Teamcenter 13.3

Managing Preferences

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1. Getting familiar with preferences

Why do I need preferences?

You can use Teamcenter preferences to control various aspects of Teamcenter's behavior and appearance.

Following are only a few examples of what preferences control:

- Whether or not live updates are allowed.
- Password requirements when not using LDAP.
- Which XML rendering template (XRT) to use.
- Which query to use as the default quick access query.

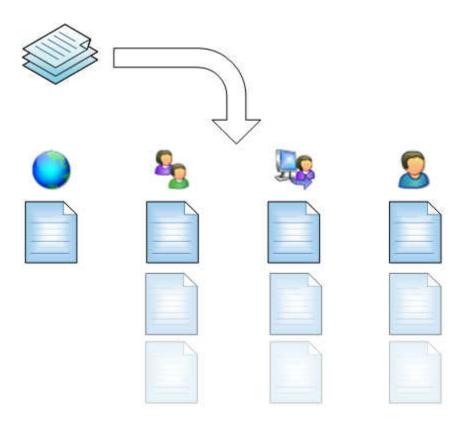
Siemens Digital Industries Software recommends browsing through the list of preferences to see which ones might be useful to you. Each preference's definition will document its use.

How do preferences work?

At their core, preferences are simply a way to store information. They are similar to environment variables, except that they they operate with several layers of permissions.

Overview

Each preference consists of two major components, a definition and instances.



A preference definition along with all of its preference instances are together considered to be a preference.



The preference definition is like a blueprint. It defines the nature of the preference and is used to create the instances at the various locations. Even though it may define a default value, the definition itself is never retrieved or read as a preference. If there are no instances of this preference, there is no value.



A preference instance created at the site location applies to everyone logged in to Teamcenter unless overridden.

There can be only one site instance.



Any preference instances created at the group location apply only to users who are currently logged in as that group, and they supercede site preferences.

There can be one group instance created for each group.



Any preference instances created at the role location apply only to users who are currently logged in as that role (regardless of group), and they supercede site and group preferences.

There can be one role instance created for each role.



Any preference instances created at the user location apply only to that user, and they supercede site, group, and role preferences.

There can be one user instance created for each user.

Preference definition

You use the preference definition to create the overall limits and restrictions on the preference as well as setting the default value. Think of this as an abstract template from which the preference itself will be instantiated. Following are the fields used to define a preference definition:

Name The name of the preference. Naming patterns help organize the preferences and give

an idea of what they do even before you read the description. See the list of existing

preferences for examples.

Protection

Determines where and by whom it can be instantiated.

Scope

Type Specify the preference value type.

Multiple Specify if this preference can hold multiple values.

Description Explain the use of the preference. What does it control? What format is expected for

the values? Etc.

Value Specify the default value that an instance will contain when initially created.

Environment Retrieve the value from an OS environment variable of the same name.

Category Organize related preferences based on their category. There are many existing

categories you can use, or you can create your own.

Preference instance

You create a preference instance from its definition. When you create a new instance of a preference it must belong to a location. This location specifies when it is active and its priority in the hierarchy. You cannot create a preference instance if the protection scope does not allow it.

When referring to preference instances, it is common to shorten the phrase. For example, the preference instance in the Engineering group location is commonly referred to as the Engineering group preference.

When you create a new preference, you specify two things:

Location Locations are where the preference instances reside. You can create preference

instances at the following locations:

- User
- Role
- Group
- Site / System

Value You can keep the default value from the definition or specify a new one.

Preference locations

User

This assigns the instance to a specific user. These are commonly the preferences that Teamcenter uses to track things like column widths in the rich client, or most recently searched text, for example. Although you can control your active preferences like style sheet registration down to the user level, it is normally recommended that you keep those kinds of settings to the Group level or higher. It makes things easier when people move in and out of groups and roles.

Role

You can control the behavior based on a user's role. This is handy for things such as style sheets. Keep the consumer's page simple while being able to provide the information the author or approver needs.

Group

Similar to the **Role** location, you can control the behavior at the next step up, at the group level.

