IBM Planning Analytics
2.0

*Getting Started with Planning Analytics
on Cloud*

IBM

Note

Before you use this information and the product it supports, read the information in "Notices" on page 125.

Product Information

This document applies to IBM Planning Analytics Version 2.0 and might also apply to subsequent releases.

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Contents

Introduction

This documentation describes how to interact with the IBM® Planning Analytics system and its TM1-related components. It also explains how to do common tasks. This documentation helps you understand the steps and features that are unique to Planning Analytics in the cloud environment.

Because the Planning Analytics system operates in a remote hosted environment, this documentation explains how to remotely interact with and connect to the Planning Analytics system. The documentation also provides an overview of the Planning Analytics system and how to work with multiple cloud environments.

Information and steps are provided about the following tasks:

- How to run each of the programs that are provided with the Planning Analytics system.
- How to move files between your local computer and the Planning Analytics system.
- How to connect to the Planning Analytics system with a remote desktop session.

This documentation does not contain detailed information about each of the TM1® programs that are provided with the Planning Analytics system. Instead, a brief description of how each program works with the Planning Analytics system is provided along with links to the related documentation for these other programs.

Audience

You must be familiar with the following concepts:

- Your TM1 data and modeling requirements
- TM1 user security options and capabilities
- Basic Microsoft Windows file management
- Remote file management using File Transfer Protocol Secure (FTPS) tools
- Remote system access using remote desktop protocol (RDP) tools

Finding information

To find documentation on the web, including all translated documentation, access IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

Accessibility features

Accessibility features help users who have a physical disability, such as restricted mobility or limited vision, to use information technology products. Some of the components in the Planning Analytics system have accessibility features. For more information, see "Accessibility features" on page 17. You can also read the *Accessibility* section in the documentation for each of the IBM components included in Planning Analytics.

IBM HTML documentation has accessibility features. PDF documents are supplemental and as such, include no added accessibility features.

Accessibility checklist

This product's IBM Knowledge Center documentation is hosted in the IBM Knowledge Center - Hosted Edition service. To request the current accessibility status for the IBM Knowledge Center, visit the IBM Accessibility Research information web page (https://www.ibm.com/able/guidelines/ci162/accessibility_checklist.html) .

Samples disclaimer

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Forward-looking statements

This documentation describes the current functionality of the product. References to items that are not currently available may be included. No implication of any future availability should be inferred. Any such references are not a commitment, promise, or legal obligation to deliver any material, code, or functionality. The development, release, and timing of features or functionality remain at the sole discretion of IBM.

Security considerations

For security considerations for IBM Planning Analytics, see *Planning Analytics Installation and Configuration*. Information on managing user and group authentication can be found in the *Managing Users and Groups* chapter of the *TM1 Operations* documentation.

Chapter 1. Getting started with Planning Analytics on Cloud

Learn about IBM Planning Analytics on Cloud and how it is different from a standard TM1 installation. Learn how to connect to the Planning Analytics system and provide this information to other users.

You must be familiar with the available components and ensure that users have the required connection information and operating instructions to run the available components.

Planning Analytics overview

You should understand your IBM Planning Analytics environment and how the different components work together.

Planning Analytics non-production and production environments

A typical IBM Planning Analytics solution includes two separate cloud environments or systems: one for non-production and one for production purposes. You receive a separate set of account information for each environment.

Note: Non-production environments are not available with Planning Analytics Digital Pack.

For example, you can use the non-production environment for development purposes and the production environment as your live environment. Each environment typically contains the following components:

- TM1 Server
- Hosted applications
- Shared folder
- Planning Analytics Workspace tenant
- Cognos® Analytics

  Note:
  – Cognos Analytics is optional and not available with Planning Analytics Digital Pack.
  – Cognos Analytics in a production environment can be scaled as required to manage production-sized loads.
  – Cognos Analytics in a non-production environment is not intended for production use or for performance testing. It is not designed to scale and does not have the same level of resources as the production Cognos Analytics environment.

Your organization might choose to subscribe to optional components, such as Cognos Analytics. It might also subscribe to more non-production and production environments. For more information, refer to your welcome kit.

You can use a remote desktop connection from your local computer to connect to either cloud system. After you connect to a cloud system, you can run the applications that are hosted on that system.

You can move files between your local computer and the shared folder on either cloud system. You can also move files between the shared folders of different cloud systems.

The following image shows the setup of Planning Analytics non-production and production environments.

Diagram showing IBM Planning Analytics Non-production environment and Production environment (Typical environment pairing), each containing: TM1 Server, Planning Analytics Workspace tenant, Cognos Analytics (Optional), Cloud hosted applications, and Shared folder. A Customer site with a laptop connects to these. Below are additional Optional additional environments (Non-production and Production) with the same components. Notes: "Not available in Planning Analytics Digital Pack."

Planning Analytics standard system

The IBM Planning Analytics standard system provides a TM1 environment hosted on a secure, remote system that you and your users can access.

Each Planning Analytics system supports a collection of TM1 desktop and web-based applications. Each system also includes a shared folder for storing and accessing your data files.

The Planning Analytics standard system includes the following main components:

- Planning Analytics Workspace
- Secure Gateway for data integration with on-premises ODBC data sources
- TM1 Server
- TM1 hosted and local applications

- Planning Analytics system shared folder
- IBM Planning Analytics Premium Reporting (a limited-use version of Cognos Analytics) is optional, but not available with Planning Analytics Digital Pack

The following image provides an overview of the different components and applications that make up a typical Planning Analytics system. The interaction between the TM1 Server, hosted applications, local applications, and shared folder are shown.
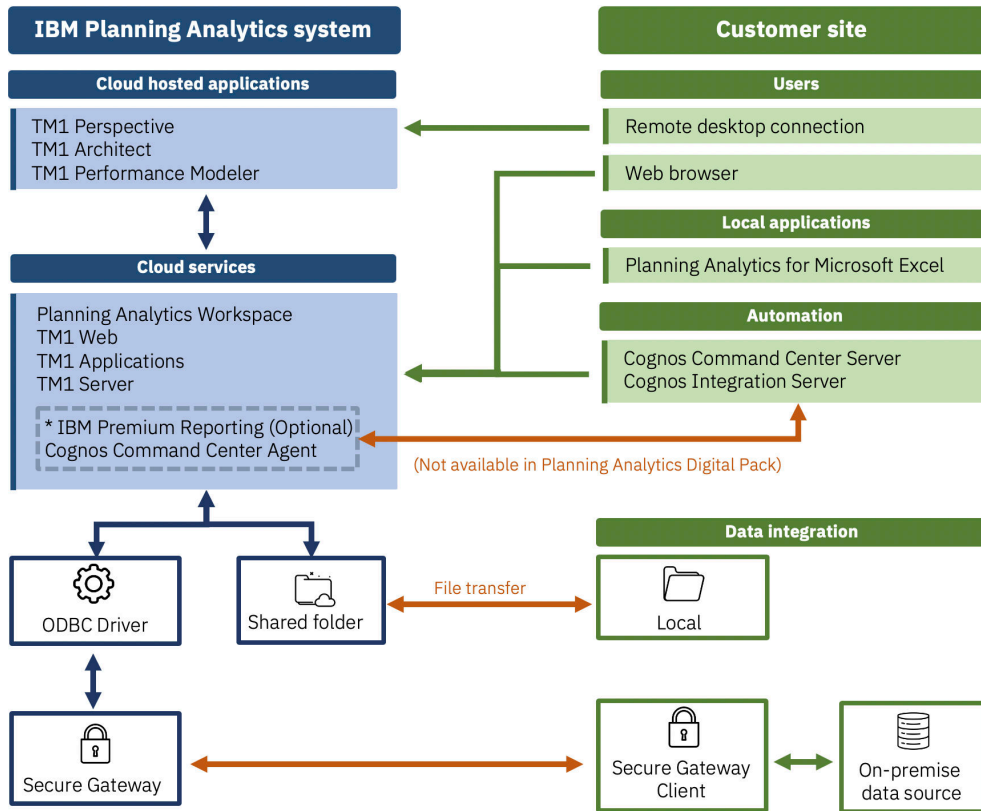
* IBM Premium Reporting is also known as limited use Cognos Analytics.

User access

The Planning Analytics modeler1, modeler2 to modelerX user accounts can connect directly to the Planning Analytics system using a remote desktop protocol (RDP) connection or a File Transfer Protocol Secure (FTPS) application. This enables modelers to run the related TM1 desktop programs and to manage files in the shared folder on the Planning Analytics system.

Typical non-modeler users connect to the Planning Analytics system using only the web, and local Cognos applications. Typical users do not connect to the Planning Analytics system using RDP or FTPS.

Customers get a user account for the remote desktop for every Planning Analytics Modeler Authorized User that they subscribe to and there is no licensing or technical restriction on the number of concurrent users.

TM1 Admin Server and TM1 Server
Your Planning Analytics system uses the following default names for the TM1 Admin Host and TM1 Server:

- Default TM1 Admin Host name: data
- Default TM1 Server name: tm1

If you'd like to change the default TM1 server name on your system, you can open a support case and request a name change at https://www.ibm.com/mysupport/.

Shared data between TM1 Servers

Planning Analytics allows, by default, any of your TM1 Servers to access any data files that are in your shared folder.

Note: In previous versions of Planning Analytics, a TM1 Server could access only its own data directory and subfolders. The data directory folder is at the same level as the file `tm1s.cfg`. If you want to keep the previous restrictions in place to ensure that one TM1 Application cannot access the files of another TM1 application, send a PMR to the Cloud Operations team.

Secure access to on-premises data

Planning Analytics can access on-premises ODBC data sources securely using the IBM Secure Gateway service. With an ODBC driver that is installed on the cloud and the Secure Gateway client that is installed on the customer site, on-premises data can be leveraged by Planning Analytics applications. For example, TurboIntegrator can efficiently process data that is related to scheduling; drill-through operations; and Extract, Transform, and Load (ETL) operations.

Planning Analytics Digital Pack

IBM Planning Analytics Digital Pack provides a scaled down version of the Planning Analytics standard system. It is intended for a small business or department of between 5 and 20 users.

Planning Analytics Digital Pack contains all of the core Planning Analytics components. However, it does not contain these additional components that are found in the Planning Analytics standard system:

- IBM Cognos Analytics
- IBM Cognos Command Center
- IBM Cognos Integration Server
- Planning Analytics non-production environments

Up to three Planning Analytics Digital Pack users can be provided with Remote Desktop Protocol (RDP) connections. RDP connections allow users to connect to hosted applications.

If you want to upgrade from the Planning Analytics Digital Pack to the Planning Analytics standard system, contact your account manager.

Planning Analytics applications and components

IBM Planning Analytics includes a collection of components for monitoring, modeling, analyzing, and interacting with TM1 data.

These components are either hosted on the Planning Analytics system or installed directly on your local computer. All of the components connect to the TM1 Server that runs on the Planning Analytics system.

For more information, see .

Hosted applications

The Planning Analytics system computer hosts Planning Analytics programs that are accessed either from a web browser or by remote desktop connection.

The following web-based applications run on the Planning Analytics system. You access these applications using a web browser on your local computer.

- Planning Analytics Workspace
- TM1 Web

- TM1 Applications
- Cognos Analytics Report Studio *****
- Cognos Analytics Workspace *****
- Cognos Analytics Workspace Advanced *****
- Cognos Analytics Connections *****

* *Not available with* Planning Analytics Digital Pack

The following desktop applications run on the Planning Analytics system. You access these applications with a remote desktop connection to the Planning Analytics system that uses the remote desktop protocol (RDP).

- TM1 Perspectives
- TM1 Architect
- TM1 Performance Modeler

Local applications

The following IBM Cognos programs are installed and run directly on your local computer and remotely access the Planning Analytics system:

- IBM Planning Analytics for Microsoft Excel
- IBM Cognos Integration Server *****
- IBM Cognos Command Center *****

* *Not available with* Planning Analytics Digital Pack

Planning Analytics shared folder

The IBM Planning Analytics system provides a dedicated shared folder for your TM1 data and related files.

The shared folder is accessible only with the shared folder user name, password, and addresses that were provided in the Welcome Kit.

Shared folder content

The shared folder contains the following files:

- TM1 data and log files
- Transfer archive files from TM1 Performance Modeler
- Transfer specification files from TM1 Performance Modeler
- Installation files for IBM Cognos Integration Server (not available with Planning Analytics Digital Pack)
- Installation files for IBM Cognos Command Center (not available with Planning Analytics Digital Pack)
- Other files and documents that you want to use with your Planning Analytics system

Accessing the shared folder

You can use your shared folder account user name and password to access the shared folder in the following ways:

- Use the Windows File Explorer in the remote desktop session to manage files in the shared folder.
- Use a File Transfer Protocol Secure (FTPS) application on your local computer to move files between your local computer and the shared folder.

  Important: To ensure that your data is encrypted when transferred, the IBM Planning Analytics system FTP connection is configured to use FTP with Secure Sockets Layer (FTPS). Make sure to use an FTP application that supports FTPS.

For information on FTPS configurations used by IBM Planning Analytics, see "File Transfer Protocol Secure (FTPS) connections" on page 44.

- If you have multiple cloud environments, you can use File Explorer to move files between the shared folders in each environment.

For more information, see "Managing files in the Planning Analytics shared folder" on page 38.

Data backup for the shared folder

The files in the shared folder are backed up on regular basis. Check with IBM Support for more information.

Important: Only the shared drive is backed up. Therefore, you risk losing your data if you store files on the remote desktop disk drive.

Planning Analytics account and system information

The IBM Planning Analytics system is managed and accessed through a group of dedicated user accounts and system addresses that are assigned to your company or organization.

When you first use your Planning Analytics system, you are provided with a Planning Analytics Welcome Kit file for each Planning Analytics system you requested.

The Welcome Kit

The IBM Planning Analytics Welcome Kit file contains a set of account and system information that is unique for your Planning Analytics system.

Download the IBM Planning Analytics Welcome Kit

The process for downloading the IBM Planning Analytics Welcome Kit is as follows.

1. IBM Planning Analytics administrators receive an email, which includes an invitation to a Box@IBM folder.

   The IBM Planning Analytics Welcome Kit is downloaded from the Box@IBM folder. The folder contains Welcome Kits for all your production and non-production environments, and is named *Your_name* `(Planning Analytics on Cloud)`.

2. To download the Welcome Kit, you need a Box@IBM account.

   - If you do not have a Box@IBM account, sign up for an account at https://account.box.com/signup/n/personal. You receive an email with access information from noreply@box.com. Then you receive a Welcome email from the fopmnews@us.ibm.com.

   - Log in details if you already have a Box@IBM account:

     If you don't have an IBM email address
     https://account.box.com/login

     If you have an IBM email address
     https://ibm.ent.box.com/

     https://ibm.account.box.com

   - If you are unable to access Box@IBM, open a support case from the IBM support portal https://www.ibm.com/mysupport/ and ask to receive the IBM Planning Analytics Welcome Kit by email.

3. In Box@IBM, you have view permissions to the folder, and you cannot see who has access to the folder. If you want to see a list of people who have access to the Box@IBM account, or to change who has access, open a support case.

4. To be notified of a new or changed file in the Welcome Kit, enable email notifications with the following steps.

   a. Log in to your Box@IBM account and go to your Welcome Kit folder.

b. Click [···] and select **Settings**.

c. In the **Email and Notifications** section, select **Override default settings for this folder and all subfolders**.

d. Under **Notify me when someone**, select **Uploads**.

e. Click **Save Changes**.

Note:

If you previously received the Welcome Kit by email, the next time a Welcome Kit is generated for you, it will be available from Box@IBM.

Contents of the Welcome Kit

The information includes the main user account credentials, system addresses, and URLs that you use to connect to one specific Planning Analytics system.

Note: The information in the Planning Analytics Welcome Kit supersedes the online documentation if differences or questions arise.

The file for the Planning Analytics Welcome Kit uses the following naming format:

```
customername - IBM Planning Analytics Welcome Kit date.zip
```

Important: Keep this information in a safe place. The provided user accounts are only for modelers who need remote desktop and file transfer access to the Planning Analytics system.

This video shows you how to use the Welcome Kit:

https://youtu.be/bvGIvmJ4NHY

A typical Planning Analytics system includes the following account and system information:

Planning Analytics system address
The unique system address for your Planning Analytics system. Use this information for remote desktop access to your Planning Analytics system.

Typical format:

```
customername.planning-analytics.cloud.ibm.com
```

Note: Customers provisioned before September 24, 2020 will have the `ibmcloud.com` domain.

You typically have more than one Planning Analytics system address. For example, you might have addresses for non-production and production cloud environments.

User account names and passwords
Each Planning Analytics system includes multiple user accounts.

Remote desktop user account
Use this account when you run a remote desktop session on the Planning Analytics system. For example, you use a remote desktop session to run the hosted desktop-based programs such as TM1 Performance Modeler and TM1 Architect.

The usernames for this account use the format `modeler1`, `modeler2` to `modelerX`. Depending on your exact Planning Analytics system, you might have one or more of these user accounts.

Important: This user account is only for the TM1 modeler subscription, and not for standard users of TM1.

Cognos Command Center agent account
Username and password for the Cognos Command Center agent.

Use this account to log in to Cognos Command Center to work with agents. For more information, see "Setting up an agent in the Cognos Command Center server" on page 25.

Note: Cognos Command Center is not available with Planning Analytics Digital Pack.

The Planning Analytics Welcome Kit contains other information that you can use to work with Cognos Command Center.

Non-interactive TM1 account
User account information for use in the LDAP namespace. You can use account information when you have automation tools and processes that are scheduled or require the username and password to be non-interactive.

Using the following account, a customer can automate processes that involve their Planning Analytics Cloud TM1 server.

- Username: *<customer>*_tm1_automation
- Password: *<generated>*
- CAM Namespace: LDAP

On the Cognos Command Center on-premises server:

1. Create a Planning Analytics Cloud Agent by using the Cognos Command Center Agent user (admin) from the welcome kit.
2. Create a Planning Analytics Cloud TM1 computing resource by using the new *<customer>*_tm1_automation from the welcome kit.

For more information, see "Setting up a non-interactive account for use in the LDAP namespace" on page 27.

Shared folder account
Username and password for File Transfer Protocol Secure (FTPS) and Windows file sharing with the shared folder on your Planning Analytics system.

Planning Analytics modeling applications
Use this information for remote desktop access to TM1 Performance Modeler, TM1 Architect, and TM1 Perspectives.

For example, use a Microsoft Windows Remote Desktop Connection with the following format to remotely connect to your Planning Analytics system:

```
https://customername.planning-analytics.cloud.ibm.com
```

Note: If you are prompted when you start TM1 Performance Modeler, make sure the **IBM Cognos TM1 system URL** field contains the following URL: `https://customername.planning-analytics.cloud.ibm.com/pmpsvc/services`

URLs for Planning Analytics web-browser-based applications
You can provide these URLs to your users so they can access the related Planning Analytics web-based applications from their web browsers.

- Planning Analytics Workspace

  ```
  https://www.planning-analytics.cloud.ibm.com
  ```

  Tip: Your desktop system address is listed in your Welcome Kit. When Remote Desktop Gateway is enabled, the address for your Planning Analytics system is *server_name*rich.planning-analytics.cloud.ibm.com. The suffix *rich* must be appended to the *server_name*.

- TM1 Web

  ```
  https://customername.planning-analytics.cloud.ibm.com/tm1web/
  ```

- TM1 Applications

  ```
  https://customername.planning-analytics.cloud.ibm.com/pmpsvc/
  ```

URLs for Planning Analytics web-connected applications
Use this information to configure a remote data connection for the following application.

- IBM Planning Analytics for Microsoft Excel

  ```
  https://customername.planning-analytics.cloud.ibm.com
  ```

Shared folder information

> User account information for File Transfer Protocol Secure (FTPS) and Windows file sharing with the shared folder on your Planning Analytics system. This information includes username, password, and addresses assigned to your shared folder.
>
> For detailed steps about accessing your shared folder, see "Managing files in the Planning Analytics shared folder" on page 38.

Federated authentication

You can use your own email addresses and passwords to control user access to IBM Planning Analytics, which allows your organization to manage password complexity and expiration rules, and other password settings.

Security Assertion Markup Language (SAML) 2.0 and IBMid are used to implement federated authentication. A user logs in to Planning Analytics through the IBMid sign in page and authenticates through your organization's SAML identity provider. Configuring IBMid to use federated authentication does not require any changes to Planning Analytics security.
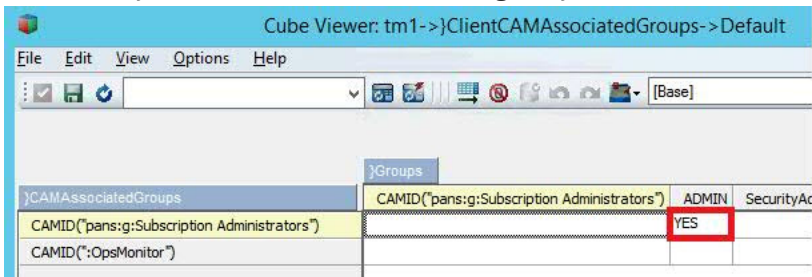
To enable federated authentication, review the IBMid Enterprise Federation Adoption Guide (https://ibm.ent.box.com/notes/78040808400?v=IBMid-Federation-Guide) with your IT organization, and then contact IBM Support.

Removing TM1 admin rights

Subscription administrators in Planning Analytics are automatically given TM1 administrator rights. These rights can be updated or removed in IBM TM1 Architect or IBM TM1 Performance Modeler.
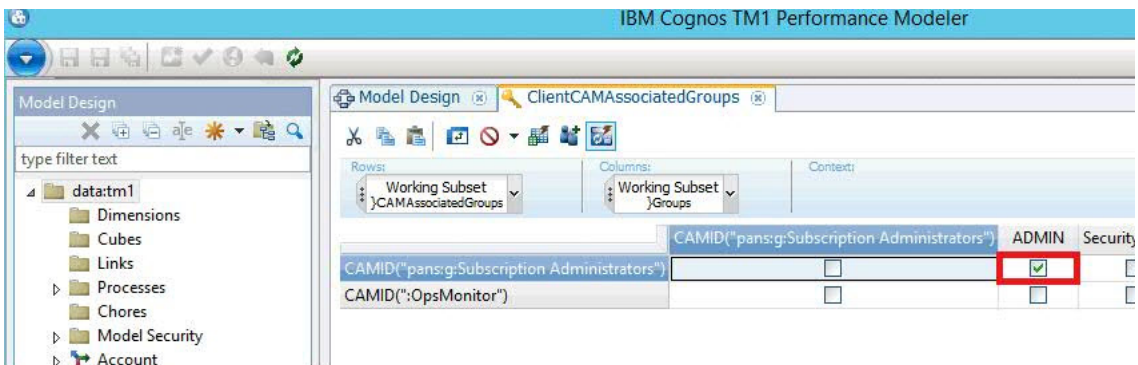
When a TM1 instance is created, a new CAM associated group entry is created in the `}ClientCAMAssociatedGroups` control cube. The control group maps the Cognos group CAMID (`"pans:g:Subscription Administrators"`) to the generic TM1 security group ADMIN.

To manually remove TM1 administrator rights, you need to remove the association in TM1 Architect

or in TM1 Performance Modeler.

Connecting to the Planning Analytics remote desktop

Connect to the IBM Planning Analytics remote desktop so that you can run the hosted desktop-based applications or manage files in the shared folder. For example, you can connect by using Microsoft

Remote Desktop Connection and then run TM1 Architect, TM1 Perspectives, and TM1 Performance Modeler.

Before you begin

Planning Analytics is configured to support secure Remote Desktop Protocol (RDP) connections only.

To successfully connect to an Planning Analytics desktop session, you must use an RDP application that supports Network Level Authentication (NLA). RDP applications are available for both Microsoft Windows and non-Windows platforms.

For example, you can use the built-in Remote Desktop Connection feature in Microsoft Windows 7. For more information about this feature, search the Microsoft Support website for "Connect to another computer with Remote Desktop Connection".

Note: To configure the RDP client to use secure TLS 1.2 connections on Windows 7, see the following document: Unable to Remote Desktop to Planning Analytics Cloud Rich Tier from Windows 7 Computer (https://www-01.ibm.com/support/docview.wss?uid=ibm10741789).

Before you connect, perform these tasks:

1. Verify that your version of Windows Remote Desktop Connection supports Network Level Authentication.

   a. Start Remote Desktop Connection.

      Tip: This tool is typically located here: **Start menu > All Programs > Accessories > Remote Desktop Connection**.

   b. In the Remote Desktop Connection window, click the program icon in the upper left corner of the window and then click **About**.

   c. Verify that the following text is listed: **Network Level Authentication supported**.

2. Configure your RDP application to run Windows key combinations on the remote computer.

   a. In Remote Desktop Connection, click **Show Options** > **Local Resources** tab.

   b. Under the **Keyboard** section, set the **Apply Windows key combinations** option to **On the remote computer**.

      This option sends your keyboard shortcuts for the Windows logo key and other key combinations to the remote computer and runs them there.

About this task

This video shows you how to access the Planning Analytics remote desktop:

https://youtu.be/A8QzdnKxRO4

What to do next

Using your RDP application, you can now access the IBM Planning Analytics remote desktop with a Remote Desktop Gateway

Connecting with a Remote Desktop Gateway

A Remote Desktop Gateway allows authorized users to connect to the Planning Analytics remote desktop using both Remote Desktop Protocol (RDP) and HTTPS protocol.

HTTPS protocol provides encryption between your computer and the remote desktop. It uses port 443, which transmits data through a Secure Sockets Layer (SSL) tunnel. This means that port 3389, the port used for Remote Desktop connections, is blocked to enhance network security.

Before you begin

Tip: Perform this task only if your Planning Analytics system is configured for a Remote Desktop Gateway. To find out which method your team uses to connect to the remote desktop, ask your Planning Analytics administrator. Alternatively, you can open the Welcome Kit and search for the following sentence:

> The remote desktop connection is provided over HTTPS (port 443)

- If the sentence above appears in the Welcome Kit, your team connects through a Remote Desktop Gateway.
- If the sentence above does not appear in the Welcome Kit, your team connects using a direct Remote Desktop Connection.

About this task

When your team connects through a Remote Desktop Gateway, some Remote Desktop connection features are enabled by default. You can enable or disable certain connection features by sending a request to IBM Support. The following table lists features of the Remote Desktop Gateway, their default availability, and whether you can enable or disable the feature by contacting IBM Support.

Feature	Default feature availability	Can the feature availability be changed?
Clipboard (allows you to copy or paste files and text).	Enabled	Yes
Access to local drives.	Enabled	Yes
Printing to a local printer.	Disabled	Yes
Timeout after an idle session.	30 minutes	No
Redirection using COM and LPT ports.	Disabled	No
Redirection using Plug and Play devices.	Disabled	No

Note: The same connection features are available to all users of the Remote Desktop Gateway, regardless of their user roles.

Procedure

1. Start Remote Desktop Connection.
2. Click **Show Options**.
3. In the **Connection settings** section, click **Open**.
4. Select the RDP file for your platform that was provided in your Welcome Kit zip file and click **Open**.

   Tip: The Welcome Kit zip file contains preconfigured RDP files for Windows, Macintosh, and Linux. These RDP files are also available on the Planning Analytics remote desktop shared folder in `\\data\s\install\Remote Desktop Services`.
5. Click **Connect**.

   Tip: If a message appears saying that the publisher of the remote connection can't be identified, click **Connect**.
6. Enter your remote desktop system password.

   Tip: Your password is listed in the Welcome kit. If you don't know the password, ask your Planning Analytics administrator.

Results

If the connection is successful, the desktop of the IBM Planning Analytics system is displayed.

Tip: If the newer Windows Start menu desktop displays instead of the classic desktop view, click the **Desktop** icon or press the Windows logo key to toggle to the classic desktop view.

What to do next

After you connect to an IBM Planning Analytics desktop session, you can run the hosted desktop applications and manage files in the shared folder.

Manually connecting with a Remote Desktop Gateway (optional)

You can manually connect to a Remote Desktop Gateway if you want to customize some settings in your remote desktop connection.

Note: Unless your Planning Analytics administrator advises otherwise, we recommend that you connect using the preconfigured RDP files in the Welcome Kit zip file.

Before you begin

Before you connect manually with a Remote Desktop Gateway, you must configure your Remote Desktop Connection client.

Configure your Remote Desktop Connection client to use a Remote Desktop Gateway.

1. Start Remote Desktop Connection.

   Tip: This tool is typically located here: **Start menu > All Programs > Accessories > Remote Desktop Connection**.

2. Enter your IBM Planning Analytics account information:

   a. In the **Computer** field, enter the address for your IBM Planning Analytics system.

      For example:

      `server_name.planning-analytics.cloud.ibm.com`

      Tip: Your desktop system address is listed in your Welcome Kit. When Remote Desktop Gateway is enabled, the address for your IBM Planning Analytics system is `server_name`rich`.planning-analytics.cloud.ibm.com`. The suffix *rich* must be appended to the *server_name*.

   b. Click **Show Options**.

   c. Enter your user name for your Windows remote desktop account on the IBM Planning Analytics system. For example, `server_name\modelerX`.

3. Select the **Allow me to save credentials** check box.

4. Click the **Advanced** tab and then click **Settings**.

5. In the **RD Gateway Server Settings** dialog, do the following:

   a. Select **Use these RD Gateway server settings**.

   b. Ensure that your IBM Planning Analytics address, for example `server_name`rich`.planning-analytics.cloud.ibm.com`, appears in the **Server name** field.

   c. Ensure that the **Bypass RD Gateway server for local addresses** check box is not selected.

   d. Select **Use my RD Gateway credentials for the remote computer**.

   e. Click **OK**.

6. Save your connection settings to an RDP file.

   Note: By creating an RDP file, you can quickly connect in your next Remote Desktop Connection session, without re-entering your credentials. You can also customize and distribute the RDP file later to multiple clients.

a. Click the **General** tab.

b. Click **Save As** and enter a name for your RDP file.

c. Click **Save**.

Procedure

1. Start Remote Desktop Connection.
2. If you want to connect using an RDP file that you saved, follow these steps:

    a) Click **Show Options**.

    b) In the **Connection settings** section, click **Open**.

    c) Select the RDP file that you saved and click **Open**.

3. If you want to enter the connection information manually, follow these steps:

    a) In the **Computer** field, enter the address for your IBM Planning Analytics system.

    For example:

    `server_name.planning-analytics.cloud.ibm.com`

    Tip: Your desktop system address is listed in your Welcome Kit. When Remote Desktop Gateway is enabled, the address for your IBM Planning Analytics system is `server_name`rich`.planning-analytics.cloud.ibm.com`. The suffix *rich* must be appended to the *server_name*.

    b) Click **Show Options**.

    c) Enter your user name for your Windows remote desktop account on the IBM Planning Analytics system.
    For example, `server_name\modelerX`.

4. Click **Connect**.

    Tip: If a message appears saying that the publisher of the remote connection can't be identified, click **Connect**.

5. Enter your remote desktop system password.

    Tip:

    - Your password is listed in the Welcome kit. If you don't know the password, ask your Planning Analytics administrator.
    - The credentials that you use for Remote Desktop Gateway and Remote Desktop Connection must be the same.

Results

If the connection is successful, the desktop of the IBM Planning Analytics system is displayed.

Tip: If the newer Windows Start menu desktop displays instead of the classic desktop view, click the **Desktop** icon or press the Windows logo key to toggle to the classic desktop view.

What to do next

After you connect to an IBM Planning Analytics desktop session, you can run the hosted desktop applications and manage files in the shared folder.

Planning Analytics and Windows Server 2012

The IBM Planning Analyticssystem runs on the Microsoft Windows Server 2012 R2 operating system. You interact with the Windows Server 2012 user interface when you connect to the Planning Analytics system with a remote desktop connection.

You should understand the Windows Server 2012 R2 user interface and some basic keyboard shortcuts. Knowing these features will help you when you work in the remote desktop session on the IBM Planning Analytics system.

Windows Updates

IBM Support manages and applies updates to the Windows operating system of your cloud environment.

⚠️ **Attention:** When you use the remote desktop session on your IBM Planning Analytics system, do not try to run the Windows Update feature even if prompted.

Windows Server 2012 user interface

Microsoft Windows Server 2012 R2 has a user interface that is similar to the UI in Microsoft Windows 8. The IBM Planning Analytics system can display either the new UI or the classic Windows desktop view. When you connect to the system with a remote desktop connection, you can switch between these desktop views.

The shortcuts to open the hosted TM1 desktop applications are available only in the classic Windows desktop view. Use the Windows logo key to switch between the classic desktop view and the new desktop view.

You can find out more about Windows Server 2012 R2 by searching the internet for the following phrases:

- "common management tasks and navigation in Windows Server 2012"
- "ebook introducing Windows Server 2012 microsoft press RTM Edition"
- "keyboard shortcuts Windows Server 2012"

Windows Server 2012 basic keyboard shortcuts

You can use the following basic keyboard shortcuts for Windows Server 2012 R2.

Tip: To make sure that your keyboard shortcuts are run on the IBM Planning Analytics system computer, configure your remote desktop connection to apply Windows key combinations on the remote computer. For more information, see "Connecting to the Planning Analytics remote desktop" on page 9.

Windows logo key
Toggles between the classic Windows desktop view and the new Windows desktop view.

Remember: The shortcuts to open the hosted TM1 desktop applications are available only in the classic Windows desktop view.

Windows logo key + d
Minimizes all running programs and displays only the classic Windows desktop. Press these keys a second time to toggle back to your running programs.

Windows logo key + q
Displays the general search tool.

Windows logo key + f
Displays the file search tool.

Controlling access to services and shared folders

You can request that only specific computers have access to your web services. You can also control which people have access to shared folders and what their permissions are.

Controlling computer access to web services

Your Planning Analytics services are accessed through a single URL behind an IBM firewall. To enhance security, you should explicitly specify IP ranges of client computers that are allowed to access this URL endpoint This process is called "white-listing". Any attempt to connect to your service endpoint from an IP address that is not included in the white list is blocked by the IBM firewall.

