the Analytics Extension 1.1 zip file to the Windows Server hosting Cisco TMS and extract the *setup.exe* file. Close all other running programs and security/anti-virus software that may prevent installing the software.
 2. Launch the *setup.exe* file and follow the onscreen instructions.



Preconfigured Destination Database

Please specify the connection information to configure the data warehouse.

Server name or IP: << Discover

Authentication: WINDOWS

User name:

Password:

Database name: << Discover

Version 1.1.10201.1036

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Figure 11: The *Preconfigured Destination Database* window.

After upgrading Analytics Extension to version 1.1, you can now run the ETL job (as described in the [Verifying the ETL task](#) section above) to verify installation.

Uninstalling Cisco TMSAE

Uninstallation process

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

The program will not remove the data warehouse Database, data warehouse CUBE, and associated server objects. See below for information on how to remove these components.

Complete removal of Cisco TMSAE databases

Note: 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 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.
1. Using SQL Management Studio, now set the **Server type** to **Analysis Services** and connect to the data warehouse Analysis Services instance
 2. Under Databases, delete the **tmsng_dwhAsDb** database

On the Cisco TMS Web Server where the Analytics Extension is installed:

1. Open the Registry Editor and delete the registry key hives
 - HKEY_LOCAL_MACHINE\SOFTWARE\Tandberg\TANDBERG Management Suite\Reporting
 - HKEY_LOCAL_MACHINE\SOFTWARE\Tandberg\TANDBERG Analytics Extension

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 Analytics Extension the option key.
(Because of how Cisco TMS caches option keys, you need to restart the Cisco TMS application pool **TMSNet20AppPool** for the changes take effect).

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 MS SQL Server. Additionally, using `PrepareDatabase.sql` and `PrepareAnalysisServiceDatabase.xml` 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.

Note: `PrepareDatabase.sql` and `PrepareAnalysisServiceDatabase.xml` must be customized and run *before* the Analytics Extension installer

Along with the `setup.exe` file, additional files are supplied to facilitate preconfiguration:

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

These scripts 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.

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 at least `db_datareader` role permission.

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 login 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" (Figure 12).

```

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

```

Figure 12: The `PrepareDatabase.sql` script before customization.

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.

1. 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.tms.lab\sqltms'`
2. Replace `<USERNAME>` with the name of the SQL Login to be used for the DWH TMS Service User.
Example: `SET @TmsReadUserName = 'AnalyticsExtension'`
3. Replace `tmsng` with the name of the Cisco TMS Database (if your Cisco TMS installation uses a custom database name). `tmsng` is the default Cisco TMS database name.
4. Replace `<PASSWORD>` with the password of the designated DWH TMS Service user.
5. Choose a time of day for the ETL job to run.
6. `EtlResolveSystemsOnInitialLoad` controls if [the ETL task](#) will resolve Cisco TMS systems on its first run. Change the value to 1 if you want to resolve Cisco TMS systems, set to 0 to skip this.
7. 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.
8. Replace `<DOMAIN ACCOUNT>` with the Windows Domain and user name that will be used as the DWH Service User.
Example: `SET @DwhDatabaseUserName = 'REPORTING\Analytics'`
9. Review all your changes for accuracy and syntax. Be sure all strings are enclosed in single quotes.

Note: SQL Management Studio will not detect all possible errors if you enter wrong information – it will only check SQL Syntax. Ensure all user and address information is correct before proceeding.

10. Execute the script by right-clicking in the script window, and select **Execute**.
11. If the databases configure correctly, a confirmation message will appear below the script after a few seconds. If an unexpected error occurs, all changes will be rolled back, and an appropriate

error message will be displayed. Please refer to the [Cisco TMS Analytics Extension Admin Guide](#) for troubleshooting the error messages.

The analysis services configuration script file

1. Open Microsoft SQL Server Management Studio.
2. Open PrepareAnalysisServiceDatabase.xml (Figure 13). When prompted for which connection to use, specify the data warehouse server name.

```

<Batch xmlns="http://schemas.microsoft.com/analysiservices/2003/engine" Transaction="true">
  <Create xmlns="http://schemas.microsoft.com/analysiservices/2003/engine">
    <ObjectDefinition>
      <Database xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001
        <ID>#DATABASEID#</ID>
        <Name>#DATABASEID#</Name>
        <Language>1033</Language>
        <Collation>Latin1_General_CI_AI</Collation>
        <DataSourceImpersonationInfo>
          <ImpersonationMode>ImpersonateServiceAccount</ImpersonationMode>
        </DataSourceImpersonationInfo>
      </Database>
    </ObjectDefinition>
  </Create>

  <Create xmlns="http://schemas.microsoft.com/analysiservices/2003/engine">
    <ParentObject>
      <DatabaseID>#DATABASEID#</DatabaseID>
    </ParentObject>
    <ObjectDefinition>
      <Role xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XML
        <ID>Owner</ID>
        <Name>Owner</Name>
        <Description />
        <Members>
          <Member>
            <Name>#DB_OWNER#</Name>
          </Member>
        </Members>
      </Role>
    </ObjectDefinition>
  </Create>

  <Create xmlns="http://schemas.microsoft.com/analysiservices/2003/engine">
    <ParentObject>
      <DatabaseID>#DATABASEID#</DatabaseID>
    </ParentObject>
  </Create>

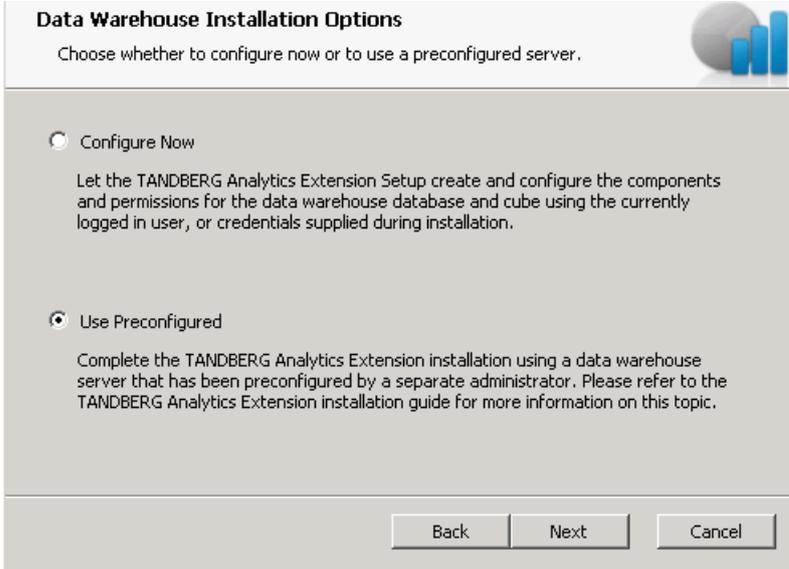
```