• Site / System

Preferences created at these locations apply to everyone. This is typically where you instantiate preferences that control system-wide behavior or default behavior that can be overridden at the group, role, or user level.

Site preferences only allow a single instance, but a dba can change the protection scope of a site preference to something else.

System preferences do not allow their protection scope to be changed, even by a dba. In all other ways, they behave like a site preference.

Caution:

An existing non-system preference may be changed into a system preference by a dba, but once it has been changed, it *cannot* be changed back. If you want to change it, it *must* be deleted and re-created.

Customer-facing preferences

You control an aspect of the UI or behavior directly by making changes to the preference. Examples of these preferences are configuring default paste relations, which style sheets are used in a given situation, or how the Dispatcher handles certain file types.

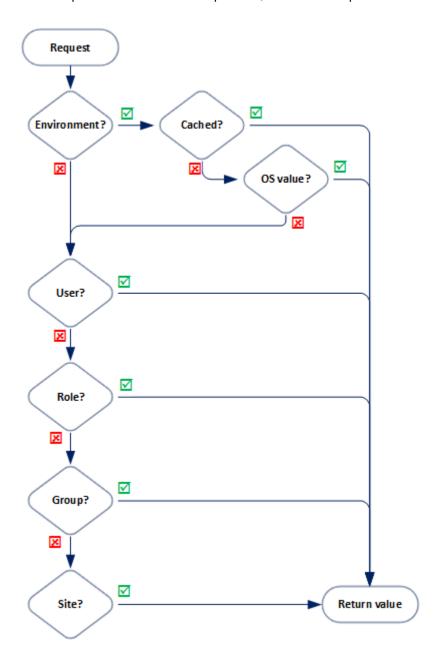
Internal preferences

Teamcenter uses preferences extensively to remember application parameters, like column width. Even though you can see and possibly modify the values of these preferences, it is not advised to do so.

How does Teamcenter retrieve preferences?

You might be interested to know how Teamcenter retrieves preference values, which can be useful in planning your overall strategy.

When a preference value is requested, Teamcenter performs the following steps to return a value:



- 1. If the preference is an **Environment** preference, **tcserver** checks the value of the OS environment variable of the same name.
 - If the environment variable exists, the value returned and cached for future requests.
- 2. If the preference is not an **Environment** preference,

or if there was no OS value present, **tcserver** looks for a preference instance at the **User** location for the current user. If it is found, it returns the value.

- 3. If **tcserver** has not returned a preference value yet, it looks for a preference instance at the **Role** location for the user's current role. If it is found, it returns the value.
- 4. If **tcserver** has not returned a preference value yet, it looks for a preference instance at the **Group** location for the user's current group. If it is found, it returns the value.
- 5. If **tcserver** has not returned a preference value yet, it returns the value of the preference instance at the **Site / System** location.

Who can make changes to preferences?

Because you would not want all users to have access to change important settings, you can control access to preferences based on the user's current group and role.

Protection scope

Use the preference's protection scope to control the level at which the preference can be created or modified. The protection scope allows anyone at that level or higher to make changes to the preference value. The priority is as follows:

	Any user	Group Administrator	dba
User	~	✓	~
Role		~	~
Group		~	~
Site / System			~

Any user

Can create, modify, and delete their own User preference instances.

Group Administrator

Can create, modify, and delete the User preference instances of members of their group, as well as Group preference instances for their group and Role instances for any role in their group.

dba

Can create, modify, and delete all preferences at all locations.

Examples

- The **DocumentRevision.SUMMARYRENDERING** preference definition has a protection scope of **User**, and therefore allows preference instances to be created at any location.
- The WRKFLW_show_user_assignment_options preference definition, on the other hand, has a protection scope of **Group**, and cannot be created at the user or role locations. They can only be created at the group or site locations.
- The BMF_CUSTOM_IMPLEMENTOR_PATH preference definition has a protection scope of Site, and therefore allows only a site instance to be created.
- The TC_PREFS_TO_HIDE definition has a protection scope of System, and only allows a site instance to be created. However, unlike a preference with a site protection scope, this preference's protection scope cannot be changed.

What are environment preferences?