Note: As a best practice, white-list the IP addresses of **all** computers that require access to your web services.

To ensure a high level of IBM support, the Monitoring tools and Operations team for IBM Planning Analytics will still have access to your web services, even if you do not include their IP addresses in a white list file.

1. Open a service request and assign it to IBM Support.
2. Create a text file and give it the name `incoming_firewall_whitelist.txt`.
3. In the text file, list the ranges of IP addresses that you want to have access to the web services.

   Tip: Computers whose IP addresses are listed will have access to all web services, for example, FTP, RDP, and HTTP.
4. Attach the file `incoming_firewall_whitelist.txt` to the service request.
5. Submit the service request.

Controlling user access to shared folders

You can request that certain user permissions be applied to specific subfolders in your shared folder.

For more information, see "Planning Analytics shared folder" on page 5.

Note: Your IBM Planning Analytics environment will go offline while your requested changes are applied.

1. Open a service request and assign it to IBM Support.
2. Create a text file and give it the name `shared_folder_acls.txt`.
3. Create a table with up to five columns, which are separated by tabs. Each row represents a separate Access Control List (ACL).

   Here is an example:

Path	User	Permissions	Inherit	Type
/	fs_rp2team4_admin	rwd	true	allow
/prod/data/	fs_rp2team4_servers	r	true	allow

   The column entries in the table represent the following information:
   - The first column entry is the path and uses forward slashes (/). A single forward slash (/) indicates the root of the shared folder.
   - The second column entry is the user name. It must start with "fs_", followed by the environment name, followed by a final part that you can define. The entry is limited to 20 characters.

     Tip: You should create a user with full permissions, such as "fs_rp2team4_admin" in the example.
   - The third column entry is the permissions - r (read), w (write) and delete (d). If no permission is specified, then rwd is assumed.
   - The fourth column entry indicates whether the ACL should be inherited (that is, child objects will inherit this ACL). The default is true. The options are "true" and "false".
   - The fifth column entry indicates if this is an "allow" or "deny" permission. The default is "allow".
4. Attach the file `shared_folder_acls.txt` to the service request.
5. Submit the service request.

Controlling TM1 Server access to data in shared folders

IBM Planning Analytics allows, by default, any of your TM1 Servers to access any data files that are in your shared folder.

Note: In previous versions of IBM Planning Analytics, a TM1 Server could access only its own data directory and sub-folders. The data directory folder is located at the same level as the file `tm1s.cfg`.

If you want to keep the previous restrictions in place to ensure that one TM1 Application cannot access the files of another TM1 application, send a PMR to the Cloud Operations team.

Support for IBM Planning Analytics

IBM Support is a one-stop-shop for customer support-related information.

Visit IBM Support at (https://www.ibm.com/mysupport/).

Service level agreement terms

You must log a Severity 1 support ticket with the IBM technical support help desk within 24 hours of first becoming aware of an event that has impacted the Cloud Service availability. You must reasonably assist IBM with any problem diagnosis and resolution.

A support ticket claim for failure to meet an SLA must be submitted within three business days after the end of the contracted month. Compensation for a valid SLA claim will be a credit against a future invoice for the Cloud Service based on the duration of time during which production system processing for the Cloud Service is not available ("Downtime"). Downtime is measured from the time Client reports the event until the time the Cloud Service is restored and does not include time related to a scheduled or announced maintenance outage; causes beyond IBM's control; problems with Client or third party content or technology, designs or instructions; unsupported system configurations and platforms or other Client errors; or Client-caused security incident or Client security testing. IBM will apply the highest applicable compensation based on the cumulative availability of the Cloud Service during each contracted month, as shown in the table below. The total compensation with respect to any contracted month cannot exceed 10 percent of one twelfth (1/12th) of the annual charge for the Cloud Service.

Important: The information in the previous paragraph is an excerpt from the service level agreement (SLA) in the Terms of Use (TOU) and the Service Description (SD) documents. For the most up to date information about your SLA, refer to these documents at the following link: http://www.ibm.com/software/sla/sladb.nsf/sla/sd. The SLA terms are described in Appendix B of the TOU and in section 3 of the SD. Both the TOU and the SD define the same terms of agreement.

SLA reports are generated monthly and are available upon request by logging a support ticket.

Maintenance

Critical patches are applied on the third Saturday of every month. Scheduled maintenance tasks can include software security updates, hardware upgrades, and other activities that require downtime.

You are notified of upcoming maintenance windows according to the following schedule:

- 7 days before the maintenance window
- 72 and 24 hours before the maintenance window
- On the day of maintenance, before the start of maintenance at 0500 hours Eastern time
- When maintenance is complete, a confirmation email is sent

Occasionally, maintenance might need to be performed outside the monthly maintenance window. For example, to apply a fix for a serious security vulnerability. In these situations, you are notified in advance and IBM tries to ensure that the work is scheduled to be done outside your regular business hours. It is possible that the work would be done during the work week.

Accessibility features

Accessibility features help users who have a physical disability, such as restricted mobility or limited vision, to use information technology products.

Keyboard shortcuts

Standard Microsoft Windows navigation keys are used in addition to application-specific keys.

You can use keyboard shortcuts to navigate through the application and perform tasks. If you are using a screen reader, you might want to maximize your window so the keyboard shortcut table is expanded and accessible. You might want to turn on high contrast in your operating system so the lines in diagrams and charts in the application are more visible.

Note: The following keyboard shortcuts are based on US standard keyboards.

Table 1. Keyboard shortcuts	
Action	**Keyboard shortcut**
Open the **Application** view	Alt+A
Open the **Model** view	Alt+M
Close the editor	Ctrl+W
Go to the next editor	Ctrl+F6
Go to the previous editor	Ctrl+Shift+F6
Go to the next view	Ctrl+F7
Go to the previous view	Ctrl+Shift+F7
Save	Ctrl+S
Save all	Ctrl+Shift+S
Show key assistance	Ctrl+Shift+L
Switch to the editor	Ctrl+Shift+E
Open a context menu	Shift+F10
Navigate a menu	Up and Down arrows
Activate a command on a menu or context menu	Enter
Move to and select the next enabled menu item or context menu item	Down arrow
Select the first enabled item in a submenu on a menu or context menu	Right arrow
Move to and select the previous enabled menu item or context menu item	Up arrow
Close an opened menu	Esc
Select or clear a check box	Space bar
Move to the next item in a dialog box or wizard	Tab
Move to the previous item in a dialog box or wizard	Shift+Tab

Table 1. Keyboard shortcuts (continued)	
Action	**Keyboard shortcut**
Move to the next choice in a drop-down list	Down arrow
Move to the previous choice in a drop-down list	Up arrow
Move to and select the next option button	Tab+Space bar
Move to and select the previous option button	Shift+Tab+Space bar
Open and display a drop-down list or menu	Alt+Down arrow
Close an open drop-down list or menu	Alt+Up arrow or Esc
Close a dialog box or wizard	Esc
Invoke a selected drop-down item	Enter
Apply the changes you made and close the dialog box or wizard	Tab to **OK** and press Enter
Close the dialog box or wizard without applying or saving the changes you made	Esc
Navigate between the tabs	Left and Right arrows or Tab or Shift+Tab
Move the current tab to the right	Shift+Page Up
Move the current tab to the left	Shift+Page Down
Navigate from icon to icon in the toolbar	Left and right arrows
Display members of a dimension in the cube viewer	Alt+Down arrow
Select several rows or columns in the cube viewer	Ctrl+Down arrow
Replace the existing dimension in the rows with the selected dimension	Ctrl+R
Replace the existing dimension in the columns with the selected dimension	Ctrl+C
Replace the existing dimension in the context with the selected dimension	Ctrl+T
Automatically expand the members in the selected dimension	In the context menu for the selected dimension, Down arrow to the **Expand to level** command and select the level that you want to display
Expand or collapse a parent in a dimension	Enter
Refresh the model with the data on the server	F5
Exit the application	Alt+F4

IBM and accessibility

See the IBM Accessibility Center (http://www.ibm.com/able) for more information about the commitment that IBM has to accessibility.

Chapter 2. Running IBM components with Planning Analytics on Cloud

You should understand how to run the IBM components that are available with IBM Planning Analytics.

Planning Analytics Workspace

IBM Planning Analytics Workspace is a web-based interface for TM1.

To run Planning Analytics Workspace, follow these steps:

1. On your local computer, open a web browser and enter the following URL:

   `https://www.planning-analytics.cloud.ibm.com`

2. Enter the required information on the login page. For **username** and **password**, enter your IBMid and password.

   Tip: To register for your IBMid, go to the IBMid registration page (`https://ibm.biz/BdHtLT`).

3. Click **Login**.

Planning Analytics Workspace documentation

1. To get help in Planning Analytics Workspace, tap ⑦, and then **Docs**.
2. To navigate back to Planning Analytics Workspace, tap **Docs** and then tap either **Welcome** or the name of the book.
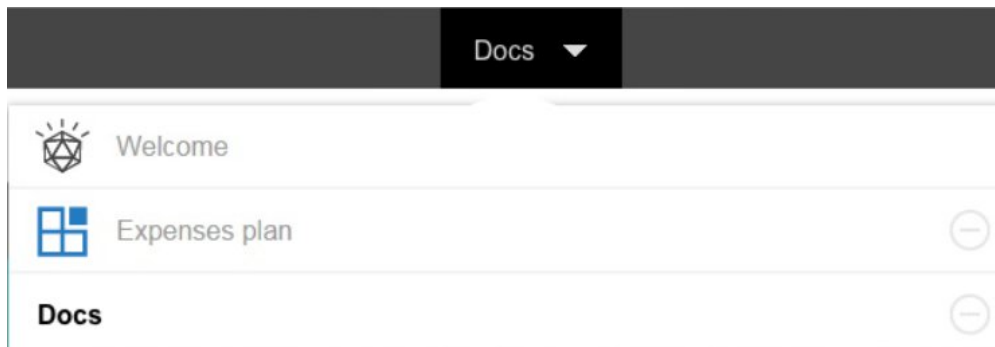
Planning Analytics for Microsoft Excel

You can use IBM Planning Analytics for Microsoft Excel to access data from the TM1 Server on your IBM Planning Analytics system.

To use Planning Analytics for Microsoft Excel with Planning Analytics, you first need to download, install, and configure the application. Depending on who needs to use the application, you might need to distribute or make available the installation program to other TM1 users in your organization.

Downloading and installing Planning Analytics for Microsoft Excel

To download and install Planning Analytics for Microsoft Excel from Planning Analytics Workspace, see Download additional components (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_prism_gs.2.0.0.doc/t_paw_download_additional_components.html).

Connecting Planning Analytics for Microsoft Excel to Planning Analytics

You must configure your installation of Planning Analytics for Microsoft Excel before it can access the TM1 Server on your Planning Analytics system.

1. Use the **Options** icon in the toolbar of Planning Analytics for Microsoft Excel to configure a connection to the Planning Analytics system.
2. Add the address for Planning Analytics for Microsoft Excel that is provided in the Planning Analytics Welcome Kit. For example:

   ```
   https://customername.planning-analytics.cloud.ibm.com/
   ```

For more information, see Setting up connections to IBM Cognos systems in *Planning Analytics for Microsoft Excel*.

Planning Analytics for Microsoft Excel documentation
The following documentation is available on IBM Knowledge Center:

• Planning Analytics for Microsoft Excel installation and configuration (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_inst.2.0.0.doc/c_ig_cor_overview.html)
• Planning Analytics for Microsoft Excel (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.ug_cxr.2.0.0.doc/c_corwelcomeintro.html)

TM1 Web

TM1 Web is hosted on the IBM Planning Analytics system and runs in a web browser on your local computer.

To run TM1 Web, you must know the related URL from the Planning Analytics Welcome Kit and have a valid TM1 user account.

1. On your local computer, open a web browser and enter the URL that was provided for TM1 Web.

   For example, TM1 Web uses the following URL format:

   ```
   https://customername.planning-analytics.cloud.ibm.com/tm1web/
   ```
2. Enter the required information on the login page.

   • For **TM1 Server**, use the default value of **tm1**.
   • For **User Name** and **Password**, enter your registered IBM ID and password.
3. Click **Login**.

TM1 Web documentation
The following documentation for TM1 Web is available on IBM Knowledge Center:

TM1 Web (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_ug.2.0.0.doc/c_tm1_wb_pref_intro.html).

TM1 Applications

Use a web browser on your local computer to run TM1 Applications with your IBM Planning Analytics system.

1. On your local computer, open a web browser and enter the URL for TM1 Applications.

   For example, TM1 Applications uses the following URL format:

   ```
   https://customername.planning-analytics.cloud.ibm.com/pmpsvc/
   ```
2. Enter the required information on the login page.

   For **User Name** and **Password**, enter your registered IBM ID and password.

3. Click **Login**.

TM1 Applications documentation

The following documentation for TM1 Applications is available on IBM Knowledge Center:

TM1 Applications (http://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/
com.ibm.swg.ba.cognos.tm1_cont_ug.2.0.0.doc/c_tm1_applications_intro.html).

TM1 REST API

You can access the TM1 REST API in your IBM Planning Analytics environment.

TM1 REST API is enabled in your Planning Analytics environment. You access it by entering a URL that ends with the string `/api/v1/$metadata`.

Note: You must enable your non-interactive account to access the TM1 REST API. For more information on the non-interactive account, see Setting up a non-interactive account for use in the LDAP namespace (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/
com.ibm.swg.ba.cognos.tm1_cloud_mg.2.0.0.doc/c_tm1_cloud_ccc_non_int_account.html).

Example

For example, a TM1 model is configured in the server environment `myserver.planning-analytics.cloud.ibm.com`, in the location `tm1/api/Planning Sample`. To access the TM1 REST API, type the following text:

```
https://myserver.planning-analytics.cloud.ibm.com/tm1/api/Planning
Sample/api/v1/$metadata
```

Note: If your TM1 server name includes a space, Planning Analytics creates two endpoints that you can use to connect to the server; one with a space in the server name and one without a space in the server name. For example, if you have a server named Planning Sample, both of these server endpoints are available:

- `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/`**`Planning Analytics`**`/api/vi`

- `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/`**`PlanningAnalytics`**`/api/vi`

Some third-party applications might not be able to connect to a TM1 server with spaces in the name. If you encounter difficulty connecting to a server with spaces in the name, try using the endpoint without spaces in the server name.

For more information, see TM1 REST API (http://www.ibm.com/support/knowledgecenter/en/
SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_rest_api.2.0.0.doc/c_preface_tm1_odata.html).

TM1 Architect

IBM TM1 Architect is a desktop application that you run in a remote desktop session with your IBM Planning Analytics system.

To run TM1 Architect on your Planning Analytics system, perform the following steps:

1. Connect to your Planning Analytics system with a remote desktop connection.

   For more information, see "Connecting to the Planning Analytics remote desktop" on page 9.

   Tip: If the newer Windows Start menu desktop is displayed instead of the classic desktop view, click the **Desktop** icon or press the Windows logo key to toggle to the classic desktop view.

2. Double-click the desktop shortcut for **Architect**.

3. In TM1 Architect, expand the **TM1** node and double-click the **tm1** server node.

4. Enter your registered IBMid and password and then click **OK**.

5. If the login is successful, the TM1 Server object tree is displayed.

TM1 Architect documentation

The following documentation for TM1 Architect is available on IBM Knowledge Center:

- TM1 Perspectives and TM1 Architect (http://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_pers_arch.2.0.0.doc/c_tm1_ug_pref_intro.html#tm1_ug_pref_intro)
- TM1 Operations (http://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_op.2.0.0.doc/c_preface_tm1_ops.html)

TM1 Perspectives

TM1 Perspectives is an add-in for Microsoft Excel that you run in a remote desktop session with your IBM Planning Analytics system.

⚠️ **Attention:** The 64-bit version of TM1 Perspectives is provided on the Planning Analytics remote desktop. The 32-bit version of TM1 Perspectives is not supported.

Follow these steps to run TM1 Perspectives on your Planning Analytics system:

1. Connect to your Planning Analytics system with a remote desktop connection.

   For more information, see "Connecting to the Planning Analytics remote desktop" on page 9.

   Tip: If the newer **Windows Start** menu desktop is displayed instead of the classic desktop view, click the **Desktop** icon or press the Windows logo key to toggle to the classic desktop view.
2. Double-click the desktop shortcut for **Perspectives**.
3. If the **Microsoft Excel Security Notice** dialog box is displayed, click **Enable Macros** to continue.
4. In Excel, in the **TM1** menu, click **Connect**.
5. After the **Connect to TM1 Server** dialog box opens, select a TM1 Server.
6. Click **OK**.
7. An embedded browser login window opens. Use your IBMid to log in.
8. If the login is successful, a confirmation message is displayed.

TM1 Perspectives documentation

The following documentation for TM1 Perspectives is available on IBM Knowledge Center:

TM1 Perspectives and TM1 Architect (http://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_pers_arch.2.0.0.doc/c_tm1_ug_pref_intro.html#tm1_ug_pref_intro)

TM1 Performance Modeler

You can run TM1 Performance Modeler from the remote desktop connection of your IBM Planning Analytics system.

To run this component:

1. Connect to your Planning Analytics system with a remote desktop connection.

   For more information, see "Connecting to the Planning Analytics remote desktop" on page 9.

   Tip: If the newer Windows Start menu desktop is displayed instead of the classic desktop view, click the **Desktop** icon or press the Windows logo key to toggle to the classic desktop view.
2. Double-click the desktop shortcut for **IBM Cognos TM1 Performance Modeler**.
3. In the Connect dialog, make sure the **IBM Cognos TM1 system URL** field contains the following URL:

   `https://customername.planning-analytics.cloud.ibm.com/pmpsvc/services`
4. Click **Log on as**, enter your registered IBMid and password, and then click **Login**.
5. In the **TM1 Server** drop-down list, select the server that you want to log into, and then click **OK**.

   For example, the default TM1 Server in the Planning Analytics system is named tm1.

TM1 Performance Modeler documentation

The following documentation for TM1 Performance Modeler is available on IBM Knowledge Center:

TM1 Performance Modeler (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.prfmdl_ug.2.0.0.doc/c_prfmdl_intro.html).

Cognos Controller

If you have both an IBM Planning Analytics cloud subscription and an IBM Cognos Controller on Cloud subscription, you can integrate the Financial Analytics Publisher component of your Cognos Controller on Cloud environment into your Planning Analytics cloud environment.

For more information, see *Using Controller Financial Analytics Publisher* at Cognos Controller 10.3.0 Knowledge Center (https://www.ibm.com/support/knowledgecenter/SS9S6B_10.3.0/com.ibm.swg.ba.cognos.cctrl.doc/welcome.html).

Cognos Command Center

You can use IBM Cognos Command Center on-premises to automate your IBM Planning Analytics on Cloud.

Note: Cognos Command Center is not available with Planning Analytics Digital Pack.

- You can create a task that combines TI processes with file management. For example, you can create a task that automates a scheduled upload of a data file to the cloud by using FTPS and runs a TI process that imports the data into your IBM Planning Analytics system. The task can then run a second TI process to export the results of the first TI process and download the results back to your local computer.
- You can also use other features of Cognos Command Center. For example, you can parse log files to look for problems and get alerts.
- You can use Cognos Command Center to bridge on-premises and on-cloud activities. You can also manage cloud-to-cloud activities.

> ⚠️ **Attention:**
>
> - Because the agent is not a Windows Administrator, you cannot use a Cognos Command Center task to start, stop, or restart the TM1 Server, which runs as a Windows service.
> - You cannot use action buttons or TM1 TI scripts to start Cognos Command Center processes because the Cognos Command Center TM1 wrapper is not deployed on cloud.

When you first use your IBM Planning Analytics system, you are provided with an IBM Planning Analytics Welcome Kit file for each IBM Planning Analytics system that you requested. The IBM Planning Analytics Welcome Kit contains the information that is required to set up an agent in Cognos Command Center and also to set up a computing resource in the Cognos Command Center server.

A non-interactive account is required to connect Cognos Command Center with Planning Analytics on Cloud. An IBMid can not be used. The Welcome Kit also contains the information that is required to set up a non-interactive user, *<customer>*_tm1_automation, in Cognos Command Center. For more information about the Welcome Kit, see "The Welcome Kit" on page 6.

For more information, see "Planning Analytics account and system information" on page 6.

Setting up an agent in the Cognos Command Center server

The agent must be added to the IBM Cognos Command Center and its connection properties must be configured in order for the Cognos Command Center server to interact with the agent.

Procedure

1. In the Cognos Command Center navigation tree, click **Setup and Design**.
2. On the **Setup and Design** tab, click **Agents**.

3. To create an agent, either click the **New** icon ![New icon] or right-click the agent item and click **New**.

4. Specify a name for the new agent.

5. Specify the following properties:

   - **Host name** For example, *customername*.planning-analytics.cloud.ibm.com.

   - **Port** For example, *443*.

   - **Platform** For example, *Windows*.

   - **Agent user name** For example, *admin*.

   - **Agent password** For example, the fifty-character password included in the IBM Planning Analytics Welcome Kit..

6. Click **Test the Agent** to verify that a connection to the agent is working properly.

   ⚠️ **Attention:**

   - The agent must be running on the host for a test connection to work.

   - If you see a "Host name exceeds maximum length of 50" warning, enter "cloud.planning-analytics.cloud.ibm.com/ccagent/" in the **Host name** field. On the IBM Command Center Server host, edit the %WINDIR%\system32\drivers\etc\hosts file and add the following line:

   ```
   Public IP address of your IBM PA environment cloud.planning-analytics.cloud.ibm.com
   ```

What to do next

For more information about creating agents, see Agents (http://www.ibm.com/support/knowledgecenter/SSPLNP_10.2.4/com.ibm.swg.ba.cognos.ag_ccc.10.2.4.doc/c_ag_ccc_agents.html).

You can also set up role-based authorization for Cognos Command Center. For more information, see Creating roles (http://www.ibm.com/support/knowledgecenter/SSPLNP_10.2.4/com.ibm.swg.ba.cognos.ag_ccc.10.2.4.doc/t_ag_ccc_create_roles.html).

Setting up a computing resource in the Cognos Command Center server

This computing resource type represents a TM1 Server instance.

Procedure

1. In the Cognos Command Center navigation tree, click **Setup and Design**.

2. Click **Ecosystems**.

3. Open an ecosystem. For example, double-click the name of an existing ecosystem in the navigation pane.

4. In the ecosystem editor window, click the **Computing resources** tab.

5. Click the **Add computing resource** icon ➕ to add a computing resource.

   A new computing resource editor opens.

6. To add a TM1 computing resource, select **TM1 10.2.2.2 Server** from the **Type** drop-down list.

   The TM1 resource attributes are displayed.

7. Configure the following attributes:

   - **Agent** Use the agent that you created in *Setting up an agent in the Cognos Command Center server*.

   - **Home Directory** For example, *c:\ccc\your_choice*.

- **Server endpoint** The TM1 Server endpoint is created by concatenating *hostname* + `/tm1/api` + *tm1_server_name* + `/api/v1`. For example, the following server endpoint connects to the PData TM1 Server:

```
https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/PData/api/v1/
```

- **User name** For example, *your_TM1_user name*.
- **Password** For example, *your_TM1_ password*.
- **CAM namespace name** Leave blank.

Note: If your TM1 server name includes a space, Planning Analytics creates two endpoints that you can use to connect to the server; one with a space in the server name and one without a space in the server name. For example, if you have a server named Planning Sample, both of these server endpoints are available:

- `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/`**`Planning Analytics`**`/api/vi`

- `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/`**`PlanningAnalytics`**`/api/vi`

Some third-party applications might not be able to connect to a TM1 server with spaces in the name. If you encounter difficulty connecting to a server with spaces in the name, try using the endpoint without spaces in the server name.

What to do next

For more information, see TM1 plug-in configuration (http://www.ibm.com/support/knowledgecenter/SSPLNP_10.2.4/com.ibm.swg.ba.cognos.ag_ccc.10.2.4.doc/c_ug_ccc_pi_tm1_1022_configuration.html).

Setting up a non-interactive account for use in the LDAP namespace

The non-interactive account that is provided in the welcome kit can be used when you use automation tools and processes that are scheduled, or when you need a user name and password that are non-interactive. For example, Cognos Command Center and Cognos Integration Server.

Using the following account, a customer can use Cognos Command Center to automate processes that involve their TM1 Server.

- User name: *customer*_tm1_automation
- Password: *generated*
- CAM Namespace: LDAP

Note:

- This account can be used only from clients where you can specify the namespace. This account cannot be used to log in to the Planning Analytics Workspace.
- This account is disabled by default. It can be enabled upon request.

To configure the TM1 object security for the non-interactive user, the user needs to be added dynamically by logging in for the first time with Cognos Command Center or by using a TI Script. The non-interactive user cannot be added by using **Add Client** in the UI.

You can use the following TI command to create the non-interactive user:

```
AddClient('CAMID("LDAP:u:uid=<customer>_tm1_automation,ou=people")');
```

Note: The non-interactive user has minimal permissions in Cognos Analytics. When you create the non-interactive user, the user is added to a new user group, the **Non-Administration Users** group in Cognos Analytics, which does not have permission to read, write, or execute packages. When the non-interactive user signs in to Analytics, the user does not have Administrator access.

Setting up a computing resource for the non-interactive user

This computing resource type represents a TM1 Server instance.

Procedure

1. In the Cognos Command Center navigation tree, click **Setup and Design**.
2. Click **Ecosystems**.
3. Open an ecosystem. For example, double-click the name of an existing ecosystem in the navigation pane.
4. In the ecosystem editor window, click the **Computing resources** tab.
5. Click the **Add computing resource** icon ⊕ to add a computing resource.

   A new computing resource editor opens.
6. To add a TM1 computing resource, select **TM1 10.2.2.2 Server** from the **Type** drop-down list.

   The TM1 resource attributes are displayed.
7. Configure the following attributes:

   - **Agent** Use the agent that you created in *Setting up a non-interactive account for use in the LDAP namespace*.
   - **Home Directory** For example, *c:\ccc\your_choice*.
   - **Server endpoint** The TM1 Server endpoint is created by concatenating *hostname* + `/tm1/api` + *tm1_server_name* + `/api/v1`. For example, the following server endpoint connects to the PData TM1 Server:

   ```
   https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/PData/api/v1/
   ```

   - **User name** For example, *<customer>*_tm1_automation.
   - **Password** For example, *your_TM1_ automation_user_password*.
   - **CAM namespace name** LDAP.

   Note: If your TM1 server name includes a space, Planning Analytics creates two endpoints that you can use to connect to the server; one with a space in the server name and one without a space in the server name. For example, if you have a server named Planning Sample, both of these server endpoints are available:

   - `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/`**`Planning Analytics`**`/api/vi`
   - `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/`**`PlanningAnalytics`**`/api/vi`

   Some third-party applications might not be able to connect to a TM1 server with spaces in the name. If you encounter difficulty connecting to a server with spaces in the name, try using the endpoint without spaces in the server name.

Connecting on-premises or in the cloud

You can use a local on-premises Cognos Command Center agent and connect to TM1 REST API directly, or you can connect with a cloud agent.

For more information, see the following flow diagram:
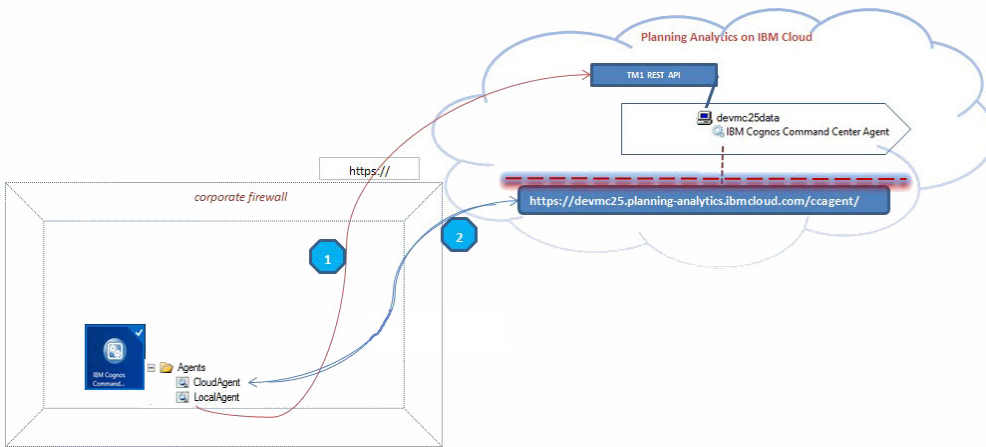
Configuring an on-premises agent

You can configure an agent that resides on an on-premises Cognos Command Center server.

Tip: We recommend that you use an on-premises agent instead of an in-cloud agent. This setting allows you to automate TM1, Email, FTP, SFTP and Oracle tasks in just a few clicks.

Restriction: If you use an on-premises agent in the planning analytics cloud environment, you cannot perform these tasks:

• run an executable or a batch file
• monitor networking ports
• manage files

The following diagram shows a Cognos Command Center agent that is configured on an on-premises Cognos Command Center server.
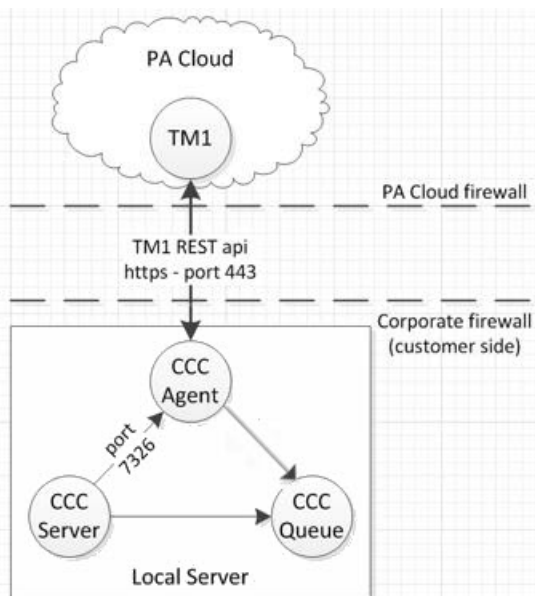
Before you begin

The TM1 9.5.2 plugin is loaded by default. However, only the TM1 10.2.2.2 plugin is compatible with Planning Analytics in the cloud. Therefore, you must load the TM1 10.2.2.2 plugin before you configure the agent.

1. In Cognos Command Center, select **Tools** > **Manage Plugin Tasks**.
2. Select the **IBM Cognos TM1 10.2.2.2** plugin zip file.

3. Click **Open**.

Procedure

1. Create an agent. See "Setting up an agent in the Cognos Command Center server" on page 25.
2. Add a computing resource. See "Setting up a computing resource in the Cognos Command Center server" on page 26.

   In the **Server endpoint** field, enter a value with this format:

   ```
   https://hostname.planning-analytics.cloud.ibm.com/tm1/api/
   tm1_server_name/api/v1/
   ```

   Note: If your TM1 server name includes a space, Planning Analytics creates two endpoints that you can use to connect to the server; one with a space in the server name and one without a space in the server name. For example, if you have a server named Planning Sample, both of these server endpoints are available:

   - `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/`**`Planning Analytics`**`/api/vi`

   - `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/`**`PlanningAnalytics`**`/api/vi`

   Some third-party applications might not be able to connect to a TM1 server with spaces in the name. If you encounter difficulty connecting to a server with spaces in the name, try using the endpoint without spaces in the server name.

Configuring an in-cloud agent

You can configure an agent that resides in the Planning Analytics cloud.

Note: We recommend that you use an on-premises agent instead of an in-cloud agent.

However, with an in-cloud agent, you can perform the following tasks that an on-premises agent cannot run:

- Run an executable or a batch file.
- Monitor networking ports.
- Manage files.

The following diagram shows a Cognos Command Center agent that resides in the Planning Analytics cloud.
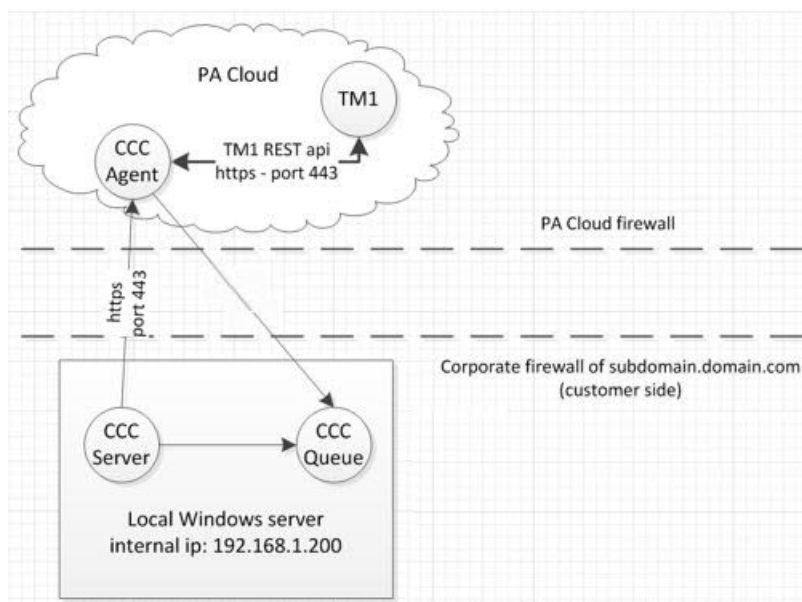
Before you begin

You must load the Planning Analytics plugin before you configure the agent.

1. In Cognos Command Center, select **Tools** > **Manage Plugin Tasks**.
2. Select the **IBM Cognos TM1 10.2.2.2** plugin zip file.
3. Click **Open**.

Procedure

1. Configure the corporate firewall of *subdomain.domain*.com.

   a) Forward inbound traffic TCP port 61617 to `192.168.1.200` port 61617

      Tip: In this example, 192.168.1.200 is the internal ip address of CCC server.

   b) Submit a ticket to the cloud ops team to find out the IP address of the Planning Analytics data computer.

   c) Block all inbound traffic except traffic that comes from the Planning Analytics cloud computer for port 61617.

      Note: Port 61617 is used by CCC Queue in this document. You specify this port number when you install Cognos Command Center.