Figure 13: The PrepareAnalysisServiceDatabase.xml script before customization.

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 'tmsg_dwh', replace
 <DatabaseID>#DATABASEID#</DatabaseID>
 with
 <DatabaseID>tmsg_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>REPORTINGAnalytics</Name>
5. Execute the script by right-clicking in the script window, and select **Execute**.
6. If the script executes correctly, a message window appears below the script after a few seconds saying 'empty' in an XML format. If an unexpected error occurs, all changes will be rolled back, and an appropriate error message will be displayed. Please refer to the [Cisco TMS Analytics Extension Admin Guide](#) for troubleshooting the error messages.

Running the software installer

Once the preconfiguration scripts have been completed, run the Analytics Extension software installer and follow the onscreen prompts, following the [Analytics Extension installer process](#) and using the 'Use Preconfigured' option (Figure 14).



Data Warehouse Installation Options

Choose whether to configure now or to use a preconfigured server.

Configure Now

Let the TANDBERG Analytics Extension Setup create and configure the components and permissions for the data warehouse database and cube using the currently logged in user, or credentials supplied during installation.

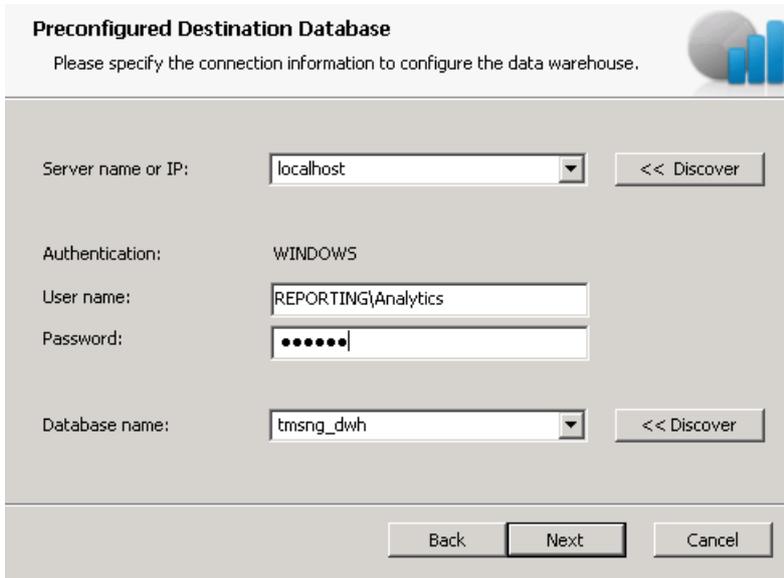
Use Preconfigured

Complete the TANDBERG Analytics Extension installation using a data warehouse server that has been preconfigured by a separate administrator. Please refer to the TANDBERG Analytics Extension installation guide for more information on this topic.

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Figure 14: Configure now and using a preconfigured data warehouse.

When prompted for the data warehouse Database information, be sure to enter the same values used in the `PrepareDatabase.sql` file for the Database Name (Figure 15).



Preconfigured Destination Database

Please specify the connection information to configure the data warehouse.

Server name or IP: localhost << Discover

Authentication: WINDOWS

User name: REPORTING\Analytics

Password: ●●●●●●

Database name: tmsng_dwh << Discover

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Figure 15: The destination database screen, using the "Use Preconfigured" option.

Bibliography

The following table lists documents and websites referenced in this document.

Title	Reference	Link
<i>Cisco TelePresence Management Suite Analytics Extension Administrator Guide</i>	D14668	http://cisco.com
<i>Cisco TelePresence Management Suite Analytics Extension API Programming Reference Guide</i>	D14701	http://cisco.com
<i>Configuring the Windows Firewall to Allow SQL Server Access</i>		http://technet.microsoft.com
<i>Configuring a Fixed Port</i>		http://technet.microsoft.com

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