You can define a preference to retrieve its value from an environment variable in the operating system.

If you want to pass multiple values from the environment to the preference, you must configure the following:

- Set the preference's **Multiple** setting to **multiple**.
- Use the appropriate separator in the environment variable. The environment variable is read from the operating system on which the **tcserver** process is running.

```
Windows Semicolon — For example, MyEnvPref=Value1; Value1; Value3
```

The environment variable is only read by the **tcserver** process when the value is first requested, so any changes made to the environment variable after that will not be reflected in the Teamcenter preference until after the next time the **tcserver** process is started.

Remember, the environment variable is read from the environment where the **tcserver** process is running, which is not necessarily the environment where the client is running.

An example of preference hierarchy

Everything in this example is based on a single preference, one which registers a style sheet to a business object for the summary view. It could be any preference as all preferences behave the same way. Since this preference definition's protection scope is **User**, you can create instances at the **Site**, **Group**, **Role**, and **User** location. This means you can control its value based on your users' current group, role, or even user name.

Example: I want the summary view's property layout for item revisions to depend on my users' login information

Following are the details of this example.

- You have three groups: Engineering, Manufacturing, and Testing. Each group has three roles: Manager, Designer, and Viewer.
- You want a default style sheet that everyone will use unless otherwise specified.
- Your technical users need an extended set of properties.
- Your managers need a page of workflow information.
- Your designers need classification information.
- You have users that just need a simplified layout for viewing.
- You have Conner. Conner is a power-user.
 Conner needs a special layout regardless of which group or role he's in.

Style sheet datasets

Five style sheet datasets are considered.

ItemRevSummary

Configured to be the default style sheet for the Item Revision summary page. This applies to everyone unless overridden.

IRSumTech

Configured to provides the extra properties for the Engineering and Manufacturing groups, but not for any other groups.

IRSumMgr

Configured to display workflow information for the Manager role, regardless of group.

IRSumDes

Configured to show the classification trace for the Designer role, regardless of group.

ConnersIRSum

Configured for Conner. Conner has his own requirements

Preference instances

Assign the style sheets to the various groups and roles, and even users if desired, by creating each preference instance with the value pointing to the respective style sheet. In this example, there are 6 preference instances created.

User Conners IRSum

preferences

Role Manager: IRSumMgr

preferences

Designer: IRSumDes

Group Engineering: IRSumTech

preferences

Manufacturing: IRSumTech

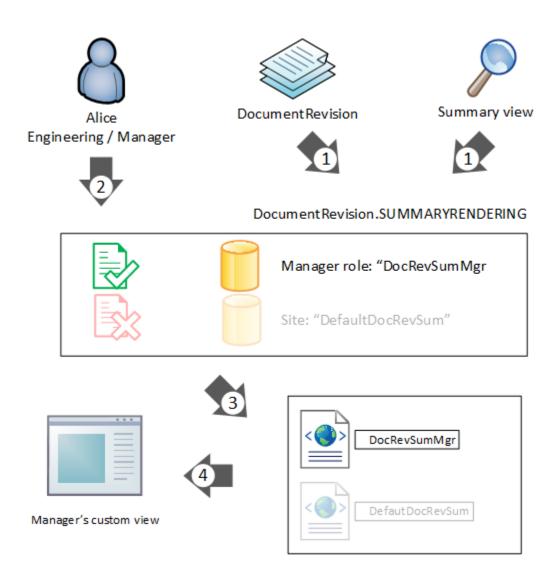
Site *value:* ItemRevSum

preference

The Viewer role and the Tester group have no preference instances created for their location.

How does Teamcenter choose which preference to use?

In this example, Alice selects a **DocumentRevision** business object and uses the **Summary** tab. When she does this, Teamcenter performs a few steps to determine which style sheet to use.



1. Based on the object type and the view location, the system knows the name of the preference instances to retrieve.

In this example, **DocumentRevision.SUMMARYRENDERING**.

There are two instances: one at the **Site** location, and one at the Manager **Role** location.

2. Based on the user's current session information, Teamcenter chooses the appropriate preference instance.

Less specific locations are overridden by more specific locations.