2. Configure the Cognos Command Center Queue.

   a) In the Cognos Command Center client, select **Tools** > **System Configuration**.

   b) Click the **Queue** subsystem.

   c) For the **External URI** property, update the value of *subdomain.domain*.com

3. Modify the file `activemq.xml`.

   a) Open the file `activemq.xml`, which is located in `installation_directory\IBM\Cognos Command Center\Common\apache-activemq-5.8.0\conf\`

   b) In the object `transportConnector`, replace the value of the `uri` attribute with the following text: `"ssl://0.0.0.0:61617?transport.enabledProtocols=TLSv1,TLSv1.1,TLSv1.2"`

   c) Save the file `activemq.xml`.

   d) Restart both the **IBM Cognos Command Center Queue** and the **IBM Cognos Command Center Server** Windows services.

4. Create an agent. See "Setting up an agent in the Cognos Command Center server" on page 25.

   Tip: If you receive the following error, revisit Step 1.

   Failed to receive reply event from agent through the message queue. Timeout while waiting on event from agent.

5. Add a computing resource. See "Setting up a computing resource in the Cognos Command Center server" on page 26.

   In the **Server endpoint** field, enter a value with this format:

   `https://hostname.planning-analytics.cloud.ibm.com/tm1/api/tm1_server_name/api/v1/`

   Note: If your TM1 server name includes a space, Planning Analytics creates two endpoints that you can use to connect to the server; one with a space in the server name and one without a space in the server name. For example, if you have a server named Planning Sample, both of these server endpoints are available:

   • `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/`**`Planning Analytics`**`/api/vi`

   • `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/`**`PlanningAnalytics`**`/api/vi`

   Some third-party applications might not be able to connect to a TM1 server with spaces in the name. If you encounter difficulty connecting to a server with spaces in the name, try using the endpoint without spaces in the server name.

Cognos Command Center documentation

You can read more about Cognos Command Center.

Documentation for Cognos Command Center is available on IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter/SSPLNP_10.2.3/com.ibm.swg.ba.cognos.ccc.doc/welcome.html).

IBM Cognos Analytics

You can run IBM Cognos Analytics on Cloud Hosted or IBM Planning Analytics Premium Reporting in your IBM Planning Analytics environment.

IBM Cognos Analytics on Cloud Hosted
A dedicated version of Cognos Analytics hosted in the cloud. Find out more here: https://community.ibm.com/community/user/businessanalytics/blogs/david-cushing/2018/12/13/1

Two Welcome Kits are provided with IBM Cognos Analytics on Cloud Hosted, one kit for Planning Analytics, and one kit for Cognos Analytics. The Planning Analytics Welcome Kit contains the information that you need to set up a Planning Analytics data source connection in Cognos Analytics.

IBM Planning Analytics Premium Reporting
A dedicated version of Cognos Analytics hosted in the cloud that is limited to Planning Analytics as the only allowed data source connection. Exploration capabilities are not included with IBM Planning Analytics Premium Reporting.

Note: IBM Planning Analytics Premium Reporting is not available for sale with Planning Analytics Digital Pack.

One Planning Analytics Welcome Kit is provided with IBM Planning Analytics Premium Reporting. This kit contains the information that you need to set up a Planning Analytics data source connection in Cognos Analytics.

For more information, see "Planning Analytics account and system information" on page 6.

Adding Cognos Analytics on Cloud Hosted users to the Planning Analytics server

Add IBM Cognos Analytics on Cloud Hosted users to the IBM Planning Analytics server.

Cognos Analytics on Cloud Hosted has a single namespace that is pre-configured for single sign-on (SSO) with IBMid. This namespace is identified as **Business Analytics** for new customers, and is identified as **Planning Analytics** for existing customers. For the remainder of this document, the namespace is referred to as the 'SSO namespace,' and is applicable to both existing and new customers.

The SSO namespace includes these security groups:

All PA Users
All users invited to IBM Planning Analytics Workspace are members of the **All PA Users** group. This group was previously named **All Planning Authenticated Users**.

Note: The **All PA Users** group should not be deleted or modified.

PA Workspace Administrators
Planning Analytics Workspace users with the administrator role are assigned to the group. This group was previously named **Subscription Admin**.

The SSO namespace includes these security groups:

Consumers
A role called **PANS users** is created. The **All PA Users** group is added to the **PANS users** role, and then this role is added to the **Consumers** role. IBM recommends that the **PANS users** role not be removed from the **Consumers** group.

Directory Administrators
> **PANS Admin Users** is a new role in the namespace. The **PA Workspace Administrators** group is a member of the **PANS Admin Users** role. The **PANS Admins Users** role is a member of the **Directory Administrators** role.

You can add users from the SSO namespace to the Planning Analytics server by using the AddClient TM1 TurboIntegrator process. (Administrators can add users from the PANS namespace in IBM TM1 Architect).

Cognos Analytics users can create a data source connection to the Planning Analytics server. Creating data source connections for each user might not be practical. However, if you choose to do so, the `CreateNewCAMClients` parameter must be set to true, see "CreateNewCAMClients" on page 66.

Note: IBM Cognos TM1 data source connections are not supported in IBM Cognos Analytics 11.1.x. See "Replacing an existing Cognos TM1 data source connection with a Planning Analytics data source connection" on page 34.

Planning Analytics Premium Reporting users

IBM Planning Analytics Premium Reporting has one namespace that is pre-configured for single sign-on (SSO) with IBMid. This namespace is identified as **Business Analytics** for new customers, and is identified as **Planning Analytics** for existing customers. For the remainder of this document, the namespace is referred to as the 'SSO namespace,' and is applicable to both existing and new customers..

The SSO namespace includes these security groups:

All PA Users
> All users invited to IBM Planning Analytics Workspace are members of the **All PA Users** group. This group was previously named **All Planning Authenticated Users**.
>
> **Note:** The **All PA Users** group should not be deleted or modified.

PA Workspace Administrators
> Planning Analytics Workspace users with the administrator role are assigned to the group. This group was previously named **Subscription Admin**.

Creating a Planning Analytics data server connection in IBM Cognos Analytics

If you are logged in as a IBM Planning Analytics user, you can create a Planning Analytics data server connection in Cognos Analytics.

Procedure

1. In IBM Cognos Analytics, go to 🔵 **Manage** > **Data server connections**.

2. In the **Data server connections** pane, click ⊕ **Add data server**
3. Select the **IBM Planning Analytics** data server type from the list of supported types.
4. In the field **New data server connection**, type a unique name for the connection.
5. By **Connections details**, click **Edit** and enter the connection details.
   a) In the **TM1 database host** field, type data.
   b) In the **HTTP port number** field, specify the port number.
      The port number is the **HTTPPortNumber** value in the tm1s.cfg file.
   c) Select **Use SSL**. **Use SSL** must always be selected.
6. Under **Authentication method**, specify how to access the data server.

   Note: For IBM Planning Analytics Premium Reporting IBMid users, **Integrated Security** must be selected.

7. Click **Test** to verify that the data server connection works, and then click **Save** to save the new data server connection.

Results

The new IBM Planning Analytics data server appears in the **Data server connections** pane.

Replacing an existing Cognos TM1 data source connection with a Planning Analytics data source connection

You can replace a Cognos TM1 connection with an IBM Planning Analytics connection. The Cognos TM1 data source is no longer supported in IBM Cognos Analytics version 11.1.x.

Procedure

1. Follow the steps to create a Planning Analytics data source.
2. Republish any packages that refer to the existing TM1 data source.
3. In IBM Cognos Administration, remove the TM1 data source by selecting the **TM1 data source** checkbox and then select **Delete**.

Assigning user permissions with TM1 security

After users are added to the TM1 Server, you can assign each user appropriate permissions using TM1 security.

Note: If you also subscribe to Cognos Analytics on Cloud, you do not need non-interactive account specific configuration to use components such as Cognos Command Center (CCC) and Cognos Integration Server (CIS). Instead, you can use the Cognos Analytics on Cloud namespace to run CCC and CIS.

Procedure

1. Understand that you can assign users to groups that have different permissions.
2. Understand the roles of each administrator group.
3. Create groups with different levels of permissions.
4. Assign users to the groups that you defined.

Upgrading from Cognos Analytics 11.0.x to 11.1.x

When IBM Cognos Analytics 11.0.x is upgraded to 11.1.x, be aware of the following information.

For IBM Planning Analytics Premium Reporting customers with Non-Interactive Users enabled, passwords are reset as a part of the upgrade.

Cognos Analytics security remains unchanged. However, be aware that new groups and roles are available in IBM Cognos Analytics 11.1.x, based on the offering that you have. See the following information:

- Cognos Analytics on Cloud Hosted
- IBM Planning Analytics Premium Reporting

Cognos Integration Server

You can use IBM Cognos Integration Server to automate the extraction and distribution of business process management (BPM) data to IBM Planning Analytics on Cloud.

Note: Cognos Integration Server is not available with Planning Analytics Digital Pack.

What is Cognos Integration Server?

Cognos Integration Server is used to automate the extraction and distribution of business process management (BPM) data to Planning Analytics on Cloud. Cognos Integration Server provides the following key features:

- Move your SAP BW InfoCubes and InfoQueries data to Planning Analytics on Cloud.
- Extend your BPM capabilities by extracting and transforming any level of data, metadata, and security information from Oracle Essbase, Oracle Hyperion Planning, and Oracle Hyperion Financial Management for use in Planning Analytics on Cloud.
- Use the automated extraction capabilities of Cognos Integration Server to enable real-time planning, calculations, and updates to move your data as necessary.
- Perform multiple, parallel extractions without taking your applications offline.
- View, define, and modify structures and extraction selections. You can also save the required data transformations, mappings, and calculations.
- Automation capabilities, such as email alerts and audit logs, help to ensure data security and Sarbanes-Oxley compliance by using automated operations.

For more information about Cognos Integration Server, see Cognos Integration Server 10.2.3 documentation

Connecting Cognos Integration Server with Planning Analytics on Cloud

To connect Cognos Integration Server with Planning Analytics on Cloud, a non-interactive account is required. Your IBMid can not be used. The Welcome Kit also contains the information that is required to set up a non-interactive user.

For more information about the Welcome Kit, see "The Welcome Kit" on page 6.

When connecting Cognos Integration Server with Planning Analytics on Cloud, use the "URL Connection" method. Do not use the "admin server" method.

Connection parameter values

The following are some parameter values that you may need to set up Cognos Integration Server with Planning Analytics on Cloud:

- The **TM1 Authentication** parameter value should be the CAM namespace.
- The **CAM Namespace ID** parameter value should be "LDAP".
- The **User Name** is the non-interactive account name.
- The **Password** is the non-interactive account password (provided in the Welcome Kit).
- The **URL** is the TM1 Server endpoint. The TM1 Server endpoint is created by concatenating the *hostname* + /tm1/api + *tm1_server_name* + /api/v1. For example, the following server endpoint connects to the PData TM1 Server:

  `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/PData/api/v1/`

Note: If your TM1 server name includes a space, Planning Analytics creates two endpoints that you can use to connect to the server; one with a space in the server name and one without a space in the server name. For example, if you have a server named Planning Sample, both of these server endpoints are available:

- `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/`**`Planning Analytics`**`/api/vi`

- `https://<environmentname>.planning-analytics.cloud.ibm.com/tm1/api/`**`PlanningAnalytics`**`/api/vi`

Some third-party applications might not be able to connect to a TM1 server with spaces in the name. If you encounter difficulty connecting to a server with spaces in the name, try using the endpoint without spaces in the server name.

Chapter 3. Administering Planning Analytics on Cloud

You should understand the steps that are unique to the cloud environment, such as uploading and managing files, and migrating data in your Planning Analytics system.

Stopping and starting TM1 databases

Use IBM Planning Analytics Administration to stop and restart a TM1 database instance in the Planning Analytics system.

For more information, see Monitor and administer databases (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_prism_gs.2.0.0.doc/c_paw_administer_servers.html).

Updating content on Planning Analytics

Use Remote Desktop to upload content files and load data into your default TM1 Server on your Planning Analytics system.

Procedure

1. Connect to your Planning Analytics system with a remote desktop connection.

   For more information, see "Connecting to the Planning Analytics remote desktop" on page 9.

   Tip: If the newer Windows Start menu desktop is displayed instead of the classic desktop view, click the **Desktop** icon or press the Windows logo key to toggle to the classic desktop view.

2. Upload your updated files to a temporary folder on the remote desktop.

   a) Open Microsoft Windows File Explorer in the remote desktop session.

      The Windows Explorer tool was renamed to File Explorer in Windows Server 2012 R2.

   b) Create a temporary folder on the remote desktop.

   c) Copy the files from File Explorer on your local desktop to the temporary folder that you created on the remote desktop.

      Tip: You can also use File Transfer Protocol (FTP) to copy your local files to Planning Analytics.

3. Stop the TM1 Server for which you are updating content by using IBM Planning Analytics Administration.

   For more information, see Start and stop databases (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_prism_gs.2.0.0.doc/t_paw_start_and_stop_servers.html).

4. In the Remote Desktop window, copy the uploaded files into the server's data folder.

   For example, copy the files from the temporary folder into the folder `\\data\s\prod\tm1`.

   Important: Do not delete any existing folder that represents one of your TM1 Servers, for example `\\data\s\prod\tm1`. Any folder that represents a service contains the file `tm1s.cfg`.

5. Start the TM1 Servers by using IBM Planning Analytics Administration.

   For more information, see Start and stop databases (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_prism_gs.2.0.0.doc/t_paw_start_and_stop_servers.html).

Managing a secure gateway

Use IBM Secure Gateway to create and manage a secure connection between your on-cloud Planning Analytics environment and your on-premises data sources.

For more information, see Administer IBM Secure Gateway (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_prism_gs.2.0.0.doc/c_paw_administer_secure_gateway.html).

For details on data sources that are supported in Planning Analytics, see Data source connections (https://www.ibm.com/docs/en/planning-analytics/2.0.0?topic=gateway-data-source-connections).

Managing files in the Planning Analytics shared folder

Manage files in your shared folder either remotely or directly within a desktop session of the cloud. If you have multiple cloud environments, you can also move files between the shared folders of each environment.

This video shows you how to access the shared folder:

https://youtu.be/AdrFDAeqc1c

Depending on your local and cloud environment, you can use one or more of the following methods to manage your files in the shared folder.

Accessing the shared folder from your local computer

If you want to connect to the shared folder from a remote computer, use a file transfer protocol (FTP) application that supports File Transfer Protocol Secure (FTPS). This will allow you to securely move files between your local computer and the shared folder on the IBM Planning Analytics system.

Use the FTP application with the shared folder address that was provided in the IBM Planning Analytics Welcome Kit. For example:

customername`.planning-analytics.cloud.ibm.com`

For more information, see "Copying local files to IBM Planning Analytics" on page 39.

For information on FTPS configurations used by IBM Planning Analytics, see "File Transfer Protocol Secure (FTPS) connections" on page 44.

Using the shared folder in a remote desktop session

If you want to access the shared folder from within the remote desktop session on the IBM Planning Analytics system, use the following path:

`\\data\s`

For example, open the Microsoft Windows File Explorer in the remote desktop session and enter `\\data\s` as the path.

Tip: The Windows Explorer tool was renamed to File Explorer in Windows Server 2012 R2.

Moving files between shared folders of multiple cloud environments

If you want to connect to the shared folder of another IBM Planning Analytics environment, use the `x.x.x.x` address that was provided to you.

For example, to move files between two cloud environments the general steps include:

1. Start a remote desktop connection to the first cloud environment.
2. Open Microsoft Windows File Explorer in the remote desktop session of the first cloud environment and enter `\\data\s`.

3. Open a second instance of File Explorer in the same remote desktop session and enter the `x.x.x.x` address for the other cloud environment.
4. Use File Explorer to copy and paste files between the shared folders of these two cloud environments.

Copying local files to IBM Planning Analytics

Your IBM Planning Analytics system includes a dedicated shared folder for storing and transferring data files. You can copy files between your local computer and the IBM Planning Analytics system shared folder with a File Transfer Protocol Secure (FTPS) application.

Before you begin

You must have your IBM Planning Analytics system account information.

You also need an FTP application that supports File Transfer Protocol Secure (FTPS) to securely copy files from your local system to the IBM Planning Analytics system.

Important: To ensure that your data is encrypted when transferred, the Planning Analytics system FTP connection is configured to use FTP with Secure Sockets Layer (FTPS). Make sure to use an FTP application that supports FTPS.

Procedure

1. On your local computer, open your FTP application and enable the option to use File Transfer Protocol Secure (FTPS).
2. Enter the information for the connection:
   a. Enter the address for the shared folder on your IBM Planning Analytics system.

      For example:

      `customername.planning-analytics.cloud.ibm.com`
   b. Enter the user name of `FileShare` and the assigned password for the cloud shared folder.
3. Use the FTP application to select and move files between your local computer and the IBM Planning Analytics system.
4. Log out of the FTP session and close the FTP application.

PGP encryption

Use PGP encryption to encrypt files that are transferred to the cloud or to encrypt files on the cloud that are to be transferred to on-premises.

Note: All data that is transferred to and from the cloud is encrypted in transit regardless if the PGP encryption feature is enabled.

Setting up PGP encryption and decryption

Set up PGP encryption and decryption for Planning Analytics on Cloud.

Before you begin

Install a PGP application, for example GnuPGP (from https://www.gnupg.org/download) or Symantec Encryption Desktop (from https://www.symantec.com), in your on premises environment.

You can also view the following video to see how you can set up PGP encryption and decryption for Planning Analytics on Cloud.

https://youtu.be/rvOt3GTG9-A

Procedure

1. Send a service request to IBM Support and ask that PGP encryption be enabled and configured.
2. Connect to the IBM Planning Analytics remote desktop using one of the modeler accounts listed in your Welcome Kit.
3. In the shared folder, go to `\\data\s\install\encryption\samples`.
4. Copy `*.pro` to your TM1 Server data directory (for example, `S:\prod\tm1\Data`).
5. Copy `*.txt` and `*.bat` to the server directory (for example, `S:\prod\tm1`).
6. Restart your TM1 Server for the demo processes to appear. The *.pro processes will have access to the IBM passphrase regardless of additional shared folder file security that may be defined.

Transferring encrypted files to the cloud and then decrypting them before import

Transfer encrypted files from your local machine to the cloud and also decrypt files on the cloud before importing them locally.

About this task

You can also view the following video to see how to use PGP to encrypt your files locally and how to transfer the encrypted file on cloud before decrypting it for use in IBM Planning Analytics.

https://youtu.be/-HW8qx7Jxww

Procedure

1. Encrypt a file (originally named *filename.extension*) in your on premises environment using the PGP application that you installed locally.

    a) Use the public key that was attached to your Welcome Kit and that you imported into your key rings.

    b) Name the encrypted file *filename.extension*`.gpg`.

    c) Name the recipient `customer@ibm.com`.
2. Copy *filename.extension*`.gpg` from your on premises location to the Planning Analytics server directory (for example, `S:\prod\tm1`).
3. Connect to the IBM Planning Analytics remote desktop using one of the modeler accounts listed in your Welcome Kit.
4. Edit the file `demo_decryption.bat` and replace two instances of the string `customer_to_ibm.txt` with *filename.extension*.
5. Start Architect, and run the process `demo_decryption.pro`. The decrypted file, named *filename.extension*, appears next to *filename.extension*`.gpg`.
6. Import the decrypted file into IBM Planning Analytics as required. For example, import the data using TurboIntegrator.

Encrypting files on the cloud before transferring them to on premises

Encrypt a file on cloud and then decrypt the file on your local environment in IBM Planning Analytics.

About this task

You can also view the following video to see how to encrypt a file on cloud, and how to decrypt a file on your local environment in Planning Analytics.

https://youtu.be/nTMuLzktDZ0

Procedure

1. Send a service request to IBM Support.

a) Attach your public key to the request.

b) Request that your public key be imported.

2. Connect to the Planning Analytics remote desktop using one of the modeler accounts listed in your Welcome Kit.

3. In Planning Analytics, extract data and save it to a server directory (for example, `S:\prod\tm1`) as the file *filename.extension*.

4. Edit the file demo_encryption.bat.

    a) Replace *firstname.lastname@mycompany*.com with the name in your key.

    b) Replace two instances of the string `customer_to_ibm.txt` with *filename.extension* (the file that you want to encrypt).

5. On the remote desktop, start Architect, and run the process `demo_encryption.pro`. The encrypted file, named *filename.extension*.gpg, appears next to *filename.extension*.

6. Copy the encrypted file *filename.extension*.gpg from the Planning Analytics server directory to your on premises location.

7. Decrypt the file in your on premises location using the PGP application that you installed locally.

Loading and migrating data in to IBM Planning Analytics

Migrate data from your development environment to your production environment with Planning Analytics. The steps for data migration depend on a number of factors, such as where your development and production environments are located and what type of data is being moved.

Note: This information refers to loading or migrating data in to Planning Analytics. For information about loading or migrating data in to IBM Planning Analytics Workspace, refer to Migrate assets(https:// www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/ com.ibm.swg.ba.cognos.tm1_prism_gs.2.0.0.doc/paw_asset_migration_overview.html).

You can perform the following data migration tasks:

- Upload files from your local computer to the shared folder in your non-production or production Planning Analytics system.
- Move files between the shared folders of your non-production and production Planning Analytics systems.
- Manually copy TM1 Websheet files to the shared folder.
- Drag and drop a file in IBM Planning Analytics Workspace to import data into a cube.

    For more information, see Import data into a cube (https://www.ibm.com/support/knowledgecenter/ SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_prism_gs.2.0.0.doc/t_paw_import_data_cube.html).

Important: You must stop and restart your TM1 Server when copying TM1 Server database files to the data directory. For more information, see https://www.ibm.com/support/knowledgecenter/ SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_prism_gs.2.0.0.doc/t_paw_start_and_stop_servers.html (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/ com.ibm.swg.ba.cognos.tm1_prism_gs.2.0.0.doc/t_paw_start_and_stop_servers.html).

On an ongoing basis, you can perform the following tasks:

- Use the Transfer tool in TM1 Performance Modeler to export and import metadata changes between development and production environments.

    For more information, see Transfer of model objects and applications in *TM1 Performance Modeler* (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/ com.ibm.swg.ba.cognos.prfmdl_ug.2.0.0.doc/c_prfmdl_tranferring_data.html).

- Use TurboIntegrator processes to load bulk data into your production environment.

    For more information, see TM1 TurboIntegrator (http://www.ibm.com/support/knowledgecenter/ SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_turb.2.0.0.doc/c_preface_n90007.html).

Log File Retention Periods

To maintain efficiency in Planning Analytics on Cloud environments, some log files are routinely deleted during the regularly scheduled maintenance window.

This list identifies the log files that are subject to removal and the retention periods. As more log files become subject to limited retention periods, they will be listed here.

TM1ProcessError.log

In a Planning Analytics on Cloud environment, the TM1ProcessError.log file is retained for three months. Any TM1ProcessError.log files that are older than three months are permanently deleted during the regularly scheduled maintenance window. If you want to retain your TM1ProcessError.log files beyond the three month maintenance interval, compress them to a zip file in your data directory.

Appendix A. Configuring Planning Analytics on Cloud

There are some technical considerations that you should be aware of while using IBM Planning Analytics.

Default configuration parameter values in Planning Analytics on Cloud

Some default configuration parameter values for IBM Planning Analytics on Cloud are different than in Planning Analytics Local.

The following configuration parameters have default values that are different for Planning Analytics on Cloud than for Planning Analytics Local:

MaximumConcurrentExports
>This configuration parameter determines the maximum number of concurrent exports that can be executed from TM1 Web. The default value in Planning Analytics on Cloud is set to **3**. This default value is determined by how TM1 Web is scaled, based on customer usage.

For the full list of TM1 configuration parameters, see "The tm1s.cfg configuration file" on page 46.

Port numbers for Planning Analytics on Cloud

Depending on your endpoint, you might need to configure your outbound port numbers with a specific port number or range.

Table 2. Outbound port numbers	
Endpoint	**Port number / range**
HTTPS / RD Gateway (includes Planning Analytics for Microsoft Excel, Planning Analytics Workspace, Cognos Command Center, web applications, and RDP)	443
Secure Gateway	9000
FTPS (initial connection)	21
FTPS (data connection)	4460-4500

Relative paths for ASCIIOutput and TextOutput functions

Use a relative path in your TurboIntegrator (TI) processes to export data to your shared folder on the IBM Planning Analytics system.

The ASCIIOutput and TextOutput TurboIntegrator functions do not work with the output path of \\data\s on the Planning Analytics system. Instead, use ./ to indicate a relative path to the TM1 data directory and shared folder on your Planning Analytics system.

For example, the following TI code sample does not work on the Planning Analytics system:

```
ASCIIOutput('\\data\s\prod\test.txt',test output);
```

The following code samples do work on the Planning Analytics system. These samples write output to a user-created folder named temp in the data directory:

```
ASCIIOutput('./temp/test1.txt','test output 1');
TextOutput('./temp/test2.txt','test output 2');
```

For more information, see ASCII and Text TurboIntegrator Functions in *TM1 Reference* (http://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_ref.2.0.0.doc/c_asciiandtextturbointegratorfunctions_n706d4.html%23ASCIIandTextTurboIntegratorFunctions_N706D4).

File Transfer Protocol Secure (FTPS) connections

FTPS is configured in passive mode, with Port 21 for the initial connection and the port range of 4460 to 4500 for the data connection.

If you are using an FTPS client to connect to the "Planning Analytics shared folder" on page 5, be aware of the following FTPS configurations used by Planning Analytics on Cloud:

- Data transfers are conducted using Passive Mode.
- Port 21 is used for the initial connection.
- A port range of 4460 to 4500 is used for the data connection.

Note: Users may be required to update network firewall settings to accommodate the FTPS port range.

System time zone and clock settings

The IBM Planning Analytics system clock is set to Coordinated Universal Time (UTC). UTC is a universal time standard that is used across the internet, networks, online services, and computer servers.

You cannot change the time zone for the Planning Analytics system. Your user account for the Microsoft Windows desktop environment in the Planning Analytics system does not have sufficient rights to change the time zone.

However, you can add additional clocks in the Planning Analytics system that display when you hover the mouse over the clock in the Windows system tray taskbar. You can also choose to remove the clock from the Windows taskbar.

For more information about adding additional clocks, search the internet for "Windows Server 2012 additional clocks".

Planning Analytics language configuration

You can configure the user interface language for the TM1 programs that are provided with IBM Planning Analytics. These programs can be configured to use the same languages as the standard version of TM1.

Make sure that the language that you select is one of the supported languages for TM1 listed in "TM1 language codes" on page 45.

Language for cloud-hosted desktop programs
You configure the user interface language for the desktop programs that are hosted in the cloud remote desktop session by using the Microsoft Windows **Language** settings. Consult the Windows help for details on how to modify language settings.

This configuration applies to the following programs:

- TM1 Perspectives
- TM1 Architect
- TM1 Performance Modeler

Language for cloud-hosted web browser-based programs
You configure the user interface language for web-based programs by changing the language settings in your web browser. Consult the help for your browser to learn how to modify language settings.

This configuration applies to the following programs:

- TM1 Web
- TM1 Applications

- Planning Analytics Workspace

Language for local programs

To change the user interface language for the programs that you run on your local computer, use the Windows **Language** settings. Consult the Windows help for details on how to modify language settings.

This configuration applies to the following programs:

- Planning Analytics for Microsoft Excel

TM1 language codes

The following table summarizes the language codes for the supported languages in IBM TM1.

Language	Code
Brazilian Portuguese	bra
Croatian	hrv
Czech	csy
Chinese (Simplified)	sch
Chinese (Traditional)	tch
Danish	dan
Dutch	nld
German	deu
Finnish	fin
French	fra
Hungarian	hun
Italian	ita
Japanese	jpn
Kazakh	kaz
Korean	kor
Norwegian	nor
Polish	pol
Romanian	rom
Russian	rus
Spanish	esp
Slovenian	slv
Swedish	sve
Thai	tha
Turkish	trk

Cognos TM1 Application Maintenance utility in Planning Analytics on Cloud

IBM Planning Analytics on Cloud does not currently support or test the Cognos® TM1® Application Maintenance utility.

Replication and synchronization

IBM Planning Analytics does not currently support or test the TM1 replication and synchronization (rep and sync) feature. Even though the options for replication and synchronization might appear in the user interface of components with Planning Analytics, this feature is not supported in the cloud environment.

Configuring and accessing documentation

You can access IBM Planning Analytics documentation on IBM Knowledge Center in a web browser, or directly from the help menu in any of the TM1 components. If you would like to access Planning Analytics documentation from within the cloud remote desktop session, you must configure the remote web browser to include the documentation locations as trusted sites.

To correctly display Planning Analytics documentation within the remote desktop session of the Planning Analytics system, configure the Microsoft Internet Explorer web browser on the Planning Analytics system.

1. On the Planning Analytics system, open Microsoft Internet Explorer.
2. Click **Tools** > **Internet Options** and then click the **Security** tab.
3. Add the location for the TM1 Performance Modeler Help system.

    a. Click **Local intranet** and then click **Sites**.
    b. Click **Add** and enter `http://127.0.0.1`
    c. Click **Close**.

4. Add the base URL for IBM Knowledge Center:

    a. Click **Trusted sites** and then click **Sites**.
    b. Click **Add** and enter `http://www.ibm.com`
    c. Click **Close**.

5. Click **OK** to close the **Internet Options** window.

You access all of the available Planning Analytics documentation on IBM Knowledge Center (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0).

The `tm1s.cfg` configuration file

The `tm1s.cfg` file is an ASCII file that specifies environment information for an IBM TM1 Server.

A default `tm1s.cfg` file is created in the TM1 Server data directory when you install a copy of the TM1 Server. Most of the available parameters are documented in the configuration file. If a parameter is not installed by default, the parameter is commented out in the configuration file. You can edit the `tm1s.cfg` file to reflect the environment of the associated remote server by uncommenting the parameter that you want to use and setting the correct value.

Note: IBM TM1 Server on IBM POWER8 little endian (LE) uses a subset of the TM1 Server configuration parameters in the `cogstartup.xml` file. For more information, see "Sample cogstartup.xml file" on page 54.

For an alphabetical listing of all the parameters in the server configuration file, see "Parameters in the tm1s.cfg file" on page 56.

Location of the tm1s.cfg file

The location of the tm1s.cfg file depends on the type of server you are using.

- If you are using the IBM Cognos Configuration tool to start and stop your IBM TM1 Server, you can view the configuration path for a TM1 Server by clicking the server name in the Explorer tree of Cognos Configuration.
- If you are running the TM1 Server remotely as a Microsoft Windows service (Tm1sd.exe), and you used the TM1 installation program to install the server, the system uses the tm1s.cfg file that is located in the server data directory you specified during installation.
- If you are running the TM1 Server remotely as a Windows application (Tm1s.exe), you specify the location of the tm1s.cfg file by using the -z parameter in the command line when you start the server, either from a shortcut or from a command prompt.

  For example, this command specifies that TM1 uses the tm1s.cfg file located in the c:\salesdata directory:

  ```
  c:\Program
  Files\Cognos\TM1\bin\tm1s.exe
  -z c:\salesdata
  ```

  If the -z parameter points to a directory containing spaces, you must enclose the directory in double quotation marks. For example, -z "c:\sales data".

- If you are running a TM1 Server on UNIX, and you used the TM1 installation program to install the server, the system uses the tm1s.cfg file that is located in the server data directory you specified during installation.
- If you are running a TM1 Server on IBM POWER8 LE, the system uses the cogstartup.xml file that is located in the *<install_location>*/configuration directory, where *<install_location>* is the server data directory you specified during the installation.

Sample tm1s.cfg file

This is a sample tm1s.cfg file.

Your tm1s.cfg file might also include comments that describe the parameters.

```
## Licensed Materials - Property of IBM
##
## IBM Cognos Products: TM1
##
## (C) Copyright IBM Corp. 2007, 2017
##
## US Government Users Restricted Rights - Use, duplication or
## disclosure restricted by GSA ADP Schedule Contract with IBM Corp.


[TM1S]
# ServerLogging
# Generates a log with the security activity details on the TM1 server that are associated with
Integrated Login. The log file, named Tm1server.log, is saved to the TM1 server data directory.
The ServerLogging parameter is useful only if your TM1 server is configured to use Integrated
Login.
# Type: Optional, Static
#
# Set ServerLogging to T in Tm1s.cfg. Note also that if ServerLogging=T is set, you must rename
the TM1 server message logfile tm1server.log by editing the corresponding parameter in the
logger configuration file tm1s-log.properties file.
ServerLogging=F


# Security package name
# If you configure the TM1 server to use Integrated Login, the SecurityPackageName parameter
defines the security package that authenticates your user name and password in Windows.
# Type: Optional, Static
#
# Valid values are:
#  * Kerberos (default) - Windows 2000 or later.
#  * NTLM - Older Windows installations, such as Windows NT.
```

```
SecurityPackageName=Kerberos


# Security mode
# Type: optional, static
#
#
# If IntegratedSecurityMode is set to 1. All clients must provide a database
# username and password. This is traditionally done through a login screen.
#
# If IntegratedSecurityMode is set to 2. The clients will have the choice
# to connect provide a database username and password or use the single-login
# mechanism for authentication.
#
# If IntegratedSecurityMode is set to 3. All clients must use the single-login
# mechanism for authentication.
#
# If IntegratedSecurityMode is set to 4. The server uses IBM Cognos 8 security authentication.
#
# If IntegratedSecurityMode is set to 5. The server uses IBM Cognos 8 security authentication
and supports user groups from both TM1 and Cognos 8.
#
# If this is not set the parameter will be set to 1 by default.
IntegratedSecurityMode=1


# UseSSL
# Enables or disables SSL on the TM1 server.
# Type: Optional/Required to use SSL, Static
# Set UseSSL=T to enable SSL. With this setting, only TM1 9.1 and later clients will be able to
securely connect to the server.
# Set UseSSL=F to disable SSL. With this setting, all TM1 clients, including older clients that
do not support SSL, will be able to connect to the server in insecure mode.
# When UseSSL=T, you must set several other Tm1s.cfg parameters that manage SSL implementation.
For details on these parameters, see Running TM1 in Secure Mode Using SSL.
# Default is UseSSL=T
UseSSL=T


# Server name to register with the Admin Server. If you do not supply this parameter, TM1 names
the server Local and treats it as a local server.
# Type: Optional, Static
ServerName=SData


# Location of TM1 database
# Type: Required, static
# Specifies the data directory from which the server loads cubes, dimensions, and other
objects. You can list multiple data directories by separating them with semicolons.
#
# Example:
# DataBaseDirectory=C:\Program Files\Cognos\TM1\Custom\TM1Data\PlanSamp\
DataBaseDirectory=.


# AdminHost
# Specifies the computer name or IP address of the Admin Host on which an Admin Server is
running
# Type: Required, Static
# You can specify multiple Admin Hosts by separating each host name with a semicolon on a
Windows TM1 server, or a colon on a UNIX TM1 server. For example:
#  * Use the format AdminHost=hostname1;hostname2 on a Windows TM1 server.
#  * Use the format AdminHost=hostname1:hostname2 on a UNIX TM1 server.
#
# Some examples include:
#  * AdminHost=boston;newyork
#  * AdminHost=192.168.1.17;192.168.1.22
#  * AdminHost=boston;192.168.1.17;192.168.1.22;myserver;192.168.1.40
#
#Note: The string specifying the admin host(s) is limited to 1020 characters or bytes.
# If set to empty than use localhost
AdminHost=


# TM1 Server Port
# Sets the server port number used to distinguish between multiple servers running on the same
computer. When multiple TM1 servers are installed on a single computer, each server must use a
unique port number.
# Type: Optional, Static
# When you install a TM1 server, the default port number is 12345. Valid port values are
between 5000 and 65535
#
```

```
# If the Tm1s.cfg file does not contain the PortNumber parameter, the TM1 server uses port
5000. Local TM1 servers use port 5000. The port used for Client Messages must also be a unique
port number and is set to 5001 by default when the ClientMessagePortNumberparameter is used.
PortNumber=12346


# ClientMessagePortNumber
# Identifies a secondary port used to accept client messages concerning the progress and
ultimate cancellation of a lengthy operation without tying up thread reserves.
# Type: optional, dynamically set/Sstatic for changes
# This additional port ensures that other server requests can continue to process while waiting
for a cancellation from the user.
#
# By default, this port number is automatically and dynamically assigned when the TM1 server
starts. You do not have to set ClientMessagePortNumber to a specific number unless firewalls or
other network issues require the listener port to be a well-known number.
#
# Note: Be sure to assign unique port numbers for the server and client message ports. If you
have two servers running on the same machine with the same port number, the message activity
may cause a system failure.
ClientMessagePortNumber=


# Language
# Sets the language used in the TM1 interface for the IBM Cognos TM1 server.You can use this to
override the current locale settings
# This parameter applies to messages generated by the server and is also used in the user
interface
# of the server dialog box when you run the server as an application instead of a Windows
service.
# Type: Optional, Static
#
# Valid values are:
# eng    English
# bra    Brazilian Portuguese
# hrv    Croatian
# csy    Czech
# sch    Chinese (Simplified)
# tch    Chinese (Traditional)
# dan    Danish
# nld    Dutch
# deu    German
# fin    Finnish
# fra    French
# hun    Hungarian
# ita    Italian
# jpn    Japanese
# kaz    Kazakh
# kor    Korean
# nor    Norwegian
# pol    Polish
# rom    Romanian
# rus    Russian
# esp    Spanish
# sky    Slovak
# slv    Slovenian
# sve    Swedish
# tha    Thai
# trk    Turkish
#Language=eng


# Savetime
# Sets the time of day to execute an automatic save of server data; saves the cubes every
succeeding day at the same time. As with a regular shutdown, SaveTime renames the log file,
opens a new log file, and continues to run after the save.
# The Savetime parameter is not available when running the TM1 server as a Windows service.
# The format of the SaveTime parameter is dd:hh:mm where:
#  * dd is the number of days from today that the system will start automatically saving data.
For example, 00 is today, 01 is tomorrow.
#  * hh:mm is the time of day in 24-hour format.
# Type: optional, dynamic
Savetime=


# Downtime
# Specifies a time when the server will come down automatically.
# The Downtime parameter is not available when running the TM1 server as a Windows service.
# The format of the Downtime parameter is dd:hh:mm where:
#  * dd is the number of days from today that the system will start automatically saving data.
For example, 00 is today, 01 is tomorrow.
#  * hh:mm is the time of day in 24-hour format.
```

```
# When you use the DownTime parameter on the UNIX TM1 server, you must set the
RunningInBackground parameter to T. If RunningInBackground=F, the server prompts for
confirmation before shutting down and cannot shut down without manual confirmation from an
administrator.
# Type: optional, dynamic
Downtime=


# LicenseMetricTime
# Sets the time of day the TM1 server will generate a License Metric Tag file.
# A License Metric Tag file is an XML file which contains information about license metrics
consumed by software product instances.
# In the case of TM1 server, the reported authorized user metrics are the number of Modelers,
Contributors and Explorers.
# The License Metric Tag files produced by various instances of TM1 servers are collected by
the IBM License Metric Tool (ILMT) agent and aggregated to produce final metrics based on the
TM1 product version.
#
# The format of the LicenseMetricTime parameter is dd:hh:mm where:
#  * dd is the number of days from today that the system will start automatically producing
License Metric tag files. For example, 00 is today, 01 is tomorrow.
#  * hh:mm is the time of day in 24-hour format.
# Type: optional, dynamic
LicenseMetricTime=


# ProgressMessage
# This parameter determines whether users have the option to cancel lengthy view calculations.
When a user opens a view that takes a significant amount of time to calculate (usually a view
with high levels of consolidation or complex rules), TM1 monitors the progress of the process.
When ProgressMessage=T a dialog box opens that allows the user to Stop Building View.
# Type: Optional, Static
#
# If the user clicks Stop Building View, the view is discarded on the client, but view
calculation continues on the server. In some instances, this can tie up the server.
# If ProgressMessage=F, the Stop Building View option is not offered and the user cannot cancel
lengthy operations. This setting helps avoid potential server tie ups in versions 9.1 SP3
through 9.4.
# When ProgressMessage=T or is not present in the Tm1s.cfg file, the Stop Building View option
opens during lengthy view calculations so the user can cancel the process if necessary. For
versions 9.4 or later, the user can assign a unique Port Number using ClientMessagePortNumber.
This additional port allows these progress messages to travel via a secondary port so that
server processing can continue without tying up thread reserves.
# Note: To avoid potentially tying up servers, TM1 9.1 SP3 through 9.4 have ProgressMessage=F
inserted into the Tm1s.cfg file during server installation. As of TM1 9.4, progress messages
can travel via the secondary port assigned by ClientMessagePortNumber so TM1 9.4 and later have
ProgressMessage=T set by default. This parameter has been tested with Citrix when this feature
was redesigned.
ProgressMessage=True


# AuditLogOn
# Turns audit logging on (T) or off (F).
# Type: Optional, Static
AuditLogOn=F


# AuditLogMaxFileSize
# Indicates the maximum file size that an audit log file can grow to before it is closed and a
new file is created.
# Type: Optional, Dynamic
# This value must include units of KB (kilobytes), MB (megabytes), or GB (gigabytes).
# Default value: 100 MB
# Minimum value: 1 KB
# Maximum value: 2 GB
AuditLogMaxFileSize= 100 MB


# AuditLogUpdateInterval
# Indicates the maximum amount of time, in minutes, that TM1 waits before moving the events
from the temporary audit file into the final audit log.
# Type: Optional, Dynamic
# This value must include units of KB (kilobytes), MB (megabytes), or GB (gigabytes).
# Default value: 60 (sixty minutes)
# Minimum value: 1  (one minute)
AuditLogUpdateInterval=60


#PersistentFeeders
# Turn on Persistent Feeders to make TM1 models load faster
# Type: Optional, Static
PersistentFeeders=F
```

```
# ServerCAMURI
# Specifies the URI for the internal dispatcher that the TM1 server should use to connect to
CAM. The URI is specified in the form http[s]://host IP address:port/p2pd/servlet/dispatch.
# Type: Optional, Static
# No default
# For example,
#
# http://10.121.25.121:9300/p2pd/servlet/dispatch
# or
# https://10.121.25.121:9300/p2pd/servlet/dispatch
#ServerCAMURI=http://localhost:9300/p2pd/servlet/dispatch


# ClientCAMURI
# The URI for the IBM Cognos Server IBM Cognos Connection used to authenticate TM1 clients. The
URI is specified in the form http[s]://host/cognos8/cgi-bin/cognos.cgi.
# Type: Optional, Static
# No default
# Example: http://10.121.25.121/cognos8/cgi-bin/cognos.cgi
#ClientCAMURI=http://localhost/ibmcognos/cgi-bin/cognos.cgi


# ClientPingCAMPassport
# Indicates the interval, in seconds, that a client should ping the CAM server to keep their
passport alive.
# Type: Optional, Static
# If an error occurs or the passport expires the user will be disconnected from the TM1 server.
#ClientPingCAMPassport=900


## Optional CAM parameters

# CAMSSLCertificate
# Type: Optional/Required only when CAM server is configured with SSL, Static
# The full path and name of the SSL certificate to be used when connecting to the internal
dispatcher. For example, C:\AxTM1\Install_Dir\ssl\CognosCert.cer.
#CAMSSLCertificate=


# CAMSSLCertRevList
# CAM SSL Certificate Rev List
#CAMSSLCertRevList=


# Skip SSL CAM Host Check
# Indicates whether the SSL certificate ID confirmation process can be skipped. The default is
FALSE.
# Type: Optional, Static
# Important: This parameter should be set to TRUE only if using a generic certificate for
demonstration purposes.
#SkipSSLCAMHostCheck=TRUE


## Optional LDAP Settings

# PasswordSource
# Determines the source of authentication
# Type: Optional, Static
# Two options:
#   * TM1 (default) - Compares the user-entered password to the password in the TM1 database.
#   * LDAP - Compares the user-entered password to the password stored in on the LDAP server.
#PasswordSource=LDAP


# LDAPPort
# TM1 attempts to bind to an LDAP server on the specified secure port. If you do not enter an
LDAPPort value, TM1 uses the default value, port 636
# Type: Optional, Static
# This must be a secure (SSL) port.
#LDAPPort=636


# LDAPHost
# Uses the domain name or dotted string representation of the IP address of the LDAP server
host. If you do enter a value for LDAPHost, TM1 uses the default value, localhost.
# Type: Optional, Static
#LDAPHost=localhost


# LDAPUseServerAccount
```

```
# Determines if a password is required to connect to the server when using LDAP authentication.
# Type: Optional
# To connect directly to the LDAP server using integrated authentication, set this parameter to
T. Set this parameter to T whenever the IBM Cognos TM1 server and LDAP server exist on the same
domain.
# To use a password before connecting, set this parameter to F. When LDAPUseServerAccount is
set to F, you must also set the LDAPPasswordFile and LDAPPasswordKeyFile to successfully
connect to the LDAP server using SSL.
#LDAPUseServerAccount=T


# LDAPSearchBase
# A base distinguished name (DN) in the LDAP directory. For example:
# ou=people,o=company.com
# Specifies the node in the LDAP tree at which the search for the TM1 user being validated
begins. For example, if the distinguished names are of the form:
# uid-bjensen, ou-people, o=company.com
#
# then the search base would be:
# ou-people, o=company.com
# This is a required field if using LDAP Authentication.
#LDAPSearchBase=cn=users,dc=company,dc=com


# LDAPSearchField
# cn
# The name of the LDAP attribute that is expected to contain the name of the TM1 user being
validated. If you do not enter an LDAPSearchField value, the default value is cn, which is also
the default value for Microsoft Active Directory.
#LDAPSearchField=cn=user


# IPVersion
# Select IPv4 or IPv6
# Sets IP protocol.
# Type: Optional, Static
#
# Three options:
#    * ipv4 - use ipv4 (default)
#    * ipv6 - use ipv6
#    * dual - use ipv6 with support for ipv4
IPVersion=ipv4


# ServerCAMIPVersion
# Server CAM Internet Protocol Version
# Select IPv4 or IPv6
# Sets IP protocol.
# Type: Optional, Static
#
# Two options:
#    * ipv4 - use ipv4 (default)
#    * ipv6 - use ipv6
ServerCAMIPVersion=ipv4


# AllowSeparateNandCRules
# Specifies expressions for N: and C: levels on separate lines using identical AREA
definitions, maintaining the rules conventions of TM1.
# Type: Optional, Static
#
# For example,
#
# ['Budget','Argentina']=N:Expression;
#
# ['Budget','Argentina']=C:Expression;
#
# are both valid rules statements when you include the AllowSeparateNandCRules parameter in the
Tm1s.cfg file and set to T.
#
# This parameter also effects how numeric and string rules are applied to cells. Without this
parameter, the first rule statement that is encountered for a given AREA definition is applied
to the cells within the scope of that definition. If any cell within the AREA definition is
numeric and the rule is a string rule, then the cell is considered not rule-derived because
there was a match that did not apply to the cell.
#
# For example, consider the statements:
#
# ['1 Quarter']=s:'str_value';Not following.
#
# ['1 Quarter']=n:77;
#
```

```
# If the AllowSeparateNandCRules parameter is not set (or is set to F), then the first rule
statement will match any cell that uses '1 Quarter' as one of its elements. If the cell is a
string cell, the value of the cell will be set to "str_value". If the cell is a numeric cell,
the cell will not be considered rule derived, since a match was found (the first rule) but the
rule itself did not apply.
#
# If the AllowSeparateNandCRules parameter is set to T, then string cells which use '1 Quarter'
will be set to "str_value" and numeric cells which use '1 Quarter' will be set to 77.
AllowSeparateNandCRules=T


# DistributedPlanningOutputDir
# Type: Optional, Static
# Cognos Insight distributed clients need information called "tunits".
# This data is created when an application is deployed and is updated as the TM1 server runs.
# The location of the directory used for this purpose is set using this parameter.
# In order to deploy Cognos Insight distributed client applications using this database,
uncomment or add this parameter as DistributedPlanningOutputDir=<location of the tunit
directory>.
# The pathname specified can be absolute, or relative to the TM1 server data directory.
#
# Examples:
#
DistributedPlanningOutputDir=tunit
     creates a directory "tunit" under the TM1 server data directory
#
DistributedPlanningOutputDir=..\tunit
   creates a directory "tunit" as a sibling to the TM1 server data directory
# DistributedPlanningOutputDir=C:\Program Files\IBM\cognos\tm1\samples\tm1\GO_New_Stores
\tunit      creates a directory "tunit"  at the specified location.
#DistributedPlanningOutputDir=.\tunit


# ForceReevaluationOfFeedersForFedCellsOnDataChange
# Type: Optional, Static
# When this parameter is set, a feeder statement is forced to be re-evaluated when data changes.
# When the IBM Cognos TM1 server computes feeders, the process can be a "chain" of feeders,
where cell A feeds cell B, and there is a feeder rule for cell B, so that rule runs and feeds
cell C, etc. Feeders for numeric cells are only evaluated when a cell goes from empty to some
non-zero value since any non-zero value in the cell would already have set any feeders.
# There is no need to re-evaluate the feeders when a cell changes from one non-zero value to
another.
# Normally, when evaluating feeders, if a feeder rule is evaluated and the target cell is
already fed, the feeding process stops.
# Feeder rules are not processed any further since the presence of the feeder in the target
cell indicates that the feeder rules for the target cell have already been run, and there is no
need to run them again.
# Consider the following feeder rules:
# ['A']=>['B'];
# The feeder rule for cell B depends on some cube data value:
# [B]=>DB(cube-name,!dim1,DB(cube2-name, ...),!dim2);['C']=>['D'];['X']=>['B'];
# When the feeder rule for B is initially evaluated, the DB(cube2-name, ...) is evaluated to
produce an element name, such as C. Therefore B feeds C and then C feeds D. When that cell X
goes from zero to non-zero. This change also feeds B. But B is already fed, so the feeding
process stops, and the feeder rule for B never evaluates, so any "change" in the output of the
rule, which may come about because of an underlying data change targeted by the DB(…) statement
will not be evaluated. If the config parameter
ForceReevaluationOfFeedersForFedCellsOnDataChange is set, then the presence of a feeder in cell
B will not terminate feeder processing. Rather, the feeder rule for B will run. Because the
feeder rule for B is data dependent, the target for the feeder may be the former C, or may be
some other cell, and that cell will be fed. Note that setting this parameter will force more
feeder evaluations, which may have a performance impact.
# To turn on this parameter set ForceReevaluationOfFeedersForFedCellsOnDataChange=T.
ForceReevaluationOfFeedersForFedCellsOnDataChange=T


#Specifies whether multiple hierarchy creation is enabled or disabled.
#Parameter type: optional (required for multiple hierarchies)
#By default, the EnableNewHierarchyCreation parameter is set to F (false). If you are working
with multiple hierarchies, change the parameter setting to T (true). TM1 Reference lists the
TurboIntegrator functions to manage dimensions and equivalent functions to manage specific
hierarchies within dimensions.
EnableNewHierarchyCreation=T

# TM1 Server HTTP Port
# Sets the server port number for HTTP access. Like PortNumber above, it is used to distinguish
between multiple servers running on the same computer. When multiple TM1 servers are installed
on a single computer, each server must use unique values for port number and HTTP port number.
# Type: Optional, Static
# When you install a TM1 server, the default HTTP port number is 12354. Valid port values are
between 5000 and 49151
#
# If the Tm1s.cfg file does not contain the HTTPPortNumber parameter, then you can not use the
```

```
 OData v4 Compliant REST API.
HTTPPortNumber=8010

#Specifies whether TurboIntegrator debugging capabilities are enabled or disabled.
#Parameter type: optional, dynamic
#By default, the EnableTIDebugging parameter is set to F (false).
#Setting the parameter to T (true) allows you to use any of the TurboIntegrator process
debugging capabilities of the TM1 REST API.
EnableTIDebugging=T
```

Sample cogstartup.xml file

This is a sample cogstartup.xml file for IBM POWER8 LE.

```
<crn:parameters
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:xsd="http://www.w3.org/2001/XMLSchema"
    xmlns:cfg="http://developer.cognos.com/schemas/configparams/XMLSchema/1/"
    xmlns:crn="http://developer.cognos.com/schemas/crconfig/1/"
    xsi:schemaLocation="http://developer.cognos.com/schemas/crconfig/1/ cogstartup.xsd"
    version="166.0">
  <!--tm1AdminServer:Defines a group of properties for the TM1 Admin Server.-->
    <crn:parameter
        name="tm1AdminServer"
        opaque="true">
        <crn:value>
      <!--tm1AdminNonSSLPortNumber:Specifies the TCP port number used by TM1 Admin Server for
unsecured communication.-->
            <crn:parameter
                name="tm1AdminNonSSLPortNumber">
                <crn:value
                    xsi:type="xsd:unsignedShort">5495</crn:value>
            </crn:parameter>
      <!--tm1AdminSSLPortNumber:Specifies the TCP port number used by TM1 Admin Server for
secured (SSL) communication.-->
            <crn:parameter
                name="tm1AdminSSLPortNumber">
                <crn:value
                    xsi:type="xsd:unsignedShort">5498</crn:value>
            </crn:parameter>
      <!--tm1AdminHTTPPortNumber:Specifies the HTTP port number used by TM1 Admin Server for
unsecured communication.-->
            <crn:parameter
                name="tm1AdminHTTPPortNumber">
                <crn:value
                    xsi:type="xsd:unsignedShort">5895</crn:value>
            </crn:parameter>
      <!--tm1AdminHTTPSPortNumber:Specifies the HTTPS port number used by TM1 Admin Server for
secured (SSL) communication.-->
            <crn:parameter
                name="tm1AdminHTTPSPortNumber">
                <crn:value
                    xsi:type="xsd:unsignedShort">5898</crn:value>
            </crn:parameter>
      <!--tm1AdminSupportNonSSLClients:Specifies if the TM1 Admin Server supports non-SSL TM1
clients.-->
      <!--Set the parameter to true to configure TM1 Admin Server to support non-SSL clients
and to listen for client connections on both secured (SSL) and unsecured ports. If set to false
TM1 Admin Server will support only SSL client connections on the secured port.-->
            <crn:parameter
                name="tm1AdminSupportNonSSLClients">
                <crn:value
                    xsi:type="xsd:boolean">false</crn:value>
            </crn:parameter>
      <!--tm1AdminSupportPreTLSv12Clients:Specifies if the TM1 Admin Server will supports pre
TLS v1.2 SSL protocols from TM1 clients.-->
      <!--Set the parameter to true to allow TM1 clients to connect with TM1 Admin Server using
SSL protocols earlier than TLS v1.2. If set to false (default), TM1 Admin Server will accept
only TLS v1.2 or later SSL protocols.-->
            <crn:parameter
                name="tm1AdminSupportPreTLSv12Clients">
                <crn:value
                    xsi:type="xsd:boolean">false</crn:value>
            </crn:parameter>
      <!--tm1AdminKeyFile:Specifies the file path to the key database file.-->
      <!--The key database file which contains the server certificate and trusted certificate
authorities.-->
            <crn:parameter
                name="tm1AdminKeyFile">
```

```
            <crn:value
                    xsi:type="cfg:filePath">./ssl/ibmtm1.kdb</crn:value>
            </crn:parameter>
        <!--tm1AdminKeyStashFile:Specifies the file path to the key database password file.-->
        <!--The key store containing passwords to the key database file.-->
            <crn:parameter
                    name="tm1AdminKeyStashFile">
                <crn:value
                        xsi:type="cfg:filePath">./ssl/ibmtm1.sth</crn:value>
            </crn:parameter>
        <!--tm1AdminKeyLabel:Specifies label of the server certificate.-->
        <!--The label of the server certificate in key database file. A certificate may be marked
as the default.-->
            <crn:parameter
                    name="tm1AdminKeyLabel">
                <crn:value
                        xsi:type="xsd:string">ibmtm1_server</crn:value>
            </crn:parameter>
        <!--tm1AdminFIPSOperationMode:Specifies the FIPS mode of operation.-->
        <!--Controls the level of support for Federal Information Processing Standards (FIPS).
Default is 'enabled'.  \n\tEnabled is basic, FIPS 140-2 level 1 support. \n\tApproved is FIPS
140-2 level 2 support. \n\tDisabled is no FIPS support at all.-->
            <crn:parameter
                    name="tm1AdminFIPSOperationMode">
                <crn:value
                        xsi:type="xsd:int">2</crn:value>
            </crn:parameter>
        <!--tm1AdminNIST_SP800_131A_MODE:Indicates server should operate in compliance of the SP
800-131A standard. Default is true.-->
            <crn:parameter
                    name="tm1AdminNIST_SP800_131A_MODE">
                <crn:value
                        xsi:type="xsd:boolean">true</crn:value>
            </crn:parameter>
        <!--tlsCipherList:Specifies a list of supported ciphersuites in priority sequence.-->
        <!--Use this property to specify what ciphersuites are acceptable in this install. The
comma-delimited string values are defined by RFC 2246, 4346, 5246, 4492 and 5289. The named
ciphersuites are presented to the SSL negotiation in specified order for both client and server
sides of the negotiation. At least one of the selected ciphersuites between configured client
and server platforms must match.-->
            <crn:parameter
                    name="tlsCipherList">
                <crn:value
                        xsi:type="xsd:string"/>
            </crn:parameter>
        <!--tm1AdminIPVersion:Specifies the Internet Protocol(s) which the TM1 Admin Server will
support.-->
            <crn:parameter
                    name="tm1AdminIPVersion">
                <crn:value
                        xsi:type="xsd:string">IPv4</crn:value>
            </crn:parameter>
        <!--tm1AdminActivityInterval:Specifies the interval in seconds wherein the TM1 Server
will notify the TM1 Admin Server that it is active.-->
            <crn:parameter
                    name="tm1AdminActivityInterval">
                <crn:value
                        xsi:type="xsd:positiveInteger">10</crn:value>
            </crn:parameter>
        <!--tm1AdminInactivityTimeout:Specifies the interval in seconds that the TM1 Server is
allowed to be inactive before it is removed from the TM1 Admin Server.-->
            <crn:parameter
                    name="tm1AdminInactivityTimeout">
                <crn:value
                        xsi:type="xsd:positiveInteger">10</crn:value>
            </crn:parameter>
        <!--tm1AdminSvrCertificateVersion:Specifies which version of the TM1 generated SSL
certificates to use.-->
        <!--By default, the 1024-bit encryption version of the TM1 generated certificates is
used. Change this parameter only if you want to use the new 2048-bit encryption version of the
default certificates. You can use the new version with old and new TM1 clients, but you must
configure the clients to use the new certificate authority file. This parameter does not apply
if you are using your own SSL certificates. Valid values include: 1 = certificate authority to
enable 1024-bit encryption with sha-1 (default value); 2 = certificate authority to enable 2048-
bit encryption with sha-256.-->
            <crn:parameter
                    name="tm1AdminSvrCertificateVersion">
                <crn:value
                        xsi:type="xsd:int">1</crn:value>
            </crn:parameter>
        </crn:value>
    </crn:parameter>
```

```
<!--tm1Server:Defines a group of properties for the TM1 Server.-->
  <crn:parameter
      name="tm1Server"
      opaque="true">
      <crn:value>
          <crn:instances
              name="tm1ServerInstances">
      <!--24 Retail:Defines a group of properties for a TM1 Server instance.-->
              <crn:instance
                  name="24 Retail"
                  class="tm1ServerInstance">
                  <crn:parameter
                      name="tm1sConfigDirectory">
                      <crn:value
                          xsi:type="cfg:folderPath">../samples/tm1/24Retail</crn:value>
                  </crn:parameter>
              </crn:instance>
      <!--SData:Defines a group of properties for a TM1 Server instance.-->
              <crn:instance
                  name="SData"
                  class="tm1ServerInstance">
                  <crn:parameter
                      name="tm1sConfigDirectory">
                      <crn:value
                          xsi:type="cfg:folderPath">../samples/tm1/SData</crn:value>
                  </crn:parameter>
              </crn:instance>
      <!--Planning Sample:Defines a group of properties for a TM1 Server instance.-->
              <crn:instance
                  name="Planning Sample"
                  class="tm1ServerInstance">
                  <crn:parameter
                      name="tm1sConfigDirectory">
                      <crn:value
                          xsi:type="cfg:folderPath">../samples/tm1/PlanSamp</crn:value>
                  </crn:parameter>
              </crn:instance>
      <!--GO_New_Stores:Defines a group of properties for a TM1 Server instance.-->
              <crn:instance
                  name="GO_New_Stores"
                  class="tm1ServerInstance">
                  <crn:parameter
                      name="tm1sConfigDirectory">
                      <crn:value
                          xsi:type="cfg:folderPath">../samples/tm1/GO_New_Stores</crn:value>
                  </crn:parameter>
              </crn:instance>
      <!--GO_Scorecards:Defines a group of properties for a TM1 Server instance.-->
              <crn:instance
                  name="GO_Scorecards"
                  class="tm1ServerInstance">
                  <crn:parameter
                      name="tm1sConfigDirectory">
                      <crn:value
                          xsi:type="cfg:folderPath">../samples/tm1/GO_scorecards</crn:value>
                  </crn:parameter>
              </crn:instance>
      <!--Proven_Techniques:Defines a group of properties for a TM1 Server instance.-->
              <crn:instance
                  name="Proven_Techniques"
                  class="tm1ServerInstance">
                  <crn:parameter
                      name="tm1sConfigDirectory">
                      <crn:value
                          xsi:type="cfg:folderPath">../samples/tm1/Proven_Techniques</
crn:value>
                  </crn:parameter>
              </crn:instance>
          </crn:instances>
      </crn:value>
  </crn:parameter>
</crn:parameters>
```

Parameters in the tm1s.cfg file

The parameters in the tm1s.cfg file are described here.

Dynamic parameter

Dynamic parameter values can be edited while the IBM TM1 Server is running.

The TM1 Server continuously polls the tm1s.cfg file at 60 second intervals to determine if any dynamic parameter values have changed. If the server detects a parameter value change, the new value is applied immediately. Dynamic parameters are identified with a statement describing them as dynamic in this list.

Static parameter

Static parameter values are read from the tm1s.cfg file only when the TM1 Server starts. If you want to change a static parameter value, you must shut down the TM1 Server, edit the value in the tm1s.cfg file, and then restart the server.

Most parameters in the tm1s.cfg file are static.

Spaces in values

If a parameter value contains spaces, enclose the parameter values within double quotes.

AdminHost

Specifies the computer name or IP address of the Admin Host on which an Admin Server is running.

Parameter type: required, static

To specify multiple Admin Hosts, separate each host name with a semicolon when running on Microsoft Windows or with a colon when running on a UNIX. For example:

- Use the format `AdminHost=hostname1;hostname2` on a Windows IBM TM1 Server.
- Use the format `AdminHost=hostname1:hostname2` on a UNIX IBM TM1 Server.

Some other examples include:

- `AdminHost=boston;newyork`
- `AdminHost=192.168.1.17;192.168.1.22`
- `AdminHost=boston;192.168.1.17;192.168.1.22;myserver;192.168.1.40`

Note: The string specifying the admin host or hosts is limited to 1020 characters or bytes.

AllowReadOnlyChoreReschedule

Provides users with READ access to a chore, and the ability to activate, deactivate, and reschedule chores.

Parameter type: optional, static

When the line AllowReadOnlyChoreReschedule=T is added to the Tm1s.cfg file for a server, users with READ access to a chore can right-click a chore in Server Explorer, and toggle the Activate Schedule option or choose the Edit Chore option. The Edit Chore option is available only when a chore is not activated.

When a user with READ access to a chore selects the Edit Chore option, only the scheduling screen of the Chore Setup Wizard opens.

The scheduling screen lets the user set scheduling parameters for the chore, but does not allow the user to edit the list of processes that compose the chore.

AllowSeparateNandCRules

When enabled, this parameter lets you specify rule expressions for N: and C: levels on separate lines using identical AREA definitions.

Parameter type: optional, static

For example,

```
['Budget','Argentina']=N:Expression;
```

```
['Budget','Argentina']=C:Expression;
```

are both valid rules statements when you include the AllowSeparateNandCRules parameter in the Tm1s.cfg file and set to T.

This parameter also effects how numeric and string rules are applied to cells. Without this parameter, the first rule statement that is encountered for a given AREA definition is applied to the cells within the scope of that definition. If any cell within the AREA definition is numeric and the rule is a string rule, then the cell is considered not rule-derived because there was a match that did not apply to the cell.

For example, consider the statements:

```
['1 Quarter']=s:'str_value';Not following.
```

```
['1 Quarter']=n:77;
```

If the AllowSeparateNandCRules parameter is not set (or is set to F), then the first rule statement will match any cell that uses '1 Quarter' as one of its elements. If the cell is a string cell, the value of the cell will be set to 'str_value'. If the cell is a numeric cell, the cell will not be considered rule derived, since a match was found (the first rule) but the rule itself did not apply.

If the AllowSeparateNandCRules parameter is set to T, then string cells which use '1 Quarter' will be set to 'str_value' and numeric cells which use '1 Quarter' will be set to 77.

To set the parameter to T, add the following line to Tm1s.cfg:

```
AllowSeparateNandCRules=T
```

AllRuleCalcStargateOptimization

The AllRuleCalcStargateOptimization parameter can improve performance in calculating views that contain only rule-calculated values.

Parameter type: optional, static

Typically, TM1 performs calculations for standard consolidations and then calculates values for rule-based consolidations, which may end up overriding values in the standard consolidations. The AllRuleCalcStargateOptimization parameter provides optimization that first checks if every value in the view is rule-calculated and then proceeds as follows:

- If every value in the view is rule-calculated, then TM1 skips the unnecessary calculations for standard consolidations and just performs the rule-calculated consolidations.
- If the view contains even a single value which is not rule-calculated, then this optimization parameter will have no effect.

When this parameter is set to True, some additional processing will take place for every view that is requested to first check if the view contains only rule-calculated values. For most views, this additional processing is minimal since the optimization is stopped after the first value in the view is found to be not rule-calculated.

To enable this parameter, set the parameter's value to T in the TM1 server configuration file, Tm1s.cfg, as follows:

```
AllRuleCalcStargateOptimization=T
```

The default setting is disabled (F).

ApplyMaximumViewSizeToEntireTransaction

Applies MaximumViewSize to the entire transaction instead of to individual calculations.

Parameter type: optional, <u>dynamic</u>

By default MaximumViewSize checks individual view processing. For example, if 10 views are processed in a single transaction, the threshold is crossed only if the processing of any single view crosses the threshold. See <u>"MaximumViewSize " on page 85</u>.

With this parameter set to True, the cumulative memory usage of all views processed in a single transaction is compared against the threshold value. This allows the memory size threshold to catch more transactions that consume large amounts of memory.

Note: TI process execution counts as a single transaction, including all child TI processes.

```
ApplyMaximumViewSizeToEntireTransaction=T
```

Default value is F.

AuditLogMaxFileSize

Indicates the maximum file size that an audit log file can grow to before it is closed and a new file is created.

Parameter type: optional, <u>dynamic</u>

This value must include units of KB (kilobytes), MB (megabytes), or GB (gigabytes). For example, to limit the log file size to 100 MB, enter the following:

```
AuditLogMaxFileSize=100 MB
```

The range of values include:

- Default value: 100 MB
- Minimum value: 1 KB
- Maximum value: 2 GB

AuditLogMaxQueryMemory

Indicates the maximum amount of memory that IBM TM1 Server can use when running an audit log query and retrieving the set of results.

Parameter type: optional, <u>dynamic</u>

This value must include units of KB (kilobytes), MB (megabytes), or GB (gigabytes). For example:

```
AuditLogMaxQueryMemory=100 MB
```

The range of values include:

- Default value: 100 MB
- Minimum value: 1 KB
- Maximum value: 2 GB

AuditLogOn

Turns audit logging on (T) or off (F).