- 3. The value of the chosen preference instance is read, providing the name of the style sheet to retrieve.
- 4. Teamcenter uses the style sheet to render the view.

Result

Your users see a different set of information based on what group or role they are in because the client uses different style sheets.

User - Group / Role	Preference instance build-up	Resulting style sheet
Alice — Engineering / Manager	Alice: none Manager: IRSumMgr Engineering: IRSumTech Site: ItemRevSum	IRSumMgr
Ted — Manufacturing / Manager	Ted: none Manager: IRSumMgr Manufacturing: IRSumTech Site: ItemRevSum	IRSumMgr
Sue — Testing / Manager	Sue: none Manager: IRSumMgr Testing: none Site: ItemRevSum	IRSumMgr
Bob — Engineering / Designer	Bob: none Designer: IRSumDes Engineering: IRSumTech Site: ItemRevSum	IRSumDes
Carol — Engineering / Viewer	Carol: none Viewer: none Engineering: IRSumTech Site: ItemRevSum	IRSumTech
Pat — Testing / Viewer	Pat: none Viewer: none Testing: none Site: ItemRevSum	ItemRevSum
Conner — Engineering / Manager	Conner: ConnersIRSum Manager: IRSumMgr Engineering: IRSumTech Site: ItemRevSum	ConnersIRSum
Conner — Testing / Viewer	Conner: ConnersIRSum Viewer: none Testing: none Site: ItemRevSum	ConnersIRSum

- Alice sees the style sheet for Managers because she does not have a user preference set to supersede
 it. The site preference is overridden by the Engineering group preference, which is overridden by the
 Manager role preference. Ted has the same result; the Manufacturing group preference is overridden
 by the Manager preference. Sue doesn't have a group preference, but she still gets the Manager role
 preference.
- Bob sees the style sheet for Designers because of his role, similar to the preceding example.

1. Getting familiar with preferences

- Carol sees the tech style sheet because there is no role preference for Viewers.
- Pat's group and role do not have preferences associated with them, and neither does she have a user preference, so she gets the default style sheet defined by the site preference.
- Conner gets Conner's style sheet regardless of which group or role he's in, since a user preference supersedes all others.

Where can I get a list of preferences?

There are several sources from which to retrieve a list of preferences and their definitions.

Administration data report

You can find the **Administration Data Report** in the **References for Administrators and Customizers** in the Teamcenter section of Support Center. In this report, you will find a complete list of all preferences shipped with Teamcenter. When you install additional features, like Dispatcher, NX Integration, 4th Generation Design, and so on, additional preferences will be added to your site. To get the most accurate and up-to-date listing of preferences contained in your site, you must create your own Administration Data Documentation report.

Rich client

You can use the various tabs of the rich client's **Edit→Options** menu to interact directly with preferences, including a report of which preferences have changed since installation.

Raw XML export

You can produce an XML file containing preference information using the **preferences_manager** utility.

2. Creating and editing preferences

Exporting, editing, and importing preferences

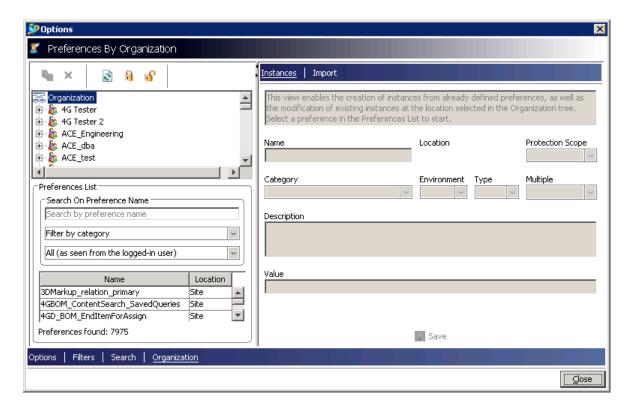
You can manually edit preference XML files to create or modify a preference, and then use the **preferences_manager** utility to load the XML files, or use the rich client to import the files.

The **preferences_manager** supports batch operations and effective bulk processing.