Parameter type: optional, <u>dynamic</u>

For example:

- To enable audit logging, set `AuditLogOn=T`
- To disable audit logging, set `AuditLogOn=F`

The default setting is F.

AuditLogUpdateInterval

Indicates the maximum amount of time, in minutes, that IBM TM1 Server waits before moving the events from the temporary audit file into the final audit log.

Parameter type: optional, dynamic

For example:

`AuditLogUpdateInterval=60`

The default value is 60 (sixty minutes).

The minimum value is 1 (one minute).

Note: You can manually update the audit log with the latest events anytime you want by using the Process Audit Log Events command in Server Explorer. For details, see "Updating the Audit Log with the Latest Events" in *TM1 Operations*.

AutomaticallyAddCubeDependencies

Determines if cube dependencies are set automatically or if you must manually identify the cube dependencies for each cube.

Parameter type: optional, static

The IBM Cognos TM1 server establishes dependencies so it can properly invalidate cube calculation caches when data in cubes is changed. For more details, see "Understanding Cube Dependency" in *TM1 Operations*.

When set to true (the default), rule-based inter-cube DB(...) dependencies are detected and set automatically at server startup time. Further, after a rule edit, save, or recompile, the dependencies expressed in that rule, whether from DB(), ATTRS(), or ATTRN() functions, are automatically re-established.

When set to false, rule based inter-cube DB(...) dependencies are not detected and are set at server startup time. Dependencies are established when a query is run. This can cause a query to block others because of a new dependency.

```
AutomaticallyAddCubeDependencies=F
```

Default value: T

CacheFriendlyMalloc

Allows for memory alignment that is specific to the IBM Power Platform.

Parameter type: optional, static

Testing has shown that enabling this parameter provides the most benefit for high user count usage scenarios. Single or low user count usage scenarios may see little to no benefit. By default, CacheFriendlyMalloc=F.

To enable the option, add the following line to your tm1s.cfg file:

```
CacheFriendlyMalloc=T
```

CalculationThresholdForStorage

Defines a minimum number of rule calculations required for a single cell or Stargate view, beyond which the IBM TM1 Server stores the calculations for use during the current server session.

Parameter type: optional, dynamic

For example, when a user requests rule-derived values from the IBM TM1 Server, either from a single cell or a Stargate view, the server usually has to perform multiple rule calculations to arrive at the requested rule-derived values.

CalculationThresholdForStorage has a direct effect on memory consumption and performance. A high parameter value results in decreased memory consumption and slower performance. A low parameter value results in increased memory consumption and faster performance.

If you do not include CalculationThresholdForStorage in Tm1s.cfg, the default calculation threshold is 50.

CAMPortalVariableFile

The path to the `variables_TM1.xml` file in your IBM Cognos installation.

Parameter type: Required for IBM Cognos interoperability, static.

The CAMPortalVariableField parameter is required only when using IBM Cognos Analytics with Cognos TM1 Web and the Cognos TM1 Server.

Set this parameter with a relative path as follows:

`CAMPortalVariableFile=`**`portal\variables_TM1.xml`**

Note: The exact file location on the IBM Cognos Analytics server is: `Cognos_location`\templates\ps \portal\variables_TM1.xml.

CAMUseSSL

Specifies that all communications between TM1 and the IBM Cognos Analytics server must use SSL.

Parameter type: optional, static

Default value: False

CheckFeedersMaximumCells

Limits the number of cells checked by the Check Feeders option in the Cube Viewer.

The CheckFeedersMaximumCells is an optional parameter that you can add to Tm1s.cfg. If you do not include this parameter in Tm1s.cfg, Check Feeders checks 3,000,000 cells, by default.

Parameter type: optional, dynamic

When TM1 Server checks feeders from a highly consolidated cell, it must check all intersections that apply to the cell. In large applications, the TM1 Server will be unavailable for a significant amount of time while TM1 Server is checking all intersections.

To limit the number of cells checked when using Check Feeders (which in turn limits the amount of time the TM1 Server is unavailable), add CheckFeedersMaximumCells to Tm1s.cfg and set the parameter to the number of cells you want to check.

For example, to limit Check Feeders to 1,000,000 cells, enter the following line:

`CheckFeedersMaximumCells=1,000,000`

ClientCAMURI

The URI for the IBM Cognos Server IBM Cognos Connection used to authenticate TM1 clients.

Parameter type: optional, dynamic

The URI is specified in the form `http[s]://<host>/<cognos_location>/cgi-bin/cognos.cgi`.

For example, `http://10.121.25.121/ibmcognos/cgi-bin/cognos.cgi`

ClientExportSSLSvrCert

Specifies whether an IBM Cognos TM1 client should retrieve the certificate authority certificate, which was originally used to issue the TM1 server's certificate, from the Microsoft Windows certificate store.

Parameter type: optional (required for SSL), static

If `ClientExportSSLSvrCert=T`, the certificate authority certificate is exported from the certificate store on the client computer when requested by the TM1 client.

Default value: F

ClientExportSSLSvrKeyID

Specifies the identity key used by an IBM Cognos TM1 client to export the certificate authority certificate, which was originally used to issue the TM1 server's certificate, from the Microsoft Windows certificate store.

Parameter type: optional (required for SSL), static

ClientMessagePortNumber

Identifies a secondary port used to accept client messages concerning the progress and ultimate cancellation of a lengthy operation without tying up thread reserves.

Parameter type: optional, static for changes, dynamically set

If no port number is specified in the configuration file, the port number is dynamically chosen and set at server startup. However, it cannot be changed while the server is running.

This additional port ensures that other server requests can continue to process while waiting for a cancellation from the user.

By default, this port number is automatically and dynamically assigned when the IBM TM1 Server starts. You do not have to set ClientMessagePortNumber to a specific number unless firewalls or other network issues require the listener port to be a well-known number.

⚠️ **CAUTION:** If you choose to set a specific value for the ClientMessagePortNumber parameter, instead of having it dynamically assigned, be sure to assign unique port numbers for all the TM1 Server and client message ports you are using. If you have two servers running on the same machine using the same port number, the message activity may cause a system conflict or hang.

See also, "PortNumber" on page 94 and "ProgressMessage" on page 95.

ClientPingCAMPassport

Indicates the interval, in seconds, that a client should ping the Cognos Authentication Management server to keep their passport alive.

Parameter type: optional, dynamic

If an error occurs or the passport expires the user will be disconnected from the IBM TM1 Server.

Default value: 900

ClientPropertiesSyncInterval

Specifies the frequency (in seconds) at which client properties are updated in the `}ClientProperties` control cube. Set to 1800 seconds to update cube every 30 minutes.

Frequent updating can cause unnecessary consumption of CPU time and may cause users from connecting/disconnecting until operation completes.

Parameter type: optional, dynamic

ClientVersionMaximum

Specifies the maximum client version that can connect to the IBM TM1 Server.

Parameter type: optional, dynamic

The ClientVersionMaximum parameter value is expressed as a version string using the following format:

m.n.tffhh

m = major release number,

n = minor release number

t = maintenance release number

ff = fix pack number

hh = hot fix number

Using this format, setting `ClientVersionMaximum = 9.4.10305` specifies that the maximum client version that can connect to the server is 9.4.1.

If your Tm1s.cfg file does not include a ClientVersionPrecision parameter value, only the major release number, minor release number, and maintenance release number are used to enforce compatability between client and server. Using the above example,

If ClientVersionMaximum is not explicitly set, the default value is equal to the currently installed server version.

Valid parameter values fall within the range $x00$ up to the currently installed server version, where x is the major release number of the currently installed TM1 Server. For example, valid parameter values for TM1 Server 9.0 SP3 fall within the range 900 - 903.

You cannot set ClientVersionMaximum to a value greater than the currently installed server version. You cannot connect newer client versions to older server versions.

ClientVersionMinimum

Specifies the minimum client version that can connect to the IBM TM1 Server.

Parameter type: optional, dynamic

The ClientVersionMinimum parameter value is expressed as a version string using the following format:

m.n.tffhh

m = major release number,

n = minor release number

t = maintenance release number

ff = fix pack number

hh = hot fix number

Using this format, setting `ClientVersionMinimum = 9.4.10305` specifies that the minimum client version that can connect to the server is 9.4.1.

If your Tm1s.cfg file does not include a ClientVersionPrecision parameter value, only the major release number, minor release number, and maintenance release number are used to enforce compatability between client and server.

If the ClientVersionMinimum parameter is not explicitly set, the default value is 8.4.00000, which corresponds to version 8.4.

You should not set ClientVersionMinimum to a value lower than the major release number of the currently installed TM1 Server. There is no upper limit for ClientVersionMinimum. However, if ClientVersionMinimum is larger than ClientVersionMaximum, only clients with a version number equal to ClientVersionMaximum can connect to the server.

ClientVersionPrecision

This parameter lets you more precisely identify the minimum and maximum versions of clients that can connect to the IBM TM1 Server.

Parameter type: optional, dynamic

The ClientVersionMinimum and ClientVersionMaximum parameter values are expressed as a version string using the following format:

m.n.tffhh

m = major release number,

n = minor release number

t = maintenance release number

ff = fix pack number

hh = hot fix number

Using this format, the version string 9.4.10305 indicates major release 9, minor release 4, maintenance release 1, fix pack 3, and hot fix 5.

If ClientVersionPrecision is not set in Tm1s.cfg or if it is set to 0, only the major release number, minor release number, and maintenance release number are used to enforce compatability between client and server. In this case, any client from major release 9, minor release 4, maintenance release 1 and more recent can connect to the server.

You can enforce more precise server and client version compatability by adding ClientVersionPrecision to the Tm1s.cfg file and setting the parameter to one of the following values.

- 1 - Indicates that the fix pack number will be enforced, but not the hot fix number.
- 2 - Indicates that both the fix pack number and hot fix number will be enforced.

Examples

If ClientVersionMinumum = 9.4.10305 and ClientVersionPrecision = 1, only clients from major release 9, minor release 4, maintenance pack 1, fix pack 3 or later can connect to the server. In this case, the hot fix number is not enforced when determining server/client compatability.

If ClientVersionMinumum = 9.4.10305 and ClientVersionPrecision = 2, only clients from major release 9, minor release 4, maintenance pack 1, fix pack 3, hot fix 5 or later can connect to the server. In this case, both the fix pack and hot fix numbers are enforced when determining server/client compatability.

CognosMDX.AggregateByAncestorRef

When possible, replaces aggregation over a member set with a reference to an ancestor, if the aggregated member set comprises a complete set of descendants and all members have the weight 1.

For example, the aggregation `aggregate(children(<Member>))` might be replaced with a reference to <Member>.

Parameter type: optional, static

This parameter is applicable only when using TM1 with IBM Cognos Analytics.

To enable **CognosMDX.AggregateByAncestorRef**, add the following line to the `tm1s.cfg` file:

```
CognosMDX.AggregateByAncestorRef=true
```

Default value: false

CognosMDX.CellCacheEnable

Allows the IBM Cognos MDX engine to modify TM1 consolidation and calculation cell cache strategies.

Parameter type: optional, static

This parameter is applicable only when using TM1 with Cognos Analytics.

Default value: true

CognosMDX.PrefilterWithPXJ

Expands the data source provider cross join approach to nested filtered sets.

Parameter type: optional, static

This parameter is applicable only when using TM1 with IBM Cognos Analytics.

This parameter is active only in the following cases: ·

- CognosMDX.UseProviderCrossJoinThreshold has a value greater than 0 in the `tm1s.cfg` file
- **UseProviderCrossJoinThreshold** has a value greater than 0 in the Cognos Analytics `qfs_config.xml` configuration file.

To enable **CognosMDX.PrefilterWithPXJ**, add the following line to the `tm1s.cfg` file:

```
CognosMDX.PrefilterWithPXJ=true
```

Default value: false

CognosMDX.SimpleCellsUseOPTSDK

Applies IBM Cognos MDX engine consolidation and calculation cell cache strategies to all cells in query results.

Parameter type: optional, static

This parameter is applicable only when using TM1 with Cognos Analytics.

When CognosMDX.SimpleCellsUseOPTSDK is not enabled, consolidation and calculation cell cache strategies are applied only to query result cells associated with calculated members.

Default value: true

CognosMDX.UseProviderCrossJoinThreshold

Applies the data source provider cross join strategy, even if it is not explicitly enabled in IBM Cognos Analytics.

Parameter type: optional, static

This parameter is applicable only when using TM1 with Cognos Analytics.

When you enable **CognosMDX.UseProviderCrossJoinThreshold**, this has the same effect as enabling the **UseProviderCrossJoinThreshold** parameter in the `qfs_config.xml` file of Cognos Analytics.

UseProviderCrossJoinThreshold controls whether combinations of members on an edge, which have no measure values, are retrieved from the TM1 server. **UseProviderCrossJoinThreshold** is enabled when it has a value greater than 0.

Note: If **UseProviderCrossJoinThreshold** is enabled in the Cognos Analytics `qfs_config.xml`, it takes precedence over the **CognosMDX.UseProviderCrossJoinThreshold** parameter in the `tm1s.cfg` file.

To enable **CognosMDX.UseProviderCrossJoinThreshold**, add it to the `tm1s.cfg` file and specify a value greater than 0, for example:

```
CognosMDX.UseProviderCrossJoinThreshold=1000
```

Default value: 0

CognosTM1InterfacePath

Specifies the location of the IBM Cognos Analytics server to use when importing data from a Cognos Package to Cognos TM1 using the Cognos TM1 Package Connector.

See the *TM1 TurboIntegrator* guide for more information.

Parameter type: optional except when using the Cognos TM1 Package Connector, static

CreateNewCAMClients

The CreateNewCAMClients server configuration parameter determines how the TM1 server handles an attempt to log on to the server with CAM credentials in the absence of a corresponding TM1 client.

Parameter type: optional, dynamic

When `CreateNewCAMClients=T` and a logon is attempted with a valid set of CAM credentials, but a corresponding TM1 client does not exist, the TM1 client is created during the logon. This is the default behavior when CreateNewCAMClients is not set in the `Tm1s.cfg` file.

When `CreateNewCAMClients=F` and a logon is attempted with a valid set of CAM credentials, but a corresponding TM1 client does not exist, the TM1 client is *not* created and the logon is rejected.

Through the C API, the error code is SystemServerClientNotFound. Through the HTTP endpoint, a 401 Unauthorized error is returned, with authentication information dependent on server configuration settings. Additionally, when the logon is rejected a log message is printed to the CAMSecurity.ClientCreation logger at the WARN level, if this level of logging is enabled. The log message includes the text "CAM Client not found, and not created due to CreateNewCAMClients config setting."

DataBaseDirectory

Specifies the data directory from which the server loads cubes, dimensions, and other objects.

You can list multiple data directories by separating them with semicolons.

Parameter type: required, static

DefaultMeasuresDimension

Identifies if a measures dimension is created. IBM TM1 Server does not require that a measures dimension be defined for a cube. You can optionally define a measures dimension by modifying the cube properties.

For more information, see the topic, "`}CubeProperties`", in *TM1 Operations*.

Parameter type: optional but some OLAP applications may require this parameter (see description below for details),static

Some OLAP applications do require that a measures dimension be present in all cubes, and may fail if such a dimension is not present. To accommodate these applications, set `DefaultMeasureDimension=T` to instruct the TM1 Server to automatically define the last dimension in a cube as the measures dimension when a new cube is created on the TM1 Server.

If DefaultMeasureDimension is set to F or is omitted from Tm1s.cfg, a measures dimension is not defined for when a cube is created.

DisableMemoryCache

Disables the memory cache used by IBM Cognos TM1 memory manager.

Parameter type: optional, static

Enable this parameter only to debug memory leaks. When you enable this parameter, there might be a decrease in server performance.

For example, when `DisableMemoryCache=T` is set it disables the memory cache used by IBM Cognos TM1 memory manager. The default setting is `DisableMemoryCache=F`.

DisableSandboxing

Determines if users have the ability to use sandboxes across the server.

Parameter type: optional, dynamic

By default, this parameter is not present in the configuration file which enables the sandbox capability for all users.

```
DisableSandboxing=F
```

When sandboxing is turned on in this way, administrators can Deny or Grant the use of Personal Workspaces or multiple sandboxes on a per usergroup basis using Capability Assignments. For more details, see "Capability Assignments" in *TM1 Operations*.

To put all usergroups into Direct Writeback mode, add the following line to Tm1s.cfg:

```
DisableSandboxing=T
```

When `DisableSandboxing=T`, the Capability Assignments are ignored.

Important: Do not use `DisableSandboxing=T` in the TM1 Server configuration file for any TM1 Server that deploys and supports TM1 Applications. TM1 Servers that deploy and support TM1 Applications require that the sandbox feature is enabled in the TM1 Server configuration file.

Display_Info_DBType_R8

Display_Info_DBType_R8 instructs the IBM TM1 Server to store DISPLAY_INFO column data as DBTYPE_R8.

Parameter type: optional, static

Important: Contact customer support to determine if this parameter is applicable to your TM1 Server.

By default, TM1 Server stores the DISPLAY_INFO as DBTYPE_UI4. When the TM1 Server OLE DB provider processes a request from ADO 2.7 for the DISPLAY_INFO column data, the provider has to convert column data from DBTYPE_UI4 to a DBTYPE_R8. The TM1 Server OLE DB provider then returns the converted column data to the OLE DB client (ADO in this case).

ADO 2.7 expects IRowset::GetData to return an integer, and uses only the first 4 bytes of the converted column data. However, the returned data is an 8-byte real number, and as a result, all information in the last 4 bytes is lost. This causes ADO 2.7 to return zeroes for all the items of the DISPLAY_INFO column.

When you include the Display_Info_DBType_R8 parameter in the Tm1s.cfg file and set the parameter to T, the TM1 Server stores DISPLAY_INFO column data as DBTYPE_R8 with the relevant 4 bytes of information in the first 4 bytes. The Display_Info_DBType_R8 parameter ensures that the information is not lost when ADO converts the data back to an integer of 4 bytes. The parameter also ensures that ADO 2.7 returns the correct values for the properties of an axis rowset member. Additionally, the parameter ensures that any OLE DB client (such as ADO 2.6) requesting the DISPLAY_INFO property as a 4 byte value, gets the correct values.

DownTime

Specifies a time when the server will come down automatically.

Parameter type: optional, dynamic

The format of the DownTime parameter is *dd:hh:mm* where:

- *dd* is the number of days from today. (For example, 00 is today, and 01 is tomorrow.)
- *hhmm* is the time of day in 24-hour format.

For example, `DownTime = 01:03:30` specifies that you want to bring the server down on the following day at 3:30 in the morning.

The DownTime parameter is not available when you run the IBM TM1 Server as a Windows service.

When you use the DownTime parameter on a TM1 Server on UNIX, you must set the RunningInBackground parameter to T. If `RunningInBackground=F`, the server prompts for confirmation before shutting down and cannot shut down without manual confirmation from an administrator.

EnableNewHierarchyCreation

Specifies whether multiple hierarchy creation is enabled or disabled.

Parameter type: optional (required for multiple hierarchies), static

By default, the **EnableNewHierarchyCreation** parameter is set to F (false). If you are working with multiple hierarchies, change the parameter setting to T (true). *TM1 Reference* lists the TurboIntegrator functions to manage dimensions and equivalent functions to manage specific hierarchies within dimensions.

EnableSandboxDimension

Specifies whether the virtual sandbox dimension feature is enabled.

Parameter type: optional, dynamic

By default, the **EnableSandboxDimension** parameter is set to `False`.

A sandbox property (**IncludeInSandboxDimension**) was introduced to specify whether a sandbox is included in the virtual sandbox dimension. For older sandboxes, the value of the **IncludeInSandboxDimension** property is false. Including sandboxes in the virtual sandbox dimension allows users to compare multiple sandbox scenarios in a single view. For more information, see **IncludeInSandboxDimension** in the Sandbox entity in the *TM1 REST API* documentation on IBM Knowledge Center.

EnableTIDebugging

Specifies whether TurboIntegrator debugging capabilities are enabled or disabled.

Parameter type: optional, dynamic

By default, the **EnableTIDebugging** parameter is set to F (false).

If you want to use any of the TurboIntegrator process debugging capabilities of the TM1 REST API, you must change the parameter setting to T (true). Similarly, you must set the parameter to T if you want to use the TurboIntegrator Debugger utility, which is currently available in preview release on IBM developerWorks.

Important: Debugging TurboIntegrator processes can consume significant system resources. It is recommended that you set **EnableTIDebugging=T** only while debugging processes in a development environment and that the parameter not be enabled in a production environment.

EventLogging

Indicates whether the event logger is turned on.

Critical events are logged in the event log file. The file is expected to be consumed by third-party tools.

Parameter type: optional, dynamic

Default: T

If the `EventLogging` parameter is set to F, then the event log file is not written to.

To set the parameter to T, add the following line to Tm1s.cfg:

```
EventLogging=T
```

EventScanFrequency

Specifies the period to check the collection of threads, where 1 is the minimum number and 0 disables the scan.

Parameter type: optional, dynamic

Default: 1(s)

To disable event scanning, add the following line to Tm1s.cfg:

```
EventScanFrequency=0
```

EventThreshold.PooledMemoryInMB

Specifies the threshold for which a message is printed for the event that the server's pooled memory exceeds a certain value.

Parameter type: optional, dynamic

The memory footprint of every model is different. This parameter is set to 0 (disabled) by default and must be adjusted by the administrator of the TM1 server.

Default: 0

To enable the threshold, add the following line to Tm1s.cfg:

```
EventThreshold.PooledMemoryInMB=0
```

EventThreshold.ThreadBlockingNumber

Indicates that a warning is printed when a thread blocks at least the specified number of threads.

Parameter type: optional, dynamic

Default: 5

To set the number of threads, add the following line to Tm1s.cfg:

```
EventThreshold.ThreadBlockingNumber=5
```

EventThreshold.ThreadRunningTime

Indicates that a warning is printed when a thread has been running for the specified length of time.

Parameter type: optional, dynamic

Default: 600 (s)

To set the number of threads, add the following line to Tm1s.cfg:

```
EventThreshold.ThreadRunningTime=600
```

EventThreshold.ThreadWaitingTime

Indicates that a warning is printed when a thread has been blocked by another thread for the specified length of time.

Parameter type: optional, dynamic

Default: 20 (s)

To set the waiting time, add the following line to Tm1s.cfg:

```
EventThreshold.ThreadWaitingTime=20
```

ExcelWebPublishEnabled

Enables the publication of Microsoft Excel files to IBM Cognos TM1 Web, as well as the export of Microsoft Excel files from TM1 Web, when Microsoft Excel is not installed on the web server. Enable the ExcelWebPublishEnabled parameter when you have TM1 10.1 clients that connect to TM1 10.2.2 servers.

Parameter type: optional, dynamic

If `ExcelWebPublishEnabled=T`, Microsoft Excel files in Cognos TM1 Applications can be published to TM1 Web without using Microsoft Excel on the web server. Similarly, Websheets and Cube View can be exported from TM1 Web without using Microsoft Excel on the web server.

When Microsoft Excel is not available on the web server, Microsoft Excel files in TM1 Applications must be explicitly published to TM1 Web.

For details about the procedure required to publish Microsoft Excel files, see *TM1 Developer*.

For details about limitations exporting from TM1 Web without using Microsoft Excel on the web server, see *TM1 Perspectives, TM1 Architect, and TM1 Web*.

Restriction: You cannot publish Microsoft Excel 2007 .xlsx files to TM1 Web when Microsoft Excel is not available on the web server. These files must be saved in Microsoft Excel 2003 .xls format if you want to publish them to TM1 Web.

Default value: F

FileRetry.Count

Specifies the number of retry attempts.

Parameter type: optional, dynamic

By default, TM1 server will shutdown when transaction log updates fail. Specifying **FileRetry.FileSpec** defers the server shutdown while the server attempts to reestablish a connection. **FileRetry.Count** defines the number of retry attempts as an integer value. If the network failure persists after the specified number of retries, TM1 server will self-terminate.

Default value: 5

FileRetry.Delay

Specifies the time delay between retry attempts.

Parameter type: optional, dynamic

By default, TM1 server will shutdown when transaction log updates fail. Specifying **FileRetry.FileSpec** defers the server shutdown while the server attempts to reestablish a connection. **FileRetry.Delay** defines the delay (in milliseconds) between retry attempts. If the network failure persists after the specified number of retries, TM1 server will self-terminate.

Default value: 2000

FileRetry.FileSpec

Network issues can cause transaction log updates to fail, which might force a TM1 server shutdown. This configuration parameter specifies the directory paths of the affected log files.

Parameter type: optional, dynamic

By default, TM1 server shuts down when transaction log updates fail. Specifying **FileRetry.FileSpec** defers the server shutdown while the server attempts to reestablish a connection.

The number of retry attempts and delay between attempts is determined by **FileRetry.Count** and **FileRetry.Delay**, respectively. If the network failure persists after the specified number of retries, TM1 server will self-terminate.

As of IBM Planning Analytics Local version 2.0.3, if this setting is not specified in the tms1.cfg file (default), the retry logic is applied to all files in the logs directory only.

To turn off the retry logic, specify one of the following options in the tms1.cfg file:

- `FileRetry.FileSpec=""` (explicitly setting the value to the empty value)
- `FileRetry.Count=0`

Use a semi-colon delimiter to specify multiple paths. For example,

1. FileRetry.FileSpec=c:\production\model\Logs

   On a write failure, the retry logic is applied to all files in the "c:\production\model\Logs" directory and below.

2. FileRetry.FileSpec=c:\production\model\Logs;\\network.ibm.com\production\Logs

   On a write failure, the retry logic is applied to all files in the "c:\production\model\Logs" directory and the network share of \\network.ibm.com\production\Logs and below.

Note: Messages are written to the server log at the WARN level when this logic is enabled.

- "Error writing to <FILENAME>, retry in progress." is written when a write operation fails and a retry attempt is in progress.
- "Error writing to <FILENAME>, retry attempt failed." is written when the retry attempt fails.

FIPSOperationMode

Controls the level of support for Federal Information Processing Standards (FIPS).

Parameter type: optional, static

Allowed values:

- 1: FIPS 140-2 level 1 approved ciphers and operation
- 2: FIPS 140-2 level 1 approved ciphers
- 3: Disabled

Default value: 2

To change the level of support for FIPS to level 1 approved ciphers and operations, for example, add the following line to the tm1s.cfg file:

```
FIPSOperationMode=1
```

ForceReevaluationOfFeedersForFedCellsOnDataChange

When this parameter is set, a feeder statement is forced to be re-evaluated when data changes.

Parameter type: optional, static

When the IBM Cognos TM1 server computes feeders, the process can be a "chain" of feeders, where cell A feeds cell B, and there is a feeder rule for cell B, so that rule runs and feeds cell C, etc. Feeders for numeric cells are evaluated only when a cell goes from empty to some non-zero value since any non-zero value in the cell would already have set any feeders.

There is no need to re-evaluate the feeders when a cell changes from one non-zero value to another.

Normally, when evaluating feeders, if a feeder rule is evaluated and the target cell is already fed, the feeding process stops.

Feeder rules are not processed any further since the presence of the feeder in the target cell indicates that the feeder rules for the target cell have already been run, and there is no need to run them again.

Consider the following feeder rules:

```
['A']=>['B'];
```

The feeder rule for cell B depends on some cube data value:

```
[B]=>DB(cube-name,!dim1,DB(cube2-name,…),!dim2);['C']=>['D'];['X']=>['B'];
```

When the feeder rule for B is initially evaluated, the `DB(cube2-name,…)` is evaluated to produce an element name, such as C. Therefore B feeds C and then C feeds D. When that cell X goes from zero to non-zero, this change also feeds B. But B is already fed, so the feeding process stops, and the feeder rule for B never evaluates, so any "change" in the output of the rule, which may come about because of an underlying data change targeted by the `DB(…)` statement will not be evaluated. If the parameter `ForceReevaluationOfFeedersForFedCellsOnDataChange` is set, then the presence of a feeder in cell B will not terminate feeder processing. Rather, the feeder rule for B will run. Because the feeder rule for B is data dependent, the target for the feeder may be the former C, or may be some other cell, and that cell will be fed. Note that setting this parameter will force more feeder evaluations, which may have a performance impact.

To turn on this parameter set `ForceReevaluationOfFeedersForFedCellsOnDataChange=T`.

HTTPPortNumber

Sets the port number on which the TM1 Server listens for incoming HTTP(S) requests.

Parameter type: required, static

The IBM Planning Analytics TM1 Server services the REST API using this HTTP(S) channel. The server accepts either standard HTTP or SSL secured HTTPS connections depending on the UseSSL parameter (see "UseSSL" on page 108). If UseSSL is set to T, switching the use of SSL on, then the server will accept only HTTPS connections. If UseSSL is set to F, the server will accept unsecured, HTTP connections.

If **HTTPPortNumber** is not defined in your tm1s.cfg file, then port number "5001" will be assigned automatically.

Note: Port numbers must be unique across *all* services running on a computer, not just across TM1 servers and not just across the HTTP ports of TM1 servers.

HTTPSessionTimeoutMinutes

Sets the timeout value for authentication sessions for the TM1 REST API.

Parameter type: optional, dynamic

When you use the TM1 REST API, your application needs to authenticate with the TM1 Server. This parameter sets the timeout, in minutes, for this authentication. If a session times out, requests made with the old session ID return `401 Unauthorized`.

The default value is 20.

IdleConnectionTimeOutSeconds

Specifies a timeout limit for idle client connections, in seconds.

Parameter type: optional, <u>dynamic</u>

For example, if you include the following line in Tm1s.cfg, the server disconnects idle client connections after 900 seconds.

```
IdleConnectionTimeOutSeconds=900
```

IndexStoreDirectory

Added in v2.0.5 Designates a folder to store index files, including bookmark files.

Parameter type: optional, <u>static</u>

By default, this parameter is undefined and bookmark (*.bm) files will appear in the same folder as its corresponding main file.

IntegratedSecurityMode

This parameter sets the user authentication mode to be used by the IBM TM1 Server.

Parameter type: optional, <u>dynamic</u>

Although the parameter name focuses on Integrated Security Mode, the security modes are used to set other kinds of security.

Note: If you change the security mode without restarting the TM1 Server, the change applies only to new client connections. If you want to ensure that all clients are authenticated with the new security mode, all clients must be logged off by the administrator.

Use the following format to set this parameter:

IntegratedSecurityMode=x

where x can be a value for one of the following security modes.

Security Mode	Description
1	The server uses secure mode (standard TM1 security). With this authentication, the TM1 Server checks the user name and password against the user names and passwords in the TM1 database.
2	This mode allows you to switch back and forth between integrated login and native TM1 security.
3	The server uses Integrated Login. Integrated Login uses Microsoft Windows network authentication to control access to TM1 data. If you use this security mode, you must also set the "SecurityPackageName" on page 98 parameter.

Security Mode	Description
4	The server uses IBM Cognos Analytics security authentication.
	Considerations when using this mode:
	In TM1 Server, Cognos Analytics users can belong only to Cognos Analytics groups and any of these predefined TM1 administrator groups (ADMIN, DataAdmin, SecurityAdmin, and OperationsAdmin). Membership in TM1 user (non-administrator) groups is not supported for Cognos Analytics users when they log in to TM1 Server.
	You can not use TM1 Server to permanently assign a Cognos Analytics user to another Cognos Analytics group. Any user assignment you make in TM1 Server to a Cognos Analytics group is not saved back to Cognos Analytics. When a Cognos Analytics user logs in to TM1 Server, the group assignments in Cognos Analytics override any Cognos Analytics group assignments made in TM1 Server.
5	The server uses Cognos Analytics security authentication and supports user groups from both TM1 Server and Cognos Analytics.
	Use security mode 5 when you are running IBM Cognos TM1 Applications with Cognos Analytics security.
	Considerations when using this mode:
	• In TM1 Server, Cognos Analytics users can belong to both Cognos Analytics and TM1 groups.
	• You can not use TM1 Server to permanently assign a Cognos Analytics user to another Cognos Analytics group. Any user assignment you make in TM1 Server to a Cognos Analytics group is not saved back to Cognos Analytics. When a Cognos Analytics user logs in to TM1 Server, the group assignments in Cognos Analytics override any Cognos Analytics group assignments made in TM1 Server.
	• If IntegratedSecurityMode=5 is used for the TM1 Server and IBM Cognos TM1 Applications, it is not possible to assign rights to native TM1 groups within the Manage rights dialog. Only Cognos Groups, imported into the TM1 Server, are available.

IPAddressV4

This parameter lets you specify the IPv4 address for an individual IBM TM1 Server.

Parameter type: optional, static

A physical server/host can have one internal IP address for clients within a firewall and a different external IP address for clients outside the firewall. By default, all TM1 client requests are routed through the external (public) adapter, which would require updates to firewall profiles. By assigning the internal IP address of TM1 Server to the **IPAddressV4** parameter, traffic is routed through the private adapter and firewall profiles do not require updates.

For example:

```
IPAddressV4="10.109.241.121"
```

Note: This parameter replaces the old **IPAddress** parameters, which is now obsolete.

IPAddressV6

This parameter lets you specify the IPv6 address for an individual IBM TM1 Server.

Parameter type: optional, static

A physical server/host can have one internal IP address for clients within a firewall and a different external IP address for clients outside the firewall. By default, all TM1 client requests are routed through the external (public) adapter, which would require updates to firewall profiles. By assigning the internal IP address of TM1 Server to the **IPAddressV6** parameter, traffic is routed through the private adapter and firewall profiles do not require updates.

For example:

```
IPAddressV6="0ff1:aa00:4125:2:a05:f7b1:61c2:a341"
```

Note: This parameter replaces the old **IPAddress** parameters, which is now obsolete.

IPVersion

This parameter indicates the Internet protocol used by the IBM TM1 Server to identify IP addresses on the network.

For example, to specify that your network uses the IPV6 protocol, add the parameter `IPVersion=ipv6` to the `tm1s.cfg` file.

Parameter type: optional, static

Valid settings are:

- `ipv4`

  Default setting. Used for IPv4 networks.
- `dual`

  Used to transition from IPv4 to IPv6. Both protocols are supported.
- `ipv6`

  Used for IPv6 networks.

Configuration notes

If you set this parameter to `ipv6` or `dual`, use the Cognos Configuration tool to change the **TM1 Admin Server IP support** option to reflect the change.

To allow clients to recognize this change, add and set the **TM1_IPVersion** environment variable in the operating system to `ipv6` or `dual`.

Setting this parameter to dual or IPV6 without having the appropriate network running can result in performance degradation.

Note: In some cases, depending on your network environment and DNS configuration, you may need to also add the IPv6 address to the `/etc/hosts` operating system file on UNIX and Microsoft Windows to successfully run the Cognos TM1 Admin Server and Cognos TM1 Server in IPv6 mode.

JavaClassPath

Use this parameter to make third-party Java™ libraries available to the IBM Cognos TM1 Server.

Parameter type: optional, static

For example, to allow a Java extension to use classes inside a file called db2cc4.jar file (a Db2® JDBC driver), use the following:

```
JavaClassPath=C:\Development\Java\DB2JDBC\db2jcc4.jar
```

You can specify multiple references by separating them with semicolons.

JavaJVMArgs

Specifies a list of arguments to pass to the Java Virtual Machine (JVM). Arguments are separated by a space and the dash character. For example, `JavaJVMArgs=-argument1=xxx -argument2=yyy`.

Parameter type: optional, static

If you want to debug a process, you might specify these arguments:

```
JavaJVMArgs=-Xrunjdwp:transport=dt_socket -server=y -suspend=n -address=1044
```

The arguments you can use depend on the specific JVM you are using.

JavaJVMPath

This parameter sets the path to the Java Virtual Machine .dll file (jvm.dll), which is required to run Java from IBM Cognos TM1 TurboIntegrator.

Parameter type: optional, static

By default, this parameter is not present in the tm1s.cfg file.

To enable Java integration with TurboIntegrator, add the following line to your tm1s.cfg file:

`JavaJVMPath=<full_path_to_jvm.dll>`

keyfile

Specifies the file path to the key database file. The key database file contains the server certificate and trusted certificate authorities. The server certificate is used by the TM1 server and the TM1 Admin server.

Parameter type: optional, static

The key database file that is provided with TM1 is `[installation_location]/ssl/ibmtm1.kdb`

To specify a different key database file, add the keyfile parameter to the `tm1s.cfg` file and specify the relative or absolute path to the `.kdb` file.

For example:

```
keyfile=./ssl/filename.kdb
```

keylabel

Specifies the label of the server certificate in the key database file.

Parameter type: optional, static

For example:

```
keylabel=TM1_Certificate
```

keystashfile

Specifies the file path to the key database password file. The key database password file is the key store that contains the password to the key database file.

Parameter type: optional, static

The key database password file that is provided with TM1 is `[installation_location]/ssl/ibmtm1.sth`

To specify a different key database password file, add the keystashfile parameter to the `tm1s.cfg` file and specify the relative or absolute path to the `.sth` file.

For example:

```
keystashfile=./ssl/filename.sth
```

Language

Sets the language used for the IBM TM1 Server. This parameter applies to messages generated by the server and is also used in the user interface of the server dialog box when you run the server as an application instead of a Windows service.

Parameter type: optional, static

Valid values currently are:

Language	Code
Brazilian Portuguese	bra
Croatian	hrv
Czech	csy
Chinese (Simplified)	sch
Chinese (Traditional)	tch
Danish	dan
Dutch	nld
German	deu
Finnish	fin
French	fra
Hungarian	hun
Italian	ita
Japanese	jpn
Kazakh	kaz
Korean	kor
Norwegian	nor
Polish	pol
Romanian	rom
Russian	rus
Spanish	esp
Slovenian	slv
Swedish	sve
Thai	tha
Turkish	trk

LDAPHost

Specifies the domain name or dotted string representation of the IP address of the LDAP server host.

Parameter type: optional, static

If you do not enter a value for LDAPHost, TM1 Server uses the default value, localhost.

LDAPPasswordFile

Defines the password file used when LDAPUseServerAccount is not used. This is the full path of the .dat file that contains the encrypted password for the IBM TM1 Server Admin Server's private key.

Parameter type: optional unless "LDAPUseServerAccount" on page 79=F, static

This parameter uses the full path to a .dat file.

LDAPPasswordKeyFile

Defines the password key used when LDAPUseServerAccount is not used.

Parameter type: optional unless "LDAPUseServerAccount" on page 79=F, static

This parameter uses the full path of the .dat file that contains the key used to encrypt and decrypt the password for the private key.

LDAPPort

Specifies the port IBM TM1 Server uses to bind to an LDAP server.

Parameter type: optional, static

Specify a secure (SSL) port, for example, 636.

Default value: 389 (an unsecured port)

LDAPSearchBase

Specifies the node in the LDAP tree where TM1 Server begins searching for valid users.

Parameter type: optional, static

A base distinguished name (DN) in the LDAP directory. For example:

```
ou=people,o=company.com
```

For example, if the distinguished names are of the form:

```
uid-bjensen, ou-people, o=company.com
```

Then the search base would be:

```
ou-people, o=company.com
```

LDAPSearchField

The name of the LDAP attribute that is expected to contain the name of the TM1 user being validated.

Parameter type: optional, static

If you do not enter an LDAPSearchField value, the default value is cn, which is also the default value for Microsoft Active Directory.

LDAPSkipSSLCertVerification

Skips the certificate trust verification step for the SSL certificate used to authenticate to an LDAP server. This parameter is applicable only when LDAPVerifyServerSSLCert=T.

Parameter type: optional, static

If trust verification does not work, you can skip the trust verification step by specifying LDAPSkipSSLCertVerification=T. In this case, TM1 does not verify the server certificate at all but simply accepts it.

Note: Before working with this parameter, you should be familiar with SSL and LDAP.

Default value: F

LDAPSkipSSLCRLVerification

Skips CRL checking for the SSL certificate used to authenticate to an LDAP server. This parameter is applicable only when LDAPVerifyServerSSLCert=T.

Parameter type: optional, static

This parameter is not required if LDAPVerifyServerSSLCert=F. The Microsoft Windows API can tolerate an empty or non-existent CRL certificate.

Note: Before working with this parameter, you should be familiar with SSL and LDAP.

Default value: F

LDAPUseServerAccount

Determines if a password is required to connect to the server when using LDAP authentication.

Parameter type: optional, static

- To connect directly to the LDAP server using integrated authentication, set this parameter to T. Set this parameter to T whenever the IBM TM1 Server and LDAP server exist on the same domain.
- To use a password before connecting, set this parameter to F. When LDAPUseServerAccount is set to F, you must also set the "LDAPPasswordFile" on page 78 and "LDAPPasswordKeyFile" on page 78 to successfully connect to the LDAP server using SSL.

LDAPVerifyCertServerName

Specifies a server to use during the SSL certificate verification process for LDAP server authentication. This parameter is applicable only when LDAPVerifyServerSSLCert=T.

Parameter type: optional, static

Note: Before working with this parameter, you should be familiar with SSL and LDAP.

Use this parameter to specify the servers TM1 should use to verify the received SSL certificate.

All of the server names you want to use for certificate verification must be listed in separate LDAPVerifyCertServerName entries. The entries must exactly match the name (subject) of the certificate presented to TM1 in the SSL handshake by the server on the other end.

Specify LDAPVerifyCertServerName in the tm1s.cfg file of each TM1 server that is using LDAP.

```
LDAPVerifyCertServerName=<server_cert_subject>
```

Replace `server_cert_subject` with a server name or IP addresses. Create an entry for each server you want to use For example:

```
LDAPVerifyCertServerName=abc99.mydomain.com
LDAPVerifyCertServerName=xyz99.mydomain.com
```

Default value: F

LDAPVerifyServerSSLCert

Delegates the verification of the SSL certificate to TM1. This parameter is useful, for example, when you are using LDAP with a proxy server.

Parameter type: optional, static

Note: Before working with this parameter, you should be familiar with SSL and LDAP.

Typically, TM1 leverages the Microsoft Windows API to verify SSL certificates. For this process to succeed, the certificate name and the LDAP server host name must match. If you are using a proxy, however, these names may not match, causing the verification to fail. In this case, you can set `LDAPVerifyServerSSLCert=T` to have TM1 perform the certificate verification.

When `LDAPVerifyServerSSLCert=T`, TM1 performs the two steps of verification (verifying the trust relationship to the certificate and checking the CRL) like the Windows API would have done, but with a slightly different approach.

1. Instead of verifying the received certificate against the configured host name, TM1 looks at the list of server names specified by LDAPVerifyCertServerName.
2. If the certificate name matches one of the servers specified by LDAPVerifyCertServerName, TM1 calls the Microsoft Windows API and requests it to verify this single certificate only.

   Note: The correct trusted root certificate authority (CA) must already have been imported to the Microsoft Windows Certificate Store.

   You can skip the trust verification step by specifying LDAPSkipSSLCertVerification=T. In this case, TM1 does not verify the server certificate at all but simply accepts it.
3. Once the trust verification is confirmed (or skipped), TM1 calls the Microsoft Windows API to check the CRL.

   Note: The CRL certificate for the trusted root must already have been imported to the Microsoft Windows Certificate Store.

   If the CRL certificate does not exist in the Microsoft Windows Certificate Store, the process will fail. You can skip the CRL step by specifying LDAPSkipSSLCRLVerification=T.
4. If all the previous steps finish successfully, the SSL handshake is complete. TM1 now attempts to authenticate to the LDAP server.

LDAPWellKnownUserName

Specifies the user name used by the IBM TM1 Server to log in to LDAP and look up the name submitted by the user.

Parameter type: optional unless "LDAPUseServerAccount" on page 79=F,, static

The value of this parameter can be any LDAP distinguished name.

For example:

```
uid=bjensen,ou=people,o=company.com
```

LoadPrivateSubsetsOnStartup

This configuration parameter determines if private subsets are loaded when the TM1 server starts.

Parameter type: optional, static

Lock contention issues can occur when private subsets are loaded on-demand (when a user requests the subset). You can avoid lock contention by loading all private subsets from all users into memory upon server startup, by adding

```
LoadPrivateSubsetsOnStartup=T
```

to the `Tm1s.cfg` file for your server.

If `LoadPrivateSubsetsOnStartup=F`, or is not present in `Tm1s.cfg`, private subsets are loaded on-demand.

LoadPublicViewsAndSubsetsAtStartup

Added in v2.0.8 This configuration parameter enables whether public subsets and views are loaded when the TM1 Server starts and keeps them loaded to avoid lock contention during the first use.

Parameter type: optional, static

Default: LoadPublicViewsAndSubsetsAtStartup=T

If `LoadPublicViewsAndSubsetsAtStartup=F`, public views subsets are loaded on-demand for your TM1 Server.

Lock contention issues can occur when public views and subsets are loaded on-demand (when a user requests the subset). You can avoid lock contention on server startup by loading all public views and subsets from all users into memory and keeping them loaded to avoid lock contention during the first use. Add the following setting to the `tm1s.cfg` file for your TM1 Server.

```
LoadPublicViewsAndSubsetsAtStartup=T
```

LockPagesInMemory

Deprecated as of IBM Planning Analytics version 2.0.9.7 When this parameter is enabled, memory pages used by the IBM TM1 Server process are held in memory (locked) and do not page out to disk under any circumstances. This retains the pages in memory over an idle period, making access to TM1 data faster after the idle period.

This parameter is applicable only to TM1® Servers running on a Microsoft® Windows 64-bit operating system.

Parameter type: optional, static

If a TM1 Server running on a Windows 64-bit operating system is idle for a long period of time, physical memory taken up by the TM1 Server will page out to disk. This is a function of the Windows 64-bit operating system and not TM1 Server. This can cause performance degradation in large TM1 Server databases when trying to access data after an idle period.

To maximize performance when running a largeTM1 Server database on 64-bit Windows, set `LockPagesInMemory=T` in the Tm1s.cfg file. If you change this parameter value, restart the TM1 Server to apply the new value.

Note: This parameter has no effect on performance for an actively running TM1 system, in which TM1 data is regularly accessed.

When this parameter is enabled, Windows still trims pages from the TM1 Server process space, but does not page them to disk. This benefits TM1 Server performance because objects are no longer placed in virtual memory, but instead remain in physical RAM.

When LockPagesInMemory is not present in Tm1s.cfg, or if the parameter is set to F, the following behavior is expected:

When a TM1 Server running on a Windows 64-bit operating system is idle for a period of time, physical memory taken up by the TM1 Server is paged out to disk. This paging to disk happens even if there are no other processes contending for the memory pages. Essentially, Windows leaves the memory pages vacant and available. This is a function of the Windows 64-bit operating system and not TM1 Server.

This background paging by the Windows operating system can cause initial performance degradation in large TM1 databases when trying to access TM1 data after an idle period. For example, when the TM1 system has been inactive overnight the first access in the morning will take longer, as the required memory pages containing TM1 data are read from disk back into memory. Also, if the TM1 model is such that there are large cube data areas that are accessed infrequently, the memory holding that cube

information may page out to disk. When a request is made for that cube data the request will take longer, as these infrequently used pages must be read back into memory.

When `LockPagesInMemory=T` in Tm1s.cfg, the memory pages containing TM1 data are locked into memory and are not available for use at any time by any other process. This can make the system overall perform poorly if there are other tasks that need to run on the TM1 machine. For example, if the machine has 48 GB of physical memory, and the TM1 server takes 38 GB to fully load, then there are only 10 GB of physical memory to run any and all other processes, including system processes. These other processes may perform poorly because they may force extensive paging activity as the system tries to run them all in what would then essentially be a 10 GB machine. If a second TM1 server is started with the same `LockPagesInMemory=T` configuration setting, and that second TM1 instance would normally take 12 GB to load, the load will fail since that TM1 server can not lock 12 GB of memory, as there is only 10 GB available.

LoggingDirectory

Specifies the directory to which the server saves its log files.

If you do not supply this parameter, the log files are saved to the first data directory specified by the DataBaseDirectory parameter.

Parameter type: optional, static.

Note: The value of parameter LoggingDirectory must be encapsulated by quotes if it uses spaces, for example `LoggingDirectory=C:/Data Files/Logfiles`. The IBM TM1 Server startup will fail if quotes are not used in that case. Note also that other parameters, such as DataBaseDirectory, do not necessarily require quotes when a value contains spaces.

LogReleaseLineCount

Sets the number of lines that a search of the Transaction Log will accumulate in a locked state before releasing temporarily so that other Transaction Log activity can proceed.

Parameter type: optional, dynamic

Default value: 5000 lines

MagnitudeDifferenceToBeZero

Sets the order of magnitude of the numerator relative to the denominator, above which the denominator equals zero when using a safe division operator.

Parameter type: optional, static

In rules and TurboIntegrator, there is a safe division operator (the backslash). With this, if you try to divide by zero, the result is zero, not undefined. If the denominator to the division is a calculated quantity, the result can be very close to zero, but not exactly zero, for example, .0000000000000004. By setting the **MagnitudeDifferenceToBeZero** parameter, you can specify how close a number can be to zero, relative to the magnitude of the numerator, to be considered as zero for the safe division operator.

Consider this example:

- In the file Tm1s.cfg, set MagnitudeDifferenceToBeZero=14
- The operation is A \ B

  Note: Backslash (\) is the safe division operator in TurboIntegrator.
- A = 1000 B = 1.5e-15
- B is 18 orders of magnitude less than A
- 18 > 14, therefore the save division operator returns B=0

MaskUserNameInServerTools

Determines whether usernames in server administration tools are masked until a user is explicitly verified as having administrator access.

Parameter type: optional, static

When MaskUserNameInServerTools is set to TRUE, usernames are masked in server administration tools until the user who is working in the administration tool is explicitly verified as an administrator. For example, when MaskUserNameInServerTools is set to TRUE, usernames are masked in TM1Top.

When MaskUserNameInServerTools is set to FALSE, usernames are displayed in server administration tools to all users regardless of administrator status.

Default value: true

MaximumCubeLoadThreads

Specifies whether the cube load and feeder calculation phases of server loading are multi-threaded, so multiple processor cores can be used in parallel.

This results in decreased server load times.

Parameter type: optional, static

To run in multi-threaded mode, you must set MaximumCubeLoadThreads to the number of processor cores on the Cognos TM1 server that you want to dedicate to cube loading and feeder processing.

Generally, the best performance is achieved when the parameter is set to a value equal to (*number of available processor cores*) - 1. For example, if the Cognos TM1 server is running on a computer with four processor cores, MaximumCubeLoadThreads must be set to 3. This ensures that one processor core is available to run other applications while the Cognos TM1 server is loading.

Note:

The maximum value for MaximumCubeLoadThreads is 32.

When MaximumCubeLoadThreads is set to 0, cube loading and feeder processing are not multi-threaded. This is the default behavior when MaximumCubeLoadThreads is not explicitly set in the Tm1s.cfg file.

Conditional feeders

When **MaximumCubeLoadThreads** is enabled, Cognos TM1 cannot manage the order in which feeders are calculated. There might be cases where processing order has an adverse effect on your application due to some order-of-evaluation dependencies in the multi-threaded environment.

If your Cognos TM1 model uses conditional feeders where the condition clause contains a fed value, you **must** disable the use of multiple threads at load time. Set MaximumCubeLoadThreads=0 or exclude the parameter from the Tm1s.cfg file.

MaximumLoginAttempts

Sets the maximum number of failed user login attempts permissible on the server.

If you do not include MaximumLoginAttempts in Tm1s.cfg, by default, the server allows three login attempts.

Parameter type: optional, dynamic

For example, if you add the line MaximumLoginAttempts=5 to Tm1s.cfg, the server enforces a limit of five failed login attempts per user. If a user does not successfully log in to the TM1 Server within the specified number of attempts, the server issues an error.

After a user has exceeded the specified maximum number of failed login attempts, the TM1 Server rejects any subsequent login attempts by the user.

The MaximumLoginAttempts parameter is enforced per server session. If a user exceeds the maximum number of attempts, he cannot log in to the current TM1 Server session, unless the administrator changes his password. However, after the TM1 Server recycles, the user can log in with his existing password.

MaximumMemoryForSubsetUndo

Sets the maximum amount of memory, in kilobytes, to be dedicated to storing the Undo/Redo stack for the Subset Editor.

For example, adding the line MaximumMemoryForSubsetUndo=20480 to the configuration file instructs the server to allot 20480 kilobytes (20 MB) of memory for the Undo/Redo stack.

Parameter type: optional, dynamic

Generally, larger subsets require greater amounts of memory to store a usable Undo/Redo stack. If you find that the TM1 Server is not storing a sufficient number of Undo/Redo steps for your subsets, increase the value of MaximumMemoryForSubsetUndo.

If this parameter is not explicitly set in the Tm1s.cfg file, the maximum amount of memory dedicated to the Undo/Redo feature of the Subset Editor is 10240 kilobytes (10 MB).

MaximumSynchAttempts

Sets the maximum number of times a synchronization process on a planet server will attempt to reconnect to a network before the process fails.

Parameter type: optional, static

You can use the MaximumSynchAttempts parameter to improve the stability of a synchronization process that is running over an unstable network connection such as a long distance wide area network (WAN) with high latency, poor bandwidth and poor transmission quality.

To specify the maximum number of times a synchronization process should attempt to make a network connection, add the following line to Tm1s.cfg for the planet server:

MaximumSynchAttempts=n

where n represents the number of network connection attempts that the synchronization process should make a before the process fails.

The default value is 1 which means the synchronization process will only attempt to connect once and will not attempt to reconnect if the connection is lost.

A value of 0 means unlimited network connection attempts.

You can configure this parameter to work with the SyncUnitSize parameter. For more information, see .

The following example shows how to use the MaximumSynchAttempts parameter with the SyncUnitSize parameter:

```
SyncUnitSize=2000
```

```
MaximumSynchAttempts=100
```

MaximumTILockObjects

A server configuration parameter that sets the maximum lock objects for a TurboIntegrator process. Used by the synchronized() TurboIntegrator function.

The server maintains a list of created TurboIntegrator lock objects. Every time the user calls the synchronized() function on a lock object, the server first checks to see if the lock object is already in the list. If not, the server creates a new lock object and inserts it into the list.

For more details, see the topic "Serializing TurboIntegrator processes using synchronized()" in *IBM Cognos TM1 TurboIntegrator*.

Even after all the TurboIntegrator processes that have referenced a lock object have exited, the lock object may not be removed from the list to free the memory immediately. This is because it is likely that sometime later, either the same process or some other process may call the synchronized() function on that same lock object.

The server configuration parameter `MaximumTILockObjects` in tm1s.cfg controls the growth of the list of created TurboIntegrator lock objects. When the number of lock objects in the list has reached MaximumTILockObjects, the server starts a cleanup operation. It removes some lock objects from the list if they are not used by any TurboIntegrator process at that moment.

If the MaximumTILockObjects parameter is not explicitly set in tm1s.cfg, a default value of 2000 is assumed.

Parameter type: optional, static

MaximumUserSandboxSize

Sets the maximum amount of RAM memory (in MB) to be allocated per user for personal workspaces or sandboxes.

If you do not set the MaximumUserSandboxSize parameter, the default maximum size is 500 MB on a 64-bit system.

Parameter type: optional, dynamic

To specify a maximum amount of memory allocation for personal workspaces or sandboxes, add the following line to Tm1s.cfg:

```
MaximumUserSandboxSize=n
```

where n represents the amount of memory in MB to be allocated.

MaximumViewSize

Sets the maximum amount of memory (in MB) to be allocated when a user accesses a view.

If you do not set the MaximumViewSize parameter, the default maximum view size is 500 MB on a 64-bit system.

Parameter type: optional, dynamic

To specify a maximum amount of memory allocation for views, add the following line to tm1s.cfg:

```
MaximumViewSize=n
```

where n represents the amount of memory in MB to be allocated.

See also "ApplyMaximumViewSizeToEntireTransaction" on page 59.

MDXSelectCalculatedMemberInputs

Changes the way in which calculated members in MDX expressions are handled when zero suppression is enabled.

Parameter type: required, dynamic

MDXSelectCalculatedMemberInputs addresses an issue with calculated members in an MDX expression when zero suppression is enabled. When zero suppression is enabled on a query axis, calculated members might be dropped from the query or might cause zero suppression to be turned off.

The issue arises because zero suppression is based on the actual data in a cube. Calculated members do not have an actual member in the cube—calculated members are derived from other members.

For example, suppose a cube has a calculated member, C, that is a sum of the members A and B.

```
     C (A+B)
A                  B
```

The members A and B are actual members in the cube, while C is derived. When you run a query with A, B, and C in the columns, {A,B,C}, you see A, B, and C in the columns and you see that C is the sum of A and B. When you turn on zero suppression, only non-null rows of data are displayed for A, B, and C, as expected.

Now, suppose you restrict the columns to C only, {C}. When zero suppression is turned off, C is displayed in the columns. But if you turn on zero suppression, C might be dropped from the columns because C does not reference any actual member in the cube.

MDXSelectCalculatedMemberInputs addresses this issue. When MDXSelectCalculatedMemberInputs is enabled, TM1 assumes that if the inputs to the calculated member have data (the A and B in the example), then the calculated member (C) also has data and must be retained when zero suppression is turned on.

The processing occurs as follows:

1. Do a fast check of the calculated member to detect what specific actual members it references.
2. Consider these actual members as inputs to the calculated member.
3. Make sure that these inputs are included in the stargate data underlying the view.

With the inputs included in the Stargate data, the suppression algorithm sees Stargate data at A and B, notices that A and B are inputs to C, and keeps C when zero suppression is enabled.

MDXSelectCalculatedMemberInputs works well for simple formulas, like C=A+B. If you use complex formulas, such as data-dependent formulas that contain conditional expression like IIF, enabling MDXSelectCalculatedMemberInputs might not resolve issues with zero suppression.

Note: Enabling MDXSelectCalculatedMemberInputs can increase the size of Stargate views. This can provide faster access times for cube data but can consume more system resources.

To enable MDXSelectCalculatedMemberInputs, add the following to the tm1s.cfg file.

```
MDXSelectCalculatedMemberInputs=True
```

To disable MDXSelectCalculatedMemberInputs, add the following to the tm1s.cfg file.

```
MDXSelectCalculatedMemberInputs=False
```

Default value: True

It is recommended to set the MaximumViewSize to be higher than the default 500MB.

MemoryCache.LockFree

Switches global garbage collection to use lock free structures.

Parameter type: optional, dynamic

Default value: False

MessageCompression

Enables message compression for large messages that significantly reduces network traffic.

The parameter is enabled by default.

Parameter type: optional, static

To disable message compression, add the following line to Tm1s.cfg:

```
MessageCompression=F
```

MTCubeLoad

Enables multi-threaded loading of individual cubes.

Note: To enable multi-threaded loading of individual cubes, you must have IBM Planning Analytics version 2.0.5 or later installed.

Parameter type: optional, dynamic

Default value: F (disabled)

MTCubeLoad uses the MTQ multi-threaded framework to achieve improved speeds when compared to the previous approach using **MaximumCubeLoadThreads**. Configuration settings **MTCubeLoad.MinFileSize**, **MTCubeLoad.Weight**, **MTCubeLoad.UseBookmarkFiles**, and **IndexStoreDirectory** are used to optimize performance.

MTCubeLoad also eliminates the risk of changing feeder generation sequences. When **MTCubeLoad** is enabled, the **MaximumCubeLoadThreads** configuration option is ignored. Since **MTCubeLoad** leverages the MTQ framework, it still relies on the **MTQ** configuration to set the number of concurrent threads.

Note: Setting **MTCubeLoad=T** does not work in all cases. When issues are detected, you **must** disable the multi-threaded loading of individual cubes.

TM1 server administrators can use the **PreallocatedMemory.Size**, **PreallocatedMemory.ThreadNumber**, and **PreallocatedMemory.BeforeLoad** settings to configure preallocation memory and optimize scale-up and performance results. Allocating memory for a TM1 server can help avoid contention effects related to varying operating system memory allocation. For best results, consider the amount of RAM consumed by TM1 server to configure the preallocation memory settings.

⚠️ **CAUTION:** Setting **MTCubeLoad=T** increases memory usage significantly.

Example

The following `tm1s.cfg` file illustrates the configuration of multi-threaded cube loading:

```
MTCubeLoad=T
MTQ=All
MTCubeLoad.UseBookmarkFiles=T
IndexStoreDirectory=c:\Cubes\CubeFolder\indexStore

# 30GB of RAM to preallocate
PreallocatedMemory.Size=30000
# Run preallocation in parallel to cube cell/feeder loading
PreallocatedMemory.BeforeLoad=F
# Window 2012 patches as of Dec 2016 worked most efficiently with a single thread
PreallocatedMemory.ThreadNumber=1

# Disable TM1 performance counters to speed up MTQ.
PerfMonIsActive=F
```

Logging

To enable logging for multi-threaded loading of individual cubes, enter the following lines in the `tm1s-log.properties` file located in the same location as your `tm1s.cfg` file:

log4j.logger.TM1.Server.Loading=DEBUG
Captures individual timing of TM1 Server loading stages: DeSerializeDimensions, DeSerializeAttributeCubes, DeSerializeRegularCubes, GenerateServerSecurity.

log4j.logger.TM1.Cube.Loading=DEBUG
Captures cube loading time, separately for `.cub` and `.feeder` files.

MTCubeLoad.MinFileSize

Sets the minimum size for cube files to be loaded on multiple threads.

Parameter type: optional, dynamic

The value must be specified in units of KB (kilobytes). Specifying a value of "0" will apply MTCubeLoad to files of any size.

Default value: 10KB

MTCubeLoad.UseBookmarkFiles

Enables the persisting of bookmarks on disk.

Parameter type: optional, dynamic

Bookmarks store information that allow cube loading to start reading cells/feeders from the middle of `.cub` and `.feeder` files. Bookmarks can be read from the files where they persist. If a bookmark file is not present, or is out-of-sync with the main file it corresponds to, bookmarks are generated on-the-fly in parallel for the rest of the cube loading logic. Bookmark files are stored in the folder specified by the **IndexStoreDirectory** configuration option. For example:

```
<IndexStoreDirectory>\<path-to-main-file-relative-to-data-folder>\<main-filename>.bm
```

Bookmark files incorporate the timestamp of their corresponding main file. When it does not match the actual timestamp of the main file, bookmark files are ignored and bookmarks are regenerated on-the-fly. When bookmark synchronization is in doubt, the bookmark folder contents should be cleaned. The content is regenerated after restarting the server. Bookmark files are also updated during SaveDataAll and CubeSaveData calls when the main files that the bookmarks are associated with are updated.

Default value: F (disabled)

MTCubeLoad.Weight

Defines the number of atomic operations needed to load a single cell.

Parameter type: optional, dynamic

The "atomic operation" is the unit used in the **MTQ.OperationProgressCheckSkipLoopSize** configuration option. **MTCubeLoad.Weight** provides a relative heuristics of how much slower cell loading is when compared to visiting a cell during a read operation.

Default value: 10

MTFeeders

Applies multi-threaded query parallelization techniques to the following processes: the CubeProcessFeeders TurboIntegrator function, cube rule updates, and construction of multi-threaded (MT) feeders at start-up.

Parameter type: optional, dynamic

The default setting is disabled (F). Enable this parameter to improve the processing of feeders. Set **MTFeeders=T** to obtain the following benefits:

- Process optimization when you use the CubeProcessFeeders(<cube_name>) TurboIntegrator function.
- When a rule update involves updating feeder cubes, the process is optimized by running in parallel. Rules are updated manually or by using the RuleLoadFromFile (Cube, TextFile) TurboIntegrator function.
- When used MTFeeders=T **and** MTFeeders.AtStartup=T in Tm1s.cfg, multi-threaded (MT) feeders are constructed at start-up. See for details on using the MTFeeders.AtStartup configuration parameter.

> ⚠️ **CAUTION:** Setting MTFeeders=T increases memory usage significantly.

Conditional feeders

When `MTFeeders` is enabled, TM1® cannot manage the order in which feeders are calculated. There might be cases where processing order has an adverse effect on your application due to some order-of-evaluation dependencies in the multi-threaded environment.

Enabling `MTFeeders` to apply feeder construction during server startup is not supported when your TM1 model uses conditional feeders. Set `MTFeeders=F` or exclude the parameter from the `Tm1s.cfg` file.

MTFeeders.AtStartup

If the `MTFEEDERS` configuration option is enabled, enabling `MTFeeders.AtStartup` applies multi-threaded (MT) feeder construction during server start-up.

Parameter type: optional [dynamic](#)

The default setting is disabled (F).

When this configuration option is enabled, it prevents the load threads (set with the `MaximumCubeLoadThreads` configuration parameter) from taking over parallel feeder construction. However, `MTFeeders.AtStartup` will not disable `MaximumCubeLoadThreads` impact on other model load phases.

Conditional feeders

When `MTFeeders.AtStartup` is enabled, TM1 cannot manage the order in which feeders are calculated. There might be cases where processing order has an adverse effect on your application due to some order-of-evaluation dependencies in the multi-threaded environment.

Enabling `MTFeeders.AtStartup` to apply multi-threaded feeder construction during server startup is not supported when your model uses conditional feeders. Set `MTFeeders.AtStartup=F` or exclude the parameter from the `Tm1s.cfg` file.

MTFeeders.AtomicWeight

Defines the number of required atomic operations to process feeders of a single cell.

Parameter type: optional, [dynamic](#)

The "atomic operation" is the unit used in the **MTQ.OperationProgressCheckSkipLoopSize** configuration option. Essentially, **MTFeeders.AtomicWeight** provides a relative heuristics of how much slower a feeder construction is when compared to visiting a cell during a read operation. The ratio **MTQ.OperationProgressCheckSkipLoopSize**/ **MTFeeders.AtomicWeight** approximates the number of cells triggering parallel execution when processing feeder updates.

The default value is 10.

MTQ

Sets the maximum number of threads per single-user connection, when multi-threaded optimization is applied. Used when processing queries, and in batch feeder and cube load operations.

Parameter type: optional, [dynamic](#)

Default value: -1

To specify a maximum number of threads for the multi-threaded optimization, add the following line to `Tm1s.cfg`:

```
MTQ=n
```

where *n* represents the number of threads to be used for a single operation.

If you set MTQ equal to a negative number, that is, MTQ=-N, the number of threads that will be used is defined by the following equation: T=M-N+1, where T= the number of threads to be used by the system and M= the number of threads on the server.

For example, if your server has 64 cores and you set MTQ=-10, the system will use 55 threads.

```
T=64-(10)+1
```

By default, MTQ=-1, which sets the value to the maximum number of threads available to a server. The result is a dynamic system setting that consumes all threads.

If you set MTQ=1 or MTQ=0, multi-threaded optimization is turned off.

For more information, see "Improving processing performance with Multi-threaded Queries" in *TM1 Operations*.

Note: Multi-threaded optimizations can improve performance on numeric cubes, where consolidation is optimized. Since TM1 does not consolidate string values, the MTQ parameter has no impact on the performance of string cubes.

MTQ.OperationProgressCheckSkipLoopSize

Use this parameter to fine-tune multi-threaded query processing.

Parameter type: optional, dynamic

This parameter specifies the number of cells to be processed before checking whether multi-threaded splits are needed.

Default value is 10000.

MTQ.SingleCellConsolidation

Use this parameter to fine-tune multi-threaded query processing.

Parameter type: optional, dynamic

Set this parameter to False to disallow multi-threaded query processing for single cell consolidations. This is applicable, for example, if your model contains complex rules (rules that have cross-cube references with a recursive depth greater than two).

Single cell consolidation is often invoked for the computation of rules that reference consolidated values as arguments. Single cell consolidation is also used to compute title only views.

Default value is True.

MTQQuery

Use this parameter to enable multi-threaded query processing when calculating a view to be used as a TI datasource.

Parameter type: optional, dynamic

If the value of the MTQ parameter is 1 (or OFF), this functionality is turned off entirely and cannot be overridden.

The value of MTQQuery can be overridden on a per-TI basis by calling the `EnableMTQViewConstruct` and `DisableMTQViewConstruct` TI functions.