- 1. Make a copy of the preference XML file, for example, the **tc_preferences.xml** file.
- 2. Apply your changes using an XML editor.
- 3. Import the changes using the **preferences_manager** utility or the rich client **Options** dialog box. For more information about a **preferences_manager** utility, see the *Utilities Reference*.

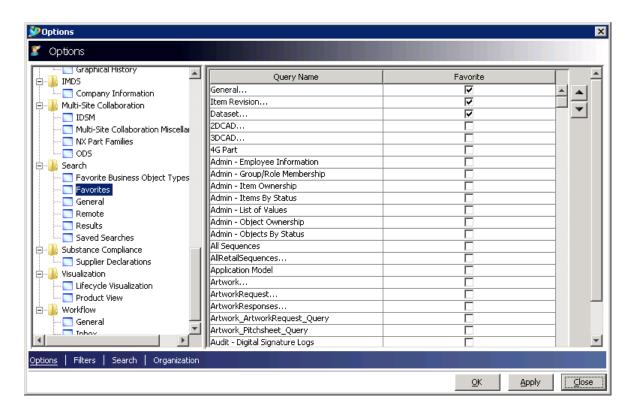
Working with preferences in the rich client

Choose **Edit**—**Options** to display the **Options** dialog box. The banner at the bottom of this dialog box contains tabs for the different pages: **Options**, **Filters**, **Search**, and **Organization**.



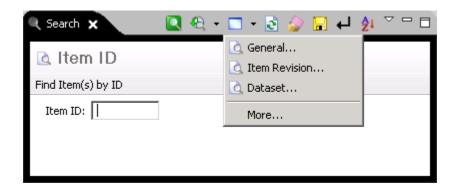
Viewing or modifying common user preference instances

The **Options** page lets you interactively specify a wide range of behaviors by checking check boxes and entering values into fields. Each option in this page represents a preference. When you make changes, Teamcenter either changes the associated existing user preference, or creates it if it doesn't already exist.



To see the information about the associated preference, hover your mouse cursor over the option. This information is available even when the behavior is not available for editing. In this example, the **Search**—**Favorites** selection allows us to change the **QRYColumnsShownPref** preference. This controls which queries are shown in the advanced search list.

	Query Name	Favorite
General		▽
Item Revision		▽
Dataset	Preference name: QRYColu	mnsShownPref
2DCAD	Protection scope: User	
3DCAD	Description:	
4G Part	Specifies the list of default ((favorite) saved queries used for
Admin - Employee Information		
Admin - Group/Role Membership		
Admin - Item Ownership		
Admin - Items By Status		



Preferences that affect display order may reorder values automatically when you create a user preference.

After you make your changes, click **OK** to save your changes and finish, or click **Apply** to save your changes and continue editing.

Viewing or modifying other preference instances

Use the **Filters** or **Search** pages to access group, role, and site preference instances, as well as user preference instances that are not available in the **Options** page's UI.

Optionally, use the **Filter by location** drop-down list to further filter the instances by location. The list is based on your current session information.



Preferences that define columns and column widths cannot be modified from the **Options** dialog box. These are interdependent preferences. When a column preference is modified, the corresponding column width preference must also be modified to ensure the table displays properly in Teamcenter. Interdependent preferences are most easily modified by right-clicking the **Properties** table in Teamcenter and choosing the **Insert columns** or **Remove this column** command.

Alternatively, you can modify these preferences using the **preferences_manager** utility or editing the preferences XML file.

Create new group or role preference instances

Depending on your dba or group administrator status, you will either see the entire organization or just a portion of it. Either way, use the organization chart to navigate to an available group, role, or user location to view or modify that location's existing preference instances or to create new ones.

dba A **dba** can work with the entire organization structure for group, role, and user

preferences.

Group administrato A non-dba **Group Administrator** (GA) can only work with preference instances for

administrato their **Group** and any **Role**s it contains.

regular users Any non-dba, non-GA user will see their user context options (groups and roles) and

work with their own preferences instances.

Tip:

The **Organization** window is interactive. When you select any node in the organization tree, preferences from all scopes are shown unless you manually selects a particular scope from the list. You may wish to use refresh to force the window to update based on your selection.