If MTQQuery=F, `EnableMTQViewConstruct()` can be called to override this value on a per-TI basis.

If MTQQuery=T (the default), `DisableMTQViewConstruct()` can be called to disable the functionality for individual TIs.

Default value is True.

NetRecvBlockingWaitLimitSeconds

Use this parameter to have the server perform the wait period for a client to send the next request as a series of shorter wait periods. This parameter changes the wait from one long wait period to shorter wait periods, so that a thread can be canceled if needed.

Parameter type: optional, static

The parameter is enabled by default.

By default the server can wait for a long time for input, which can result in long-held threads and other problems.

This parameter instructs the Cognos TM1 server to perform the wait as a series of repeated shorter waits and gives the server the opportunity to cancel or pause the thread. When set to zero (the default) the legacy behavior of one long wait is used.

Default value: 0

NetRecvMaxClientIOWaitWithinAPIsSeconds

Specifies the maximum time for a client to do I/O within the time interval between the arrival of the first packet of data for a set of APIs through processing until a response has been sent.

Parameter type: optional, static

This parameter requires the client to handle I/O in a reasonably timely fashion after initiating API requests. This parameter is designed to protect against connections that go dead but do not raise a socket error or create other possibilities such as a hung client.

Default value is 0, which means no time limit.

NIST_SP800_131A_MODE

Indicates that the server must operate in compliance with the SP800-131A encryption standard.

Parameter type: optional, static

When SP800-131 encryption is enforced, the signed certificate must comply with the standard as defined by the National Institute of Standards and Technology (NIST) Special Publication SP800-131. This standard requires a minimum key size of 2048 bits and a signature algorithm of RSA with SHA-224 or higher.

To turn off SP800-131 compliance, add the following line to the `tm1s.cfg` file:

```
NIST_SP800_131A_MODE=False
```

Default value: True

ODBCLibraryPath

Specifies the name and location of the ODBC interface library (.so file) on UNIX.

Parameter type: optional (required to support ODBC on UNIX), static

This parameter is applicable only to TM1 running on UNIX or Linux.

In the tm1s.cfg file, add the following line:

```
ODBCLibraryPath= location/file
```

Replace location/file with the absolute path and filename of the library.

For example:

```
ODBCLibraryPath=/usr/local/lib/unixODBC/lib/libodbc.so
```

ODBCTimeoutInSeconds

Specifies the timeout value that is sent to the ODBC driver using the SQL_ATTR_QUERY_TIMEOUT and SQL_ATTR_CONNECTION_TIMEOUT connection attributes.

Parameter type: optional, dynamic

Note: The ODBC driver must respect the request and implement the timeout.

This parameter defaults to zero. A zero value indicates legacy behavior of no timeout.

For example, in the tm1s.cfg file, add the following line:

```
ODBCTimeoutInSeconds= 10
```

OptimizeClient

Added in v2.0.7 This parameter determines whether private objects are loaded when the user authenticates during TM1 Server startup.

Parameter type: optional, dynamic

Note: A new user that was dynamically added, who logs in with CAM authentication, is still subject to lock contention because a new element must be added to the }clients dimension.

Organizations with many users can set this parameter to improve startup times for particular users. Users with many private objects can set this parameter to improve startup times. Currently, private objects include a user's private directory, private sandboxes, private subsets, and private views. Loading these private objects affects the server load and potentially the amount of memory that is consumed at startup. Depending on the number of users, the private objects, and the memory that each consumes, setting this parameter can improve server startup times.

OptimizeClient can be set as follows:

- None = 0
- OperationsAdmin = 1
- Admin = 2
- All = 3

For example, to load all private objects for all users when TM1 Server starts up, you can set OptimizeClient to All:

```
OptimizeClient=3
```

The default setting is 0 (None).

OracleErrorForceRowStatus

Use this parameter to ensure the correct interaction between IBM Cognos TM1 TurboIntegrator processes and Oracle ODBC data sources.

Parameter type: optional, static

The format of the parameter is as follows:

```
OracleErrorForceRowStatus=x
```

Replace *x* with one of the following values:

0

Planning Analytics auto-detects the version of Oracle you are connecting to.

1

Planning Analytics handles the connection to Oracle the same way as other drivers.

2
> Planning Analytics connects to Oracle and uses SQLULEN instead of SQLUSMALLINT.

The default is 0.

PasswordMinimumLength

Specifies a minimum password length for clients accessing the server.

Parameter type: optional, dynamic

For example, set `PasswordMinimumLength=8` to enforce a minimum password length of 8 characters.

Note: This parameter only affects passwords set or changed after the parameter had been set. It has no effect on old, unchanged passwords having less characters as enforced by PasswordMinimumLength

PasswordSource

Compares user-entered password to the stored password.

Parameter type: optional, static

Cognos TM1 (Default): Compares the user-entered password to the password in the TM1 database.

LDAP: Compares the user-entered password to the password stored in on the LDAP server.

PerfMonIsActive

Use this parameter to turn updates to TM1 performance counters on or off.

Parameter type: optional, dynamic

You can view performance counters using the TM1 PerfMon utility or the Microsoft Windows Performance Monitor. For more details, see "Using TM1 Performance Counters" in *TM1 Operations*.

Capturing performance counters in TM1 can impact performance under a heavy multi-user workload (with 100 or more active users). Use this parameter to turn off updates to performance counters if performance is an issue.

```
PerfMonIsActive=F
```

Default value is T.

PerformanceMonitorOn

Automatically starts populating the `}Stats` control cubes when a server starts.

The control cubes contain statistics that you can review to monitor the system performance. For details on control cubes, see "Control Cubes" in *IBM Cognos TM1 Operations*.

Parameter type: optional, dynamic

For example, to enable Performance Monitor set `PerformanceMonitorOn=T`. To disable the Performance Monitor set `PerformanceMonitorOn=F`

PersistentFeeders

To improve reload time of cubes with feeders, set the PersistentFeeders configuration parameter to true (T) to store the calculated feeders to a .feeders file.

Any installation with server load times of over 5 minutes can probably improve their performance using this parameter.

Parameter type: optional, static

When this parameter is set to T and the server encounters a persistent feeder file, it loads the saved feeders which reduces the time normally taken to recalculate those feeders. Feeders are saved when the data is saved or rules are edited. You do not explicitly save the feeders

For installations with many complex feeder calculations persisting feeders and then re-loading them at server startup will improve performance. For simple feeders, the time taken to read feeders from disk may exceed the time to re-calculate the feeders but most installations will benefit.

Using the Persistent Feeders feature will increase your system size on disk only. Memory size is not affected by the use of this parameter.

```
PersistentFeeders=T
```

For more information, see "Using Persistent Feeders" in *IBM Cognos TM1 Operations*.

PortNumber

Sets the server port number used to distinguish between multiple servers running on the same computer.

When multiple IBM TM1 Servers are installed on a single computer, each server must use a unique port number.

Parameter type: optional, static

When you install a TM1 Server, the default port number is 12345. Valid port numbers are between 5001 and 65535.

If the Tm1s.cfg file does not contain the PortNumber parameter, the TM1 Server uses port 5000. Local TM1 Servers use port 5000. The port used for Client Messages must also be a unique port number and is set to 5001 by default when the ClientMessagePortNumberparameter is used.

PreallocatedMemory.BeforeLoad

Added in v2.0.5 Specifies whether the preallocation of memory occurs before server loading or in parallel.

Parameter type: optional, dynamic

Default value: F (disabled)

When **PreallocatedMemory.BeforeLoad=T** (enabled), preallocation of memory is performed before server loading. With this setting is disabled, preallocation occurs in parallel to a server loading process. Overall server load time improvements vary by operating system allocation speeds and the memory consumption speeds of the server loading logic. TM1 server administrators can modify the preallocation memory settings to obtain optimal results for their environment.

PreallocatedMemory.Size

Added in v2.0.5 Triggers the preallocation of pooled TM1 server memory.

Parameter type: optional, dynamic

Default value: 0

Allocated memory is specified in units of MB (megabytes).

PreallocatedMemory.ThreadNumber

Added in v2.0.5 Specifies the number of threads used for preallocation memory in multi-threaded cube loading.

Parameter type: optional, dynamic

Default value: 4

PrivilegeGenerationOptimization

When the IBM TM1 Server generates security privileges from a security control cube, it reads every cell from that cube.

If the security control cube is sparsely populated, this results in unnecessary processing and a longer loading time. An example of a sparsely populated security cube would be one that has a greater ratio of default security settings compared to defined security settings.

Parameter type: optional, static

To address this issue, the PrivilegeGenerationOptimization parameter can be added to the Tm1s.cfg file as follows:

```
PrivilegeGenerationOptimization=T
```

When this parameter is set to T, the TM1 Server will read only the populated cells in security cubes. In the case of a sparsely populated security cube, this will dramatically shorten the load time of the TM1 Server.

Note: If you populate the security settings via rules and want to use this parameter, you must write feeders for the rules that populate your security cubes. Because security settings are stored as strings, the rules that populate your security cubes must include the FeedStrings function.

ProgressMessage

This parameter determines whether users have the option to cancel lengthy view calculations.

When a user opens a view that takes a significant amount of time to calculate (usually a view with high levels of consolidation or complex rules), IBM TM1 Server monitors the progress of the process. When ProgressMessage=T a dialog box opens that allows the user to Stop Building View.

Parameter type: optional, static

If the user clicks Stop Building View, the view is discarded on the client, but view calculation continues on the server. In some instances, this can tie up the server.

- If ProgressMessage=F, the Stop Building View option is not offered and the user cannot cancel lengthy operations.
- When ProgressMessage=T or is not present in the Tm1s.cfg file, the Stop Building View option opens during lengthy view calculations so the user can cancel the process if necessary. You can assign a unique Port Number using ClientMessagePortNumber. This additional port allows these progress messages to travel via a secondary port so that server processing can continue without tying up thread reserves.

Note: As of Cognos TM1 10.1, progress messages can travel via the secondary port assigned by ClientMessagePortNumber so Cognos TM1 10.1 and later have `ProgressMessage=T` set by default.

ProportionSpreadToZeroCells

Allows you to perform a proportional spread from a consolidation without generating an error when all the leaf cells contain zero values.

In this case, Cognos TM1 applies an equal spread to the empty cells when the ProportionSpreadToZeroCells parameter is enabled. This functionality is enabled by default.

Parameter type: optional, static

Behavior when ProportionSpreadToZeroCells is enabled

This parameter and functionality are enabled by default, allowing you to complete a spread operation without an error when you perform a proportional spread on a consolidation where all the leaf cells are zero. In this scenario, Cognos TM1 converts the typed entry of "P###" to "LS*###" and applies the spread as an equal spread.

When this parameter is enabled *and* data *exists* in any of the leaf cells, the behavior is the same as previous versions of Cognos TM1 when performing a proportional spread.

This parameter is on by default and it is not necessary to enable it. However, if you want to explicitly configure it, set the ProportionSpreadToZeroCells parameter to T (True) in the Tm1s.cfg configuration file as follows.

```
ProportionSpreadToZeroCells=T
```

Behavior when ProportionSpreadToZeroCells is disabled

Setting this parameter to F (False) disables this feature. An error displays when you try to perform one of the following proportional spreading operations:

- In TM1 Contributor - Enter a number in a consolidated cell where all of the leaf cells for that consolidation contain zeros.
- In TM1 Contributor and other TM1 clients - Perform a proportional spread operation by either entering a spreading code and number such as "P###" in a cell, or access a proportional spread from the right-click menu or TM1 menu (TM1 Perspectives only) when the leaf cells for that consolidation all contain zeros.

These operations make the TM1 server perform a proportional spread, but the operation fails because all of the leaf cells contain zeros.

To disable this functionality, set the ProportionSpreadToZeroCells parameter to F (False) in the Tm1s.cfg configuration file as follows.

```
ProportionSpreadToZeroCells=F
```

PullInvalidationSubsets

Reduces metadata locking by not requiring an R-lock (read lock) on the dimension during subset creation, deletion, or loading from disk.

Parameter type: optional, dynamic

Default value: T (enabled)

When a user logs in, the system loads the user's unregistered subsets from disk. At the same time, a TurboIntegrator process that edits a dimension will hold an IX (intent-to-write) lock on the dimension for the process duration. In previous releases, or when this parameter is set to F (disabled), logging in could be blocked for the entire duration of a long-running TurboIntegrator process. TM1 lock types are incompatible with each other.

RawStoreDirectory

Indicates the location of the temporary, unprocessed log file for audit logging if logging takes place in a directory other than the data directory.

Parameter type: optional, dynamic

If this parameter is not entered, by default the unprocessed audit log file is saved in the directory listed in the DataBaseDirectory parameter.

For details on other audit logging parameters, see "AuditLogMaxFileSize" on page 59, "AuditLogMaxQueryMemory " on page 59, "AuditLogOn" on page 59, and "AuditLogUpdateInterval" on page 60.

ReceiveProgressResponseTimeoutSecs

The ReceiveProgressResponseTimeoutSecs parameter configures the server to sever the client connection and release resources during a long wait for a Cancel action.

Parameter type: optional, dynamic

When the IBM TM1 Server is performing lengthy operations for a client, periodic "progress" messages are sent to the TM1 client application. The client responds to these messages with an indication of whether the user has pressed the Cancel button, in which case the lengthy operation is terminated. These responses are generated automatically by the network code in the client application; there is no user interaction involved. After sending the progress message the server waits for a response from the client application. As the server is waiting, the client's thread will continue to hold resource locks on the TM1 Server, preventing other users from making other server requests which require the same resource locks.

In some particular situations, most notably running TM1 clients under a Citrix environment, the response from the client application never arrives back at theTM1 Server, causing the server to wait for an infinite amount of time. This results in a system lockup, because the client's thread holds resource locks that are never released.

The ReceiveProgressResponseTimeoutSecs parameter lets you configure your server to detect this situation and to sever the client connection, releasing the resources. When the parameter is set to a valid interval (in seconds), the server process will terminate the client connection, releasing any resource locks, if the server does not detect the client application's response within the specified interval.

For example, if ReceiveProgressResponseTimeoutSecs=20 and the client application does not respond to the progress message sent from the server within 20 seconds, the client connection is terminated. Again, no user action is required to generate this response. The response is automatically generated by the client application, so that if the response does not arrive within 20 seconds, it is an indication that there is something seriously wrong with the client or the underlying network.

ReceiveProgressResponseTimeoutSecs is an optional Tm1s.cfg parameter. If the parameter is not present in the Tm1s.cfg file, processes are not terminated when a client does not respond to a progress message from the TM1 Server.

For some TM1 Server installations, the ClientMessagePortNumber defines a separate thread to use for cancellation messages without tying up reserves. When ClientMessagePortNumber is available, ReceiveProgressResponseTimeoutSecs is not used.

ReduceCubeLockingOnDimensionUpdate

Reduces the occurrence of cube locking during dimension updates.

Parameter type: optional, static

Default value: F (disabled)

You can use this parameter to reduce cube locking during dimension updates.

Previously, whenever a dimension was updated, all cubes that used this dimension had to be locked IX so that their rules could be recompiled and checked. This approach meant that if two dimensions used the same cube, they could not be modified simultaneously. Often, updating a dimension does not change the existing rules. For example, adding an element that is not yet referenced by the rules.

Now, you can use this parameter to maintain dimension to cube consistency and coherency. When `ReduceCubeLockingOnDimensionUpdate=T`, the same coherency is maintained by using only a RO lock, which is less prone to causing contention.

Instead of IX locking the cube, the server first makes a copy of the rule to recompile it to the side to see whether an IX lock is necessary; often it is not.

To enable this functionality, add the following line to the tms1.cfg file:

```
ReduceCubeLockingOnDimensionUpdate=T
```

RulesOverwriteCellsOnLoad

Prevents cells from being overwritten on server load in rule-derived data.

Parameter type: optional, static

During the processing of feeders for a cube, a cube's value can be wiped out if there is a rule for that cell. When the cube that had a cell wiped out is saved, the value is gone so the action has no effect on the cube. However, if the rule is edited but the cube is not modified later, the cube is not saved to disk. In that case, real cell values might be wiped out when the rules run.

The RulesOverwriteCellsOnLoad parameter can be used to prevent the zeroing out action after a rule is edited.

If you are changing rules and the rules might cause some cells that have data to become rule-derived because of edits, set RulesOverwriteCellsOnLoad=F in the configuration file.

If this parameter is set to T, rule-derived cells are wiped to zero whenever the server loads. The data value in those cells is lost even if the rule is changed later so that the cell is no longer rule-derived.

```
RulesOverwriteCellsOnLoad=F
```

Important:

In IBM Planning Analytics version 2.0.7 or later, if this parameter is not present in the configuration file then it is assumed to be False by default.

In IBM Planning Analytics version 2.0.6 or earlier, if this parameter is not present in the configuration file then it is assumed to be True by default.

RunningInBackground

When you add the line `RunningInBackground=T` to tm1s.cfg, the IBM TM1 Server on UNIX runs in background mode.

Parameter type: optional, static

If you use the startup_tm1s.sh and shutdown_tm1s.sh scripts to start and stop your TM1 Server, set `RunningInBackground=T`.

SaveFeedersOnRuleAttach

When set to False, postpones writing to feeder files until SaveDataAll and CubeDataSave are called, instead of updating the files right after rules are changed and feeders are generated at the server start time.

Parameter type: optional, dynamic

Default value: True

SaveTime

Sets the time of day to execute an automatic save of server data; saves the cubes every succeeding day at the same time. As with a regular shutdown, SaveTime renames the log file, opens a new log file, and continues to run after the save.

Parameter type: optional, dynamic

The SaveTime parameter is not available when running the TM1 Server as a Windows service.

The format of the SaveTime parameter is *dd:hh:mm* where:

- dd is the number of days from today that the system will start automatically saving data. For example, 00 is today, 01 is tomorrow.
- hh:mm is the time of day in 24-hour format.

SecurityPackageName

If you configure the IBM TM1 Server to use Integrated Login, the SecurityPackageName parameter defines the security package that authenticates your user name and password in Microsoft Windows.

Parameter type: optional, static

Valid values are:

- Kerberos
- NTLM
- Negotiate

Use `Kerberos` unless you are running TM1 locally. If you are running locally, use `Negotiate` or NTLM. `Negotiate` selects Kerberos unless it cannot be used by one of the systems involved in the authentication.

ServerCAMURI

Specifies the URI for the internal dispatcher that the IBM TM1 Server should use to connect to Cognos Authentication Manager (CAM).

The URI is specified in the form

```
http[s]://fully-qualified host IP address:port/p2pd/servlet/dispatch
```

Note: In Planning Analytics version 2.0.9 or later, you can configure your TM1 Server CAM URI with a Server Name Indication (SNI). The SNI can be set using the existing ServerCAMURI parameter in the format of SNI;URI.

Parameter type: optional, dynamic

For example,

```
https://vottbies005.ent.ad.cognos.com:9443/p2pd/servlet/dispatch
```

For CAM authentication this setting must include the fully-qualified name for the server that the Cognos Analytics certificate was created for.

To determine the server that the certificate was issued for:

1. Enter the SSL URI to the Cognos Analytics dispatcher in a browser.
2. Update the `ServerCAMURI` setting in the tm1s.cfg with the fully-qualified name of that server.

    For example:

    ```
    ServerCAMURI=https://vottbies005.ent.ad.cognos.com:9443/p2pd/servlet/dispatch.
    ```

To configure the Cognos TM1 Applications Server to work with CAM SSL,

1. Ensure the following settings are made in Cognos Configuration:

    - **Force Qualified Paths** set to **False**.
    - **Use Mutual Authentication** set to **True**
2. Accept the certificate when saving.

ServerCAMURIRetryAttempts

Specifies the number of attempts made before moving on to the next ServerCAMURI entry in the tm1s.cfg file.

Parameter type: optional, static

This parameter is applicable if you are using IBM TM1 Server with Cognos Analytics security and you have defined multiple dispatchers in the tm1s.cfg file. Dispatchers are defined using the ServerCAMURI parameter.

For example, suppose you have three **ServerCAMURI** parameters specified in the tm1s.cfg file and `ServerCAMURIRetryAttempts=7`.

```
ServerCAMURI=http://server1:9300/p2pd/servlet/dispatch
ServerCAMURI=http://server2:9300/p2pd/servlet/dispatch
```

```
ServerCAMURI=http://server3:9300/p2pd/servlet/dispatch
ServerCAMURIRetryAttempts=7
```

The first dispatcher (http://server1:9300/p2pd/servlet/dispatch) is used and tried seven times. If it does not respond, the second one is then used and tried seven times. If it does not respond, the third dispatcher is then tried seven times. If the third one does not respond, the login fails.

Default value: 3

ServerLogging

Generates a log with the security activity details on the IBM TM1 Server that are associated with Integrated Login.

Parameter type: optional, dynamic

The log file, named Tm1server.log, is saved to the TM1 Server data directory. The ServerLogging parameter is useful only if your TM1 Server is configured to use Integrated Login.

Set ServerLogging to T in Tm1s.cfg. Note also that if `ServerLogging=T` is set, you must rename the TM1 Server message logfile tm1server.log by editing the corresponding parameter in the logger configuration file tm1s-log.properties.

Note: If you change this parameter dynamically (without restarting the TM1 Server), logging occurs only for new client sessions.

ServerName

Sets the name of the IBM TM1 Server. If you do not supply this parameter, TM1 Server names the server Local and treats it as a local server.

Parameter type: optional, static

ServicePrincipalName

Specifies the service principal name (SPN) when using Integrated Login with TM1 Web and constrained delegation.

Parameter type: optional, static

Use the following format to add the parameter to the Tm1s.cfg file:

ServicePrincipalName=SPN

The value you set here must match the service name that has also been mapped to a domain account on the Active Directory domain controller using the Microsoft command-line tool, setspn.exe.

For example, if you use setspn.exe to add an SPN as follows:

setspn -a FPM/TM1 WbSvr_Account

then you need to set the ServicePrincipalName parameter like this:

ServicePrincipalName=FPM/TM1

For more information about constrained delegation and SPN configuration, search the Microsoft website for the topic "Kerberos Technical Supplement for Windows".

SkipLoadingAliases

Use SkipLoadingAliases to speed up the loading of the server and updating of views by skipping the loading of aliases.

Parameter type: optional, static

Important: Contact customer support to determine if this parameter is applicable to your IBM TM1 Server.

Valid values are:

- T - Aliases skipped
- F - Aliases loaded

SpreadErrorInTIDiscardsAllChanges

If SpreadErrorInTIDiscardsAllChanges is enabled and a spreading error occurs as part of a running TurboIntegrator script, all changes that were made by that TurboIntegrator script are discarded.

Parameter type: optional, static

To enable SpreadErrorInTIDiscardsAllChanges, add the following line to the `tm1s.cfg` file:

```
SpreadErrorInTIDiscardsAllChanges=T
```

Default value: F

SpreadingPrecision

Use the SpreadingPrecision parameter to increase or decrease the margin of error for spreading calculations. The SpreadingPrecision parameter value is specified with scientific (exponential) notation.

Parameter type: optional, dynamic

Floating point arithmetic on computers is not 100% precise. When a computer calculates very small numbers, a margin of error is applied to the calculation. If the computer adds a set of numbers, and the resulting sum is close to the target value within the margin of error, the sum is considered accurate.

The margin of error for certain TM1 Server calculations is controlled through the SpreadingPrecision parameter. The default value is SpreadingPrecision=1e-8. This value is used in the following spreading scenarios:

- Spreading from a consolidated cell.
- Spreading in leaf cells whose consolidated value has a hold applied.

Spreading from a Consolidation

When you execute a proportional data spread from a consolidated cell, TM1 Server writes the numbers to each cell in the range, and rolls up the total to recalculate the consolidation. The total of all cells in the consolidation is then compared to the original value you provided for the spread function. The total might be different from the target value because of the rules applied to the n-level elements or the consolidated cell itself.

If the rules are such that the resultant value does not match the spread desired value, an error will be generated and the spread operation will not be done.

If SpreadingPrecision=1e-8, the total calculated by TM1 Server for the consolidation must be within 0.000001% of the target value (99.999999% accurate), or TM1 Server displays an error. An error of more than US$0.01 on a consolidated spread of US$1,000,000 results in an error.

You can increase or decrease the margin of error for these types of calculations using the SpreadingPrecision parameter.

The following examples include valid values for the SpreadingPrecision parameter:

- `SpreadingPrecision=1e-4`
- `SpreadingPrecision=1e-8`
- `SpreadingPrecision=1e-99`

The exponent value in the notation must be two digits or less. For example, `SpreadingPrecision=1e-123` is not a valid parameter value, as the exponent contains three digits.

Spreading and Consolidation Holds

The SpreadingPrecision parameter also has an effect under these conditions:

- When you spread values to some leaf cells that roll up into a consolidation
- A consolidation with a hold applied to it

For example, suppose you have the consolidation Q1 with values Jan, Feb, and Mar.

If Q1- has a consolidated hold applied, and you spread values to Jan and Feb, TM1 Server does the following:

- Applies the spreading to Jan and Feb.
- Adjusts Mar.
- Adds the three n-level elements together.
- Compares the sum of the n-level elements to the value of Q1.

If the sum is accurate to within the margin of error specified by the SpreadingPrecision parameter, the spread succeeds. If the sum falls outside the margin of error specified by the SpreadingPrecision parameter, TM1 Server generates an error.

SQLRowsetSize

Added in v2.0.3 Specifies the maximum number of rows to retrieve per ODBC request.

This parameter can be used to improve execution time for long-running processes that are caused by slow Microsoft SQL queries. It can benefit any users that use an ODBC driver that does not have a fetch setting, such as MS SQL and Db2. It does not affect Oracle database users.

Parameter type: optional, dynamic

Note: This parameter applies to all data sources even if you are pulling data from multiple different data sources.

To set this parameter, add the following line to the Tm1s.cfg file for the server:

```
SQLRowsetSize=nn
```

Where nn is any positive integer that represents the maximum number of ODBC requests to make.

The minimum value is 50 (default).

For cloud only customers, the default value is 500. The entry SQLRowsetSize=500 is added to the Tm1s.cfg file for any new provision in IBM Planning Analytics on Cloud. If the setting exists in the Tm1s.cfg file, it is not changed.

The recommended value depends on the long-running process that you are trying to improve processing for. You can double the values (100, 200, and so on) to test for the best results. Increasing the value of SQLRowsetSize fetches more results per ODBC request and incurs network latency fewer times.

A larger value means that more memory is used per fetch. You need to look at memory consumption to see whether the increase in memory usage is acceptable (it might be noticeable if you have lots of data per row).

SSLCertAuthority

Specifies the name of the IBM Cognos TM1 server's certificate authority file. This file must reside on the computer where the TM1 server is installed.

Parameter type: optional (required for SSL), static

If you are using your own SSL certificates with TM1, you can determine this value by referring to the Microsoft Management Console. Click **Certificates** > **Personal** > **Certificates**. The principal name is displayed in the Issued By column of the Properties pane.

SSLCertificate

Specifies the full path of the IBM Cognos TM1 server's certificate file, which contains the public/private key pair.

Parameter type: optional (required for SSL), static

SSLCertificateID

Specifies the name of the principal to whom the IBM Cognos TM1 server's certificate is issued.

Parameter type: optional (required for SSL), static

If you are using your own SSL certificates with TM1, you can determine this value by referring to the Microsoft Management Console. Click **Certificates** > **Personal** > **Certificates**. The principal name is displayed in the Issued To column of the Properties pane.

StartupChores

StartupChores is a configuration parameter that identifies a list of chores that run at server startup.

Parameter type: optional, static

To run a chore at startup before users login or other scheduled chores run, add this parameter with the names of the chores to run separated by a colon, for example:

```
StartupChores=ChoreName1:ChoreName2:ChoreName3:ChoreNameN
```

If this parameter is not specified, then no Chores will be run. If the name specified does not match an existing Chore then an error is written to the server log and execution continues to the next Chore.

The value of the configuration parameter can be retrieved by a client application as a Server property called StartupChores using the existing TM1ObjectPropertyGet call.

This is a read-only property and set operations are rejected. The value of the property can be changed only by editing the configuration file and restarting the server.

SubsetElementBreatherCount

This parameter manages the wayIBM TM1 Server handles locking behavior for subsets.

Parameter type: optional, dynamic

When

```
SubsetElementBreatherCount=-1
```

The TM1 Server never releases the lock on subsets when other requests for the subset are pending. This setting is the default. It can optimize view performance for a single user, but at the cost of multi-user concurreny.

When `SubsetElementBreatherCount` is set to any value greater than zero (0), the TM1 server releases the lock on subsets when other requests for the subset are pending, then reacquires the lock after pending requests are processed. This setting improves performance when multiple users attempt to access the same subset, particularly when the subset contain more than 100 elements.

SupportPreTLSv12Clients

As of TM1 10.2.2 Fix Pack 6 (10.2.2.6), all SSL-secured communication between clients and servers in TM1 uses Transport Layer Security (TLS) 1.2. This parameter determines whether clients prior to 10.2.2.6 can connect to the 10.2.2.6 or later TM1 server.

Parameter type: optional, static

Default is F (False).

To allow clients prior to 10.2.2.6 to connect to the 10.2.2.6 (or later) TM1 server, add the following line to Tm1s.cfg:

```
SupportPreTLSv12Clients=T
```

When the TM1 server is configured to allow connections from pre-TLS v1.2 clients, the connection with such clients is established using TLS 1.0.

If SupportPreTLSv12Clients is not present in the Tm1s.cfg file, or if SupportPreTLSv12Clients=F, clients prior to 10.2.2.6 **cannot** connect to a 10.2.2.6 or later TM1 Server.

SvrSSLExportKeyID

Specifies the identity key used to export the IBM Cognos TM1 server's certificate from the Microsoft Windows certificate store.

Parameter type: optional, static

In most cases, the value for **SvrSSLExportKeyID** will be identical to the value for SSLCertificate.

SyncUnitSize

Sets the frequency of saving a check point during a synchronization process in case there is a network connection failure.

Parameter type: optional, static

Note: When you use SyncUnitSize, you must also configure the MaximumSynchAttempts parameter. For more information, see "MaximumSynchAttempts" on page 84.

If you configure both the SyncUnitSize and MaximumSynchAttempts parameters and a synchronization process is interrupted by a network connection failure, the process will attempt to reconnect and complete the synchronization starting from the last check point.

To set this parameter, add the following line to the Tm1s.cfg file for the planet server:

```
SyncUnitSize=n
```

where n represents the number of synchronization records written to the transaction log file, Tm1s.log, after which a check point will be saved.

The default value is 1000.

The minimum recommended value is 500.

tlsCipherList

Specifies a comma-separated list of supported cipher suites in priority sequence.

Parameter type: optional, static

Use tlsCipherList to specify what cipher suites are acceptable for your TM1 system. The listed cipher suites are presented to the SSL negotiation in the order in which they are listed, for both the client and server sides of the negotiation. At least one of the listed cipher suites for the client and server must match.

The following cipher suites are supported:

- RFC 2246: "The TLS Protocol Version 1.0 " (http://www.ietf.org/rfc/rfc2246.txt)
- RFC 4346: "The Transport Layer Security (TLS) Protocol Version 1.1" (http://www.ietf.org/rfc/rfc4346.txt)
- RFC 5246: "The Transport Layer Security (TLS) Protocol Version 1.2" (http://www.ietf.org/rfc/rfc5246.txt)

- RFC 4492: "Elliptic Curve Cryptography (ECC) Cipher Suites for Transport Layer Security (TLS)" (http://www.ietf.org/rfc/rfc4492.txt)
- RFC 5289, TLS Elliptic Curve Cipher Suites with SHA-256/384 and AES Galois Counter Mode (GCM) (http://www.ietf.org/rfc/rfc5289.txt)

For example:

```
tlsCipherList=TLS_RSA_WITH_AES_128_CBC_SHA,
TLS_RSA_WITH_RC4_128_MD5, TLS_RSA_WITH_AES_128_CBC_SHA256
```

TopLogging

Added in v2.0.7 Enables dynamic logging of the threads that are running in an instance of the TM1 Server.

Parameter type: Boolean, optional, dynamic

By default, the **TopLogging** parameter is set to `False`.

Note: You must add `TopLogging=T` to the `tm1s.cfg` file before you start your TM1 Server to enable logging.

TopScanFrequency

Added in v2.0.7 Specifies the logging frequency (interval) in seconds for the **TopLogging** logger, which enables dynamic logging of the threads that are running in an instance of the TM1 Server.

Parameter type: Integer, optional, dynamic

By default, the **TopScanFrequency** parameter is set to 5 seconds. Setting this parameter to 0 disables the logger.

See also **TopLogging**.

TopScanMode.Sandboxes

Added in v2.0.7 Enables logging of the active sandboxes for the current server, the total memory that is consumed for all sandboxes by a user, and the number of sandboxes for this user.

Parameter type: optional, dynamic

By default, the **TopScanMode.Sandboxes** parameter is set to F (False).

See also **TopLogging**.

TopScanMode.SandboxQueueMetrics

Added in v2.0.7 Enables logging of sandbox queue metrics. The name of the node for the sandbox, the status of the sandbox in the queue, and the length of time the sandbox was in the queue before it was processed is logged for each sandbox in the queue.

Parameter type: optional, dynamic

By default, the **TopScanMode.SandboxQueueMetrics** parameter is set to F (False).

See also **TopLogging**.

TopScanMode.Threads

Added in v2.0.7 Enables logging of the current processing state of each thread. This information includes the name of the user or process that started the thread, the API function that the thread is executing, the lock status of the last object that was locked, the number of objects that are used by the thread, and the total time, in seconds, that the current API function or chore process has been processing.

Parameter type: optional, dynamic

By default, the **TopScanMode.Threads** parameter is set to T (True).

See also **TopLogging**.

UnicodeUpperLowerCase

This configuration parameter instructs the TM1 server to identify and handle Unicode object names, preventing the creation of identical Unicode object names that vary only in case.

Parameter type:

- Optional
- Static

   If you change this parameter value, restart the TM1 server to apply the new value.