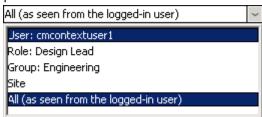
Example

You are the **Engineering** group administrator. You want to modify a *specific user's* default UI panel when they open **Edit Options** to show the favorite search listing.

1. Navigate to their user location.



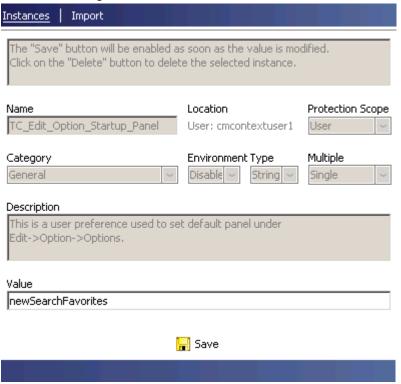
2. Optionally, select the drop-down value to filter preference instances to only show their user preferences.



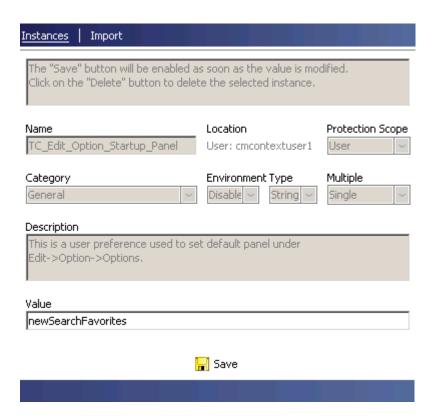
3. Find the preference instance in the list and highlight it.

Name	Location
Fnd0HomeFolder_ColumnPreferences	User
Fnd0HomeFolder_ColumnWidthPreferences	User
HistoryIDList	User
HistoryTitleList	User
HistoryTypeList	User
ItemRevision_PseudoFolder	User
TC_Edit_Option_Startup_Panel	User

4. Make the change, and then click **Save**.



5. Make the change, and then click **Save**.



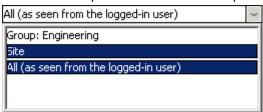
Example

You are the **Engineering** group administrator. You want to create a *group preference* for your users' default UI panel when they open **Edit**—**Options** to show the favorite search listing.

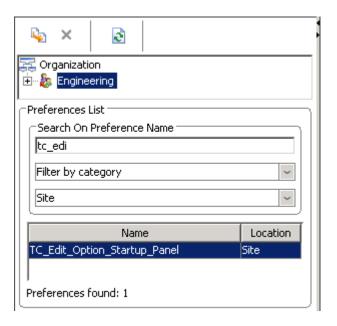
1. Navigate to your group location.



2. Select the drop-down value to filter preference instances to only show site preferences.



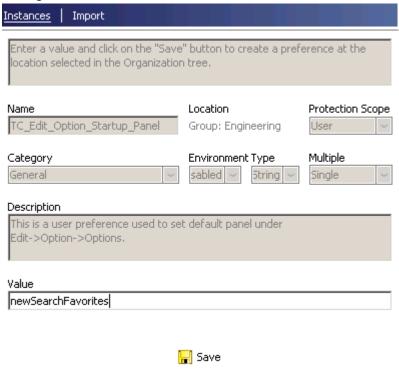
3. Use the **Search on Preference Name** to locate the site preference.



With the site preference highlighted, click the Create new preference instance button to 4. create a new instance at the highlighted location.



Change the value, and then click Save. 5.



What if preference names change when imported?

When importing preferences from the command-line, you may notice that in some cases the letters **ug** are automatically changed to **nx**. This is to assist in the conversion of older preferences. It does not matter if the original **ug** letters are uppercase, lowercase, or mixed case.

The replacement is all lowercase if the original is lowercase, but uppercase if either or both of the **ug** characters are uppercase.

This automatic conversion of **ug** occurs when any of the following criteria are met:

- When at the beginning of the preference name, followed by a special character.
- When preceded by a special character at the end of the preference name.
- When both preceded and followed by a special character in the middle of the preference name.