TM1 treats ASCII object names as case-insensitive; the element name SALES is equivalent to sales. A reference to either SALES, sales, or even SaLeS is considered to be a reference to a single element. Similarly, the cube name Projections is equivalent to PROJECTIONS.

However, Unicode object names are **not** treated as case-insensitive. Consequently, a server can contain two identically named objects that varied only in case. For example, the elements NEMÈIJA and nemèija can exist in a single dimension, and each is considered a unique element.

Include the parameter `UnicodeUpperLowerCase=T` in your TM1s.cfg file to prevent the creation of identically named Unicode object names that vary only in case. When `UnicodeUpperLowerCase=T`, Unicode object names are handled just as ASCII object names, and are case-insensitive.

If you have developed applications that rely on Unicode object names that vary only in case, and want to maintain such functionality, you should not add the UnicodeUpperLowerCase configuration parameter to your Tm1s.cfg file. If this parameter is not present in Tm1s.cfg (or is set to F) TM1 will continue to treat Unicode object names as case-sensitive.

UseExcelSerialDate

Enables the use of Microsoft Excel serial dates instead of TM1 serial dates.

Parameter type: optional, static

When UseExcelSerialDate is enabled, TM1 rule functions and TurboIntegrator functions use Jan 1, 1900 as a base date for serial dates instead of Jan 1, 1960.

In the past, TM1 rule functions used serial dates that represent the number of days elapsed since Jan 1, 1960. This conflicts with Microsoft Excel serial dates, which represent the number of days elapsed since Jan 1, 1900. The number formatting features in TM1 expect cube data to use Microsoft Excel serial dates rather than TM1 serial dates.

To avoid the need to convert dates, enable UseExcelSerialDate to have rule functions use Microsoft Excel dates rather than legacy TM1 dates.

```
UseExcelSerialDate=T
```

Default value: F

Example

You can see the serial date issue in this example.

The following rule returns May 26, 2015 as a serial date.

```
[]= N:(DAYNO('2015-05-26'));
```

The unformatted result is 20234, which indicates that 20234 days have elapsed since Jan 1, 1960. The rule function is using legacy TM1 serial dates.

When you set the display format in TM1 to a date format, such as mmmm dd, yyyy, the result is May 25, 1955, because May 25, 1955 is 20234 days away from Jan 1, 1900. The value is being interpreted as a Microsoft Excel serial date.

After you add `UseExcelSerialDate=T` to the `tm1s.cfg` file and restart the TM1 server, you see the expected result, May 26, 2015, in TM1. The rule function is now using Jan 1, 1900 as the base date for serial dates.

UseLocalCopiesforPublicDynamicSubsets

Allows public dynamic subsets to improve performance and reduce locking by using local copies of the subset when possible.

Parameter type: optional, dynamic

By default, or if the parameter is not present in the tm1s.cfg file, **UseLocalCopiesforPublicDynamicSubsets** is enabled. To restore the earlier method of saving dynamic subsets, set this parameter to F.

UserDefinedCalculations

Enables the **Rollup** and **Insert Subset** options to create user-defined consolidations in the Subset Editor in IBM Cognos TM1(r) Perspectives and Architect, and enables the **Create Custom Consolidation** button in TM1(r)Web clients.

Parameter type: optional, dynamic

By default, UserDefinedCalculations is enabled.

To disable user-defined consolidations TM1 Perspectives, Architect, and TM1 Web clients, add the following line to tm1s.cfg:

```
UserDefinedCalculations=F
```

Note: When set to F, users will see the following:

- In Architect and Perspectives, when users click the **Rollup** or **Insert Subset** option, they will get an error message stating that user defined calculations are not enabled.
- In TM1 Web, the **Create Custom Consolidation** button will be grayed-out.

UseSQLFetch UseSQLFetchScroll UseSQLExtendedFetch

These parameters instruct IBM TM1 Server to use a particular fetch call.

Parameter type: optional, dynamic

When you run TurboIntegrator process that extracts information from an ODBC data source, TM1 Server tries to use the most efficient SQL fetch call possible.TM1 Server queries the ODBC driver to determine which of the following SQL Fetch calls to use to extract the data:

SQLFetch(), an ODBC 1 function

SQLExtendedFetch(), an ODBC 2function

SQLFetchScroll(), an ODBC 3 function

These parameters are all dynamic.

If TM1 Server receives no response when it queries the ODBC driver, your TM1 Server process will result in an error unless one of the following parameters is set to T in your Tm1s.cfg file:

UseSQLFetch

UseSQLFetchScroll

UseSQLExtendedFetch

These parameters instruct TM1 Server to use a particular fetch call. You must ensure that the call specified in Tm1s.cfg is appropriate for the ODBC driver being accessed, and you can specify only one of these parameters in Tm1s.cfg.

For example, to instruct the TM1 Server to use the SQLExtendedFetch() call to extract data from an ODBC source, add the following line to Tm1s.cfg:

```
UseSQLExtendedFetch=T
```

UseSSL

Enables or disables SSL on the IBM TM1 Server.

Parameter type: optional (required for SSL), static

This parameter is enabled by default.

To disable SSL, set UseSSL=F.

Default value: T

UseStargateForRules

Indicates if a rule uses the Stargate view.

Parameter type: optional, static

By default, any time a rule references a calculated value, the value is retrieved from a Stargate view stored in memory (if available). Using the Stargate view for rules, in most cases, results in a significant improvement in performance. It is more efficient to retrieve a calculated value from memory than to request and retrieve a calculation from the server.

In some unique instances that are difficult, if not impossible, to determine in advance and can only be determined through trial and error, retrieving a calculated value from a Stargate view is actually slower than requesting and retrieving the value from the server. In these instances, add the following line to Tm1s.cfg to instruct the TM1 rules to always retrieve the calculated values from the server and improve performance.

```
UseStargateForRules=F
```

Contact customer support before adding the UseStargateForRules parameter.

VersionedListControlDimensions

Removes contention on control dimensions such as }Cubes, }Dimensions, }Groups, }Clients. Allows creation of new objects without IX locking the dimension.

Parameter type: optional, static

Default value: T (enabled)

Set to F (False) to disable versioned list control dimensions.

ViewConsolidationOptimization

Enables or disables view consolidation optimization on the IBM TM1 Server.

Parameter type: optional, static

Using this parameter improves the performance of calculating consolidated elements. By default, ViewConsolidationOptimization is enabled on the TM1 Server.

View consolidation optimization stores the consolidated values that use leaf element components on either the row or column axis. For example, consider the dimension structure Year, 1Quarter with values Jan, Feb, and Mar.

When either a row or column subset uses the Jan element, both the 1 Quarter and Year consolidations are calculated and stored for future reference. This improves performance but increases the amount of memory required for a given view.

To disable view consolidation optimization, add the following line to Tm1s.cfg:

`ViewConsolidationOptimization=F`

ViewConsolidationOptimizationMethod

This parameter defines the method used to achieve view consolidation optimization when the ViewConsolidationOptimization parameter is enabled on the IBM TM1 Server.

Parameter type: optional, static

There are two methods that ViewConsolidationOptimization can use to calculate and store consolidations: ARRAY or TREE. The ARRAY method stores consolidations in a temporary array. The TREE method stores consolidations in a tree.

ViewConsolidationOptimizationMethod should be set to TREE in most circumstances. This setting provides the best performance in normal operations.

In rare instances, using the TREE method can result in a degradation of performance. In such an instance, try setting the parameter to ARRAY. For example, in the uncommon circumstance when dimensions have just a few leaf elements rolling up to many consolidations, ViewConsolidationOptimizationMethod should be set to ARRAY.

To set this parameter, add the appropriate line to your configuration file:

```
ViewConsolidationOptimizationMethod=TREE
```

or

```
ViewConsolidationOptimizationMethod=ARRAY
```

If ViewConsolidationOptimizationMethod is not explicitly set in the `Tm1s.cfg` file, the TREE method is used by default.

ZeroWeightOptimization

Determines whether consolidated members with a weight of 0 are factored into the computation of consolidated cell values or consolidation functions. Consolidation functions include ConsolidatedCount, ConsolidatedMax, ConsolidatedMin, ConsolidatedAvg, ConsolidatedCount, and ConsolidatedCountUnique.

Parameter type: optional, static

When set to `true`, members for which the weighting is zero are eliminated from the consolidation list, and are therefore not processed when calculating values for consolidated cells or consolidation functions. This is the default behavior.

When set to `false`, members for which the weighting is zero are included in the consolidation list, and are therefore factored into the calculations.

Default value: true

The Tm1p.ini client configuration file

The Tm1p.ini file specifies the environment information for the IBM Cognos TM1 clients (Cognos TM1 Perspectives, Cognos TM1 Architect, and Cognos TM1 Clients).

Location of the Tm1p.ini File

IBM Cognos TM1 installs a system default version of the `Tm1p.ini` file and also creates a user-specific version of the file.

The two versions of the `Tm1p.ini` file are stored in different locations.

System default Tm1p.ini file

The system default version of `Tm1p.ini` allows multiple users to use Cognos TM1 on a given computer. The `Tm1p.ini` file must be present the first time a user starts Cognos TM1 on the computer, as the parameters in the system default version govern the behavior of the initial startup of the Cognos TM1 client for each user.

The installation location of the system default version of the `Tm1p.ini` file is determined by the `%ProgramData%` setting.

%ProgramData%`\Applix\TM1\`

For example:

`C:\ProgramData\Applix\TM1\Tm1p.ini`

Tip: Run `echo %ProgramData%` from a command line to see the exact location.

User-specific Tm1p.ini file

After a user starts Cognos TM1 on the computer, a user-specific copy of the `Tm1p.ini` file is created in their %USERPROFILE% location.

The user-specific copy of `Tm1p.ini` accepts all parameters settings and changes for the user and governs the behavior of the Cognos TM1 client for all subsequent user sessions of the Cognos TM1 client.

The Cognos TM1 Options dialog box also stores many of these settings. You can change these settings using either the TM1 Options dialog box or by editing the `Tm1p.ini` file. The `Tm1p.ini` parameters and TM1 Options are described here.

The exact location for %USERPROFILE% is located here:

%USERPROFILE%`\`*user name*`\AppData\Roaming\Applix\TM1\`

For example:

`C:\Users\ADMIN\AppData\Roaming\Applix\TM1\Tm1p.ini`

Tip: Run `echo %USERPROFILE%` from a command line to see the exact location.

Parameters in the Tm1p.ini file

The following parameters can be used in the Tm1p.ini file.

AdminHost

Displays the Admin Host name on which an Admin Server is running. On IBM Cognos TM1 Options, use Login Parameters Admin Host.

AdminSvrSSLCertAuthority

The full path of the certificate authority file that issued the certificate for IBM TM1 Server.

On Cognos TM1 Options, use Certificate Authority.

AdminSvrSSLCertID

The name of the principal to whom the IBM Cognos TM1 Admin Server's certificate is issued.

Note: The value of this parameter should be identical to the **SSLCertificateIDparameter** for the Cognos TM1 Admin Server as set in IBM Cognos Configuration.

This parameter can also be set for clients in the Cognos TM1 Options window > **Certificate ID** field.

AdminSvrSSLCertRevList

The full path of the certificate revocation file issued by the certificate authority that issued the IBM Cognos TM1 Admin Server's certificate.

A certificate revocation file will only exist in the event a certificate had been revoked. On Cognos TM1 Options, use Certificate Revocation List.

AdminSvrSSLExportKeyID

The identity key used to export the certificate authority certificate, which originally issued the IBM Cognos TM1 Admin Server's certificate, from the certificate store.

This parameter is required only if you choose to use the certificate store by setting ExportAdminSvrSSLCert=T.

On Cognos TM1 Options, use Export Certificate ID.

AdvancedRulesEditor

Deprecated in v2.0.7 Indicates the type of rules editor used.

Note: As of Planning Analytics version 2.0.7, the **AdvancedRulesEditor** parameter in the `tm1p.ini` file is ignored. The advanced rules editor does not launch in TM1 Architect and TM1 Perspectives, only the basic rule editor launches.

The advanced rules editor has an enhanced interface.

- T - The advanced rules editor is used.
- F (Default)- The basic rules editor is used.

AllowImportCamClients

This parameter is required only when configuring IBM TM1 Server to use CAM authentication.

It must be set to T when importing an administrative user from CAM into TM1 Server.

If your TM1 Server is not configured to use CAM authentication, this parameter should be set to F or omitted from the Tm1p.ini file.

BrowseDisplayReadsRightToLeft

Indicates how data is oriented in the Cube Viewer.

Data can display right to left or left to right.

- T - Data is oriented right to left.
- F (Default) - Data is oriented left to right.

ClassicSliceMode

Indicates whether the Slice option in the Cube Viewer generates classic slices or dynamic slices.

- T - Slice option generates classic slices.
- F - Slice option generates dynamic slices.

CognosGatewayURI

This parameter is required only when configuring IBM TM1 Server to use IBM Cognos security (CAM) authentication.

It must be set to the URI of your IBM Cognos gateway. The URI is specified in the form `http[s]:/ <host>/cognosx/cgi-bin/cognos.cgi` or `http[s]:/<host>/ibmcognos/cgi-bin/ cognos.cgi`.

For example, `http://win2003test/ibmcognos/cgi-bin/cognos.cgi`.

If your TM1 Server is not configured to use CAM authentication, this parameter should be omitted from the Tm1p.ini file.

ConnectLocalAtStartup

Indicates whether IBM Cognos TM1 Architect or IBM Cognos TM1 Perspectives automatically connects to the local server at startup.

- T (Default) - TM1 Server connects to the local server at startup.
- F - TM1 Server does not connect to the local server at startup.

DataBaseDirectory

Uses the full path to the local server data directory.

You can specify multiple data directories by separating the directory names with semicolons.

DimensionDownloadMaxSize

A threshold value of the number of elements in a dimension, beyond which the dimension is downloaded and cached on the IBM TM1 client.

The DimensionDownloadMaxSize parameter is applicable to older version of TM1. The parameter is not applicable to 10.2.2.

To improve performance when you work with large dimensions, add DimensionDownloadMaxSize so that large dimensions will cache on the client.

DisableAdminHostEntry

When enabled in the `Tm1p.ini` file, the **DisableAdminHostEntry** parameter prevents users from modifying the Admin Host setting on the **TM1 Options** dialog box.

When **DisableAdminHostEntry=T**, the **Admin Host** option on the **TM1 Options** dialog box is disabled. This prevents a user from modifying the Admin Host setting and seeing other TM1 servers in your environment. If **DisableAdminHostEntry=F**, or if the parameter is not present in the `Tm1p.ini` file, the Admin Host setting can be edited.

DisableAdminHostEntry must be present in the user-specific version of the `Tm1p.ini` file. When the **DisableAdminHostEntry** parameter is added in the system default `Tm1p.ini` file, the parameter and setting is copied to the user-specific version of `Tm1p.ini` the first time a user starts Architect or Perspectives.

If a user starts Architect or Perspectives and the **DisableAdminHostEntry** parameter is not present in the system default version of `Tm1p.ini`, **DisableAdminHostEntry=F** is added to the user-specific version of `Tm1p.ini`.

DisableWritebackOnDisconnect

When **DisableWritebackOnDisconnect** is enabled in the `Tm1p.ini` file, worksheet cells containing TM1 formulas that write to the TM1 server remain active and write to the server as long as an active server connection is available.

However, when this parameter is enabled and the TM1 Perspectives client is not connected to a TM1 server, cells containing TM1 formulas that write to the server are no longer protected. In this case, entering a value in any worksheet cell containing a TM1 formula that writes to the TM1 server results in the TM1 formula being overwritten.

TM1 formulas that write to the server include DBR, DBRW, DBRA, DBS, DBSA, DBSS, and DBSW.

Setting `DisableWritebackOnDisconnect=T` also restores multiple level undo/redo and multiple copy/paste operations in a worksheet containing TM1 formulas when there is no active server connection.

DisableWritebackOnDisconnect has a similar effect as DisableWritebackOnTM1Formulas. The important distinction between these two parameters is that **DisableWritebackOnDisconnect** applies only when there is no active server connection, while **DisableWritebackOnTM1Formulas** applies at all times.

DisableWritebackOnTM1Formulas

When enabled in the `Tm1p.ini` file, the **DisableWritebackOnTM1Formula** parameter prevents writeback to the TM1 server when you enter a value in a cell containing a TM1 worksheet formula.

When you set `DisableWritebackOnTM1Formula=T` in the `Tm1p.ini` file, entering a value in any worksheet cell containing a TM1 formula that writes to the TM1 server results in the TM1 formula being overwritten.

TM1 formulas that write to the server include DBR, DBRW, DBRA, DBS, DBSA, DBSS, and DBSW.

Setting `DisableWritebackOnTM1Formula=T` also restores multiple level undo/redo and multiple copy/paste operations in a worksheet containing TM1 formulas.

DisplayApplications

Indicates whether the Applications group is visible in Server Explorer on startup.

- T - Applications group is visible in Server Explorer.
- F - Applications group does not appear in Server Explorer.

DisplayChores

Indicates whether the Chores group is visible in Server Explorer on startup.

- T - Chores group is visible in Server Explorer.
- F - Chores group does not appear in Server Explorer.

DisplayControlCubes

Indicates whether the Control Cube group is visible in Server Explorer on startup.

- T - ControlCube group is visible in Server Explorer.
- F - ControlCube group does not appear in Server Explorer.

DisplayCubes

Indicates whether the Cubes group is visible in Server Explorer on startup.

- T - Cubes group is visible in Server Explorer.
- F - Cubes group does not appear in Server Explorer.

DisplayDimensions

Indicates whether the Dimensions group is visible in Server Explorer on startup.

- T - Dimensions group is visible in Server Explorer.
- F - Dimensions group does not appear in Server Explorer.

DisplayExplorerPropertiesWindow

Indicates whether the Properties pane is visible in Server Explorer on startup.

- T - Properties pane is visible.
- F (Default) - Properties pane does not appear.

DisplayProcesses

Indicates whether the Processes group is visible in Server Explorer at startup.

- T - Processes group is visible in Server Explorer.
- F - Processes group does not appear in Server Explorer.

DisplayReplications

Indicates whether the Replications group is visible in Server Explorer at startup.

- T - Replications group is visible in Server Explorer.
- F - Replications group does not appear in Server Explorer.

ExpandRowHeaderWidth

Indicates if the Row Headers will automatically expand to accommodate the width of the longest entry in the column.

- T(Default) - Row headers auto-expand.
- F - Row header must be manually expanded when necessary.

ExportAdminSvrSSLCert

Select this option if you want the certificate authority certificate which originally issued the IBM Cognos TM1 Admin Server's certificate to be exported from the Microsoft Windows certificate store at runtime.

- T (Default) - Original certificate is exported from the Windows certificate store.
- F - Original certificate is not exported.

In Cognos TM1 Options, select Use Certificate Store.

When this option is selected, you must also set a value for Export Certificate ID in the Cognos TM1 Options dialog box or AdminSvrSSLExportKeyID.

InSpreadsheetBrowser

Indicates if the In-Spreadsheet Browser or the Cube Viewer is the default browser.

- T - In-Spreadsheet Browser is the default browser. When you double-click a cube or view, it opens in an Excel document.
- F (Default) - Cube Viewer is the default browser. When you double-click a cube or view, it opens in the Cube Viewer.

IntegratedLogin

Indicates if your TM1 client uses Integrated Login or the standard TM1 security to log in to the IBM TM1 Server and other TM1 components.

- T - Client uses Integrated login, where your Microsoft Windows login username and password are used to access the TM1 Server and other components.
- F (Default) - Client uses standard TM1 Server security, where a username and password must be explicitly provided, when logging in to the TM1 Server and other components.

Before you enable this parameter, consult with your TM1 administrator to determine if Integrated Login is implemented on your TM1 Server.

On Cognos TM1 Options, use Integrated Login.

Language

Indicates the language used in the IBM TM1 Server client interface.

Clients will try to read from the locale and use that to set the language. That language will be used if it matches one of the supported languages. If the language entered does not match a supported language, English is used.

To override the default you can set the Language explicitly in the tm1p.ini using the following codes:

Language	Code
Brazilian Portuguese	bra
Croatian	hrv
Czech	csy
Chinese (Simplified)	sch
Chinese (Traditional)	tch
Danish	dan
Dutch	nld
German	deu
Finnish	fin
French	fra
Hungarian	hun
Italian	ita
Japanese	jpn
Kazakh	kaz
Korean	kor
Norwegian	nor
Polish	pol
Romanian	rom
Russian	rus
Spanish	esp
Slovenian	slv
Swedish	sve
Thai	tha
Turkish	trk

LocalServerNetworkProtocol

Determines the protocol that the local IBM TM1 Server uses to communicate with clients. Currently, the only valid setting is TCP.

MainWindowLayoutInfo

Generates dimension and position coordinates for the Server Explorer window; allows Server Explorer dimensions and position to be maintained between sessions.

The coordinates are automatically generated when you move or resize the Server Explorer window.

PreviousAdminHosts

Lists up to six of the most recently accessed Admin Hosts from the IBM Cognos TM1 Options Admin Host list.

PreviousDataDirectories

Lists up to six of the most recently accessed data directories in the Local Server Data Directory list from the IBM Cognos TM1 Options window.

The directories accessed within a single session are separated by semicolons. The directories accessed in different sessions are separated by commas.

SecurityAssignmentWindowLayoutInfo

Generates dimension and position coordinates for the Clients/Groups window; allows Clients/Groups dimensions and position to be maintained between sessions.

The coordinates are automatically generated when you move or resize the Clients/Groups window.

SentMsgsToServerCountWarning

The SentMsgsToServerCountWarning parameter is for development use only. The parameter is set to F by default.

Be sure not to change the default setting.

ShowAdminHostChangeWarning

Between session storage of whether to display or suppress a warning when the AdminHost is changed.

- T (Default)- When an AdminHost is changed, a warning message displays.
- F - No message is displayed when the AdminHost is changed.

ShowAliasAttributeWarning

Between session storage of whether to display or suppress a warning when the Alias Attribute is changed.

- T (Default)- When an Alias Attribute is changed, a warning message displays.
- F - No message is displayed when the Alias Attribute is changed.

ShowChoresSchedulingWarning

Between session storage of whether to display or suppress a warning when a chore schedule is changed.

- T (Default)- When a chore schedule is changed, a warning message displays.
- F - No message is displayed when a chore schedule is changed.

ShowCubeReplicationWarning

Between session storage of whether to display or suppress a warning when a cube is replicated.

- T (Default)- When a cube is replicated, a warning message displays.
- F - No message is displayed when a cube is replicated.

ShowDimDeleteElementWarning

Between session storage of whether to display or suppress a warning when a dimension element is deleted.

- T (Default)- When a dimension element is deleted, a warning message displays.
- F - No message is displayed when a dimension element is deleted.

ShowDimensionAccessWarning

Between session storage of whether to display or suppress a warning when a dimension is accessed.

- T (Default)- When a dimension is accessed, a warning message displays.
- F - No message is displayed when a dimension is accessed.

ShowDynamicSubsetWarning

Between session storage of whether to display or suppress a warning when a Dynamic Subset is changed.

- T (Default)- When a Dynamic Subset is changed, a warning message displays.
- F - No message is displayed when a Dynamic Subset is changed.

ShowPickOperationWarning

Between session storage of whether to display or suppress a warning when data is copied using the Pick Elements option.

- T (Default)- A warning message displays any time data is copied using the Pick Elements option.
- F - No message displays when data is copied using the Pick Elements option.

ShowProcessUNASCIIWarning

Between session storage of whether to display or suppress a warning when an ASCII datasource is processed.

- T (Default)- When an ASCII datasource is processed, a warning message displays.
- F - No message is displayed when an ASCII datasource is processed.

ShowProcessUNODBCWarning

Between session storage of whether to display or suppress a warning when an ODBC datasource is processed.

- T (Default)- Any time an ODBC datasource is processed, a warning message displays.
- F - No message displays when an ODBC datasource is processed.

SliceNewWorkbook

Determines how slices are generated from the Cube Viewer.

- T - Inserts slices in a new workbook.
- F (Default) - Inserts slices in a new sheet of the current workbook.

SubsetWindowLayoutInfo

Generates dimension and position coordinates for the Subset Editor window; allows Subset Editor dimensions and position to be maintained between sessions.

The coordinates are automatically generated when you move or resize the Subset Editor window.

TM1RebuildDefault

Determines if worksheets recalculate on opening by default

By default, when you slice a view into Microsoft Excel from IBM Cognos TM1, the workbook contains a workbook level named variable, TM1RebuildOption, that is set to 1 by default. This causes the worksheets in the book to be rebuilt on opening (which forces a recalculation to happen on each sheet in the book). This action is necessary if the sheets contain Active Forms. If you are not working with Active Forms, you may not want all workbooks to use this default behavior.

All worksheets recalculate when a Cognos TM1 workbook is opened. The workbook was created by slicing from Cognos TM1 Perspectives and contains the workbook level named variable TM1RebuildOption = 1.

By default, all new books created by slicing have a workbook level named variable TM1RebuildOption=1 in them. This makes the workbook rebuild on open, causing a recalculation of all sheets, which is important for Active Forms but may not be the desired behavior if you are primarily working with non-Active Form worksheets.

To prevent sheets from using the default to always rebuild when slicing, change TM1RebuildDefault from T to F (or add TM1RebuildDefault=F if it doesn't already exist) in your tm1p.ini file. When TM1RebuildDefault=F the books get the workbook level named variable set to TM1RebuildOption=0 on slicing. This is equivalent to how Cognos TM1 worked prior to the introduction of Active Forms.

If this option is set to T or doesn't exist, slicing from a view in Cognos TM1 Perspectives sets the TM1RebuildOption workbook level named variable to 1 which forces a rebuild on open. If this option is F, the name variable TM1RebuildOption is set to 0, which does not rebuild. For a particular report, for example, an Active Form, you can set the name variable to 1 instead of the default 0.

By default, a new install does not have the TM1RebuildDefault parameter at all which provides the default behavior of slicing with TM1RebuildOption=1.

Appendix B. Troubleshooting Planning Analytics on Cloud

This section answers some common questions that customers might have about IBM Planning Analytics on cloud.

Can I change the tm1s.cfg file?

Yes, you can modify the tm1s.cfg file. However, you must use the version that is provided with the Cloud deployment. This Cloud version has settings specific to Planning Analytics, such as the TM1 database port number. Do not use a customer's existing tm1s.cfg file if you are moving their TM1 model to the cloud. Some of the settings require a server restart before they become effective. Use the IBM Planning Analytics Administration to start or stop the TM1 Server.

Important:

Do not modify the following parameters in the tm1s.cfg file, otherwise your deployment will break:

- UseSSL
- CAMUseSSL
- SSLCertificateID
- SSLCertAuthority
- ClientCAMURI
- ServerCAMURI
- DatabaseDirectory
- LoggingDirectory
- ServerName
- PortNumber
- MessagePortNumber
- HTTPPortNumber

Can I remove the tm1s.cfg file?

No, the tm1s.cfg is a required file and should not be removed or deleted. If the tm1s.cfg file is removed, deleted, or corrupted, the TM1 database will no longer appear in Planning Analytics Administration and you will no longer able to manage it. In addition to the TM1 database no longer running, the following will no longer work in Planning Analytics Administration:

- Create a new database with the same name as the one that has its tm1s.cfg file removed or deleted.
- Rename and delete a database that has its tm1s.cfg file removed or deleted.

Have there been any changes to TM1 configuration parameters since 10.2.2?

Yes, parameters have been added to the TM1 database configuration file (`tm1s.cfg`), the TM1 Web configuration file (`tm1web_config.xml`), and the TM1 client configuration file (`tm1p.ini`) since 10.2.2. This section covers changes that were made after the 10.2.2.3 version of the *TM1 Installation and Configuration Guide* was published.

The following tables list parameters that were added in TM1 10.2.2.3 and TM1 10.2.2.4.

Table 3. New tm1s.cfg parameters in 10.2.2.3 and 10.2.2.4
New tm1s.cfg parameter
MDXSelectCalculatedMemberInputs (10.2.2.4)
SpreadErrorInTIDiscardsAllChanges (10.2.2.3)

Table 4. New tm1web_config.xml parameters in 10.2.2.3 and 10.2.2.4
New tm1web_config.xml parameter
ActionButtonFullRecalculationEnabled (10.2.2.4)
MixedCellPaste (10.2.2.3)

Table 5. New tm1p.ini parameters in 10.2.2.3 and 10.2.2.4
New tm1p.ini parameter
DisableAdminHostEntry (10.2.2.4)

The following table lists `tm1s.cfg` parameters that are new or changed in 10.3.

Table 6. tm1s.cfg parameters that are new or changed in 10.3	
tm1s.cfg parameter	**Change in 10.3**
AuditLogOn	Changed to Dynamic
ClientCAMURI	Changed to Dynamic
ClientPingCAMPassport	Changed to Dynamic
ClientPingCAMPassport	Default value changed to 900
EnableRuleStatsGathering	New
ExcelWebPublishEnabled	Changed to Dynamic
FIPSOperationMode	New
IntegratedSecurityMode	Changed to Dynamic
JobQueueMaxWaitTime	Changed to Dynamic
JobQueueThreadSleepTime	Changed to Dynamic
LogReleaseLineCount	Changed to Dynamic
MaskUserNameInServerTools	Default value changed to TRUE
MTQ	Default value changed to ALL
PerformanceMonitorOn	Changed to Dynamic
RawStoreDirectory	Changed to Dynamic
ServerCAMURI	Changed to Dynamic
ServerCAMURIRetryAttempts	Changed to Dynamic
ServerCAMURIRetryAttempts	Default value changed to 3
ServerLogging	Changed to Dynamic
UseLocalCopiesforPublicDynamicSubsets	Changed to Dynamic

The following table lists `tm1s.cfg` parameters that have are new or changed in Planning Analytics 2.0.0.

Table 7. tm1s.cfg parameters that have changed in 2.0.0 or later	
tm1s.cfg parameter	**Change in Planning Analytics 2.0**
EnableSandboxDimension	New
EnableTIDebugging	New
EventLogging	New
EventThreshold.ThreadRunningTime	New
EventThreshold.ThreadWaitingTime	New
EventThreshold.ThreadBlockingNumber	New
EventThreshold.PooledMemoryInMB	New
EventScanFrequency	New
FileRetry.Count	New
FileRetry.Delay	New
FileRetry.FileSpec	New
HTTPPortNumber	No longer optional. If HTTPPortNumber is not defined, port number "5001" is assigned.
IndexStoreDirectory	New
IPAddress	Obsolete, replaced by IPAddressV4 and IPAddressV6
MDXSelectCalculatedMemberInputs	No longer optional. Enabled by default.
MTFeeders	New
MTFeeders.AtStartup	New
ODBCTimeoutInSeconds	New
SQLRowsetSize	New

For all other parameters, see "Parameters in the tm1s.cfg file" on page 56, "Parameters in the Tm1p.ini file" on page 110, and TM1 Web configuration parameters.

Which TM1 databases are set up initially?

A single blank TM1 database, with the name *TM1*, is set up initially when the system is provisioned.

Note: If you'd like to change the default TM1 database name on your system, you can open a support case and request a name change at https://www.ibm.com/mysupport/.

How do I set up new TM1 databases?

If you are an administrator, you can set up new or additional TM1 databases in Planning Analytics on Cloud. For more information, see Create a database.

How can I migrate my existing TM1 database content and settings to the Cloud?

You can migrate your existing TM1 database content and settings to the Cloud by following these steps:

1. Set up a new TM1 database in Planning Analytics on Cloud. For more information, see Create a database.

2. Delete the default TM1 objects from the new TM1 database.

3. Copy the TM1 objects from your existing TM1 data directory to the data directory in the new TM1 database.

4. Add an existing Cognos user to the Cognos TM1 ADMIN group to act as the administrator. For more information, see Defining a Cognos user to function as a Cognos TM1 administrator (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/com.ibm.swg.ba.cognos.tm1_inst.2.0.0.doc/t_tm1op_defcamuser.html).

   Tip: All Planning Analytics user accounts are already configured by default with Cognos security mode 5.

For more information, see "Loading and migrating data in to IBM Planning Analytics" on page 41.

How do I access text files in Architect, TurboIntegrator or Performance Modeler?

When you specify access to text files, select the **Data Source** tab and ensure that the values for **Data Source Name** and **Data Source Name on Server** are different. See the following table.

Name of text box on Data Source tab	Description
Data Source Name	This is the path used by Architect and Performance Modeler when you run remote desktop. The full path is required. For example, type `\\data\s\prod\tm1\data\Integration\OracleGLSubAccountDim.csv`
Data Source Name on Server	This is the path used by TurboIntegrator processes on the TM1 database. The path should be relative to the TM1 data directory, although absolute paths are possible using `S:\...` **Important:** If you enter `\\data\s` as the **Data Source Name on Server** value, the TI process will fail. For example, type `.\Integration\OracleGLSubAccountDim.csv`

Note:

All files must reside on the Shared Drive for these reasons:

- The TM1 database cannot see the Remote Desktop file system.
- Only the shared drive is backed up. Therefore, you risk losing your data if you store files on the remote desktop disk drive.

How do I restore data from a backup?

To restore data from a backup, contact the Cloud Operations team. The Cloud Operations team performs daily backups of the data in your shared folder. They retain the last seven daily backups and an additional four weekly backups.

Important: Ensure that your data resides in your shared folder. Any files that are stored in a location other than the shared folder will not be backed up.

Why did the expand and collapse icons disappear in the object tree pane?

In some scenarios, running TM1 Architect or Server Explorer in the desktop session of the IBM Planning Analytics system causes the expand and collapse icons (+ and - symbols) in the object tree pane to disappear.

If this display issue happens, you cannot expand the object nodes in the tree and access your TM1 data objects.

As a workaround, close and reopen TM1 Architect or Server Explorer to correct the display.

Why am I seeing "Error opening the log file" in TM1 Architect?

Viewing the Message log in TM1 Architect with IBM Planning Analytics requires a workaround.

When you click **Server** > **View Message Log**, the following error displays: "Error opening the log file".

As a workaround, use a text editor, such as Windows Notepad, to open and view the `tm1server.log` file from the `\\data\s\prod\tm1` shared folder location.

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