Special Characters

- _ (underscore)
- , (comma)
- (space)
- . (period)
- ; (semicolon)
- + (plus)
- - (minus)

Examples of automatic conversion

- uq_preference gets changed to nx_preference.
- Preference_for_uq gets changed to Preference_for_nx.
- Preference_ug_setting gets changed to Preference_nx_setting.
- **PreferenceForUg** does not get changed.

Specify dual OS values for a single preference

If you import preferences using the **preferences_manager** utility, you can define both Linux and Windows values for the same preference. To do so, you must set **array** to false, directing Teamcenter to return a single value for the preference query, even when multiple values are defined.

Note:

If you define both Linux and Windows values for a preference, the value returned is based on the server operating system.

- 1. Create an XML file containing the relevant preference definitions.
- 2. Set array to false.
- 3. Define **platform** values for both Linux (**UNX**) and Windows (**WNT**). For example:

4. Import the XML file to the database with the **preferences_manager** utility using the **OVERRIDE** option.

For more information about this utility, see Utilities Reference.

Tips for defining preferences

When defining preferences, please note the following:

Name

When entering the name of the preference, avoid the following characters:

- , comma
- period
- ; semicolon
- + plus

2. Creating and editing preferences

- hyphen/minus
- __ underscore

Type

Following are the five types of preference values:

String

Valid values are any valid string of characters.

Logical

Valid value is one of any logical pair (on or off, true or false, yes or no, 0 or 1).

Note:

Logical preferences may have more than one valid value. For example, **0**, **No**, **Off**, and **False** may all be equivalent valid values of the same preference that achieve the same result. The value shown in the **Options** pane of the Options dialog box may differ from the possible values listed for a preference, but both values are valid settings.

Integer

Valid values are any positive integer.

• Double

Valid values are floating point (real) numbers (-12.34, 99.05).

Date

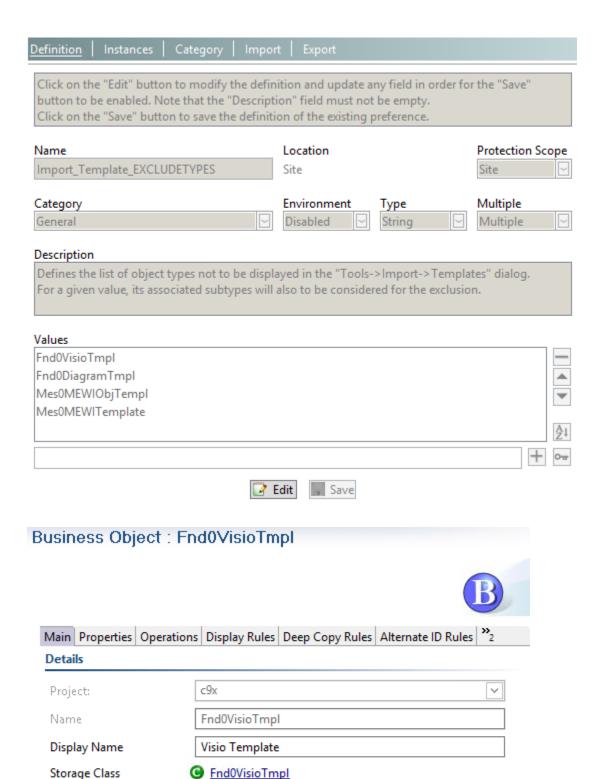
Valid values are calendar date and time entries in *DD-MM-YYYY HH-MM-SS* format, for example, **23-Fe-2008 16-32-45**.

Note:

To ensure correct display of date format in Teamcenter, Siemens Digital Industries Software recommends users set values from the **Options** dialog box, rather than through the XML file.

Value

When referring to business objects, do not enter their localized name. Instead, use their database (real) name. For example, the **Import_Template_EXCLUDETYPES** preference refers to **Fnd0VisioTmpl** instead of **Visio Template**.



B Fnd0DiagramTmpl
Fnd0VisioTmplRevision

Fnd0VisioTmplMaster

Parent

Form

Item Revision