



StarTeam 16.2

Release Notes

Micro Focus
The Lawn
22-30 Old Bath Road
Newbury, Berkshire RG14 1QN
UK
<http://www.microfocus.com>

Copyright © Micro Focus 2017. All rights reserved.

MICRO FOCUS, the Micro Focus logo and StarTeam are trademarks or registered trademarks of Micro Focus IP Development Limited or its subsidiaries or affiliated companies in the United States, United Kingdom and other countries.

All other marks are the property of their respective owners.

2017-11-02

Contents

StarTeam Release Notes	5
What's New	6
16.2	6
StarTeam Command Line Tools	6
StarTeam Cross-Platform Client	6
StarTeam Git Command Line Utility	7
StarTeam Server	7
Workflow Extensions	8
StarTeam Web Client	8
16.1 Update 1	9
StarTeam Eclipse Plugin	9
StarTeam Quality Center Synchronizer	9
16.1	9
StarTeam Command Line Tools	9
StarTeam Cross-Platform Client	10
StarTeam Server	12
16.0	13
StarTeam Command Line Tools	13
StarTeam Cross-Platform Client	13
StarTeam Server	15
15.1	15
StarTeam Command Line Tools	16
StarTeam Cross-Platform Client	16
StarTeam Server	17
StarTeam Web Client	17
15.0	18
All Components	18
StarTeam Cross-Platform Client	18
Datamart	18
MPX	18
StarTeam Command Line Tools	19
StarTeam Web Client	19
14.4	20
All Components	20
Datamart	20
StarTeam Command Line Tools	20
StarTeam Cross-Platform Client	21
StarTeam Eclipse Plugin	22
StarTeam Server	22
StarTeam Visual Studio Plugin	22
14.3	22
All Components	22
StarTeam Command Line Tools	23
StarTeam Cross-Platform Client	23
StarTeam Server	24
StarTeam Web Client	24
TeamInspector	24
System Requirements	25
StarTeam Cross-Platform Client System Requirements	25
Datamart System Requirements	26
StarTeam Eclipse Plugin System Requirements	27

StarTeam Layout Designer System Requirements	27
MPX System Requirements	28
StarTeam Quality Center Synchronizer System Requirements	29
StarTeam Server System Requirements	30
Operating Systems	30
Databases	30
Web Browsers	31
Third Party Software	31
StarTeam Server and Microsoft SQL Server Express on the Same Computer	32
StarTeam Server and Database on Different Computers	32
Database Server System Requirements	33
Unicode Character Sets	33
System Requirements for Linux	33
StarTeam Visual Studio Plugin System Requirements	33
StarTeam Web Client System Requirements	34
StarTeam Web Server System Requirements	34
StarTeam Workflow Extensions System Requirements	34
TeamInspector System Requirements	34
StarTeam Microsoft SCC Integration Requirements	36
Known Issues	37
Documentation Known Issues	37
StarTeam Command Line Known Issues	37
StarTeam Cross-Platform Client Known Issues	38
StarTeam Eclipse Plugin Known Issues	39
MPX Known Issues	40
StarTeam SDK Known Issues	41
StarTeam Server Known Issues	41
StarTeam Layout Designer Known Issues	43
StarTeam Quality Center Synchronizer Known Issues	43
StarTeam Visual Studio Plugin Known Issues and Limitations	44
StarTeam Web Client Known Issues	46
StarTeam Web Server Known Issues	47
TeamInspector Known Issues	47
StarTeam Microsoft SCC Integration Known Issues and Installation Notes	48
Contacting Micro Focus	50
Information Needed by Micro Focus SupportLine	50
Creating a Dump File	50
Creating Debug Files	50
Licensing Information	51

StarTeam Release Notes

These release notes contain information that might not appear in the Help. Read them in their entirety before you install the product.



Note: This document contains a number of links to external web sites. Micro Focus cannot be responsible for the contents of the website or for the contents of any site to which it might link. Web sites by their nature can change very rapidly and although we try to keep our links up-to-date, we cannot guarantee that they will always work as expected.

What's New

16.2

The following are the new features in this release.

StarTeam Command Line Tools

The following are the updates for this release of the StarTeam Command Line Tools.

New Parameter `-pi`

A new `-pi` parameter has been added for `add`, `ci`, and `sync` commands. When adding `-pi typename: "path"`, the type name is the internal name of a component that supports being a process item type, for example change request, task, requirement, story, custom component name.

New Parameter: `rolldown`

In the `Select` command, `rolldown` can only be specified for tree item types. When specified, the children of the selected tree items (specifically, the entire tree of descendants) are added to the result set.

StarTeam Cross-Platform Client

The following are the new features for this release of the StarTeam Cross-Platform Client.

Support for Red Hat Enterprise Linux 7.3

StarTeam Cross-Platform Client now supports Red Hat Enterprise Linux 7.3.

Configuring Projects to Create Workspace Change Packages

StarTeam Cross-Platform Client now provides a way control workspace Change Package creation at the project-level. If the feature is enabled (the default), then Change Packages are created when files are checked in, folders are created, and etc. The feature behavior changes depending on the StarTeam Server configuration in the `starteam-server-configs.xml` file.

Refer to the Project section, Configuring Projects to Create Workspace Change Packages topic, of the StarTeam Cross-Platform Client help for more information on how to use this feature.

Favorite Projects

StarTeam Cross-Platform Client now provides the ability to save projects to Favorites, making it easy to return to frequently used projects.


Server Outage Information Available Through StarTeam Cross-Platform Client

Server outage information is now available through StarTeam Cross-Platform Client.

StarTeam Git Command Line Utility.

The StarTeam Git Command Line Utility brings centralized source code control and security to teams using Git. Git users can connect to the StarTeam Server using the command line utility to push and pull changes with their local Git repository. Teams are able to share Projects in StarTeam such that developers can work synchronously either in Git or StarTeam clients.

With the StarTeam Git Command Line Utility, developers can:

- Use the `clone` command to clone a StarTeam View from a StarTeam Server and populate the master branch in a local Git repository with the tip content.
 -  **Important:** The `clone` command initializes the developers local Git workspace and allows them to issue further commands to interact with the StarTeam View content. User credentials specified during the `clone` command will be cached and re-used during subsequent `fetch`, `pull`, and `push` commands from the same local repository unless a different username or password is specified during those commands. However, caching of credentials is only available on Microsoft Windows platforms and all commands issued from Linux must specify a username and password.
- Use the `fetch` and `pull` commands to update a local Git repository with changes from StarTeam. When you `pull` changes, each StarTeam *Change Package* becomes a commit in a local Git repository.
- Use the `push` command to push changes from a local Git repository into StarTeam Server. Each Git commit becomes a StarTeam Change Package, including the user ID, timestamp, and comment.

Benefits

- Developers are able to use their preferred Git client tools on a local Git repository while connecting with the centralized StarTeam source code control system using the StarTeam Git Command Line Utility.
- Enterprises retain what StarTeam offers: rich change management, ALM traceability, Issue/Process enforcement, security, and visibility.

StarTeam Server

The following are the new features for this release of the StarTeam Server.

Offline Proxy Utility

Use the new Offline Proxy utility to communicate to StarTeam users that the server is down for maintenance. Previously, when StarTeam Server is down due to database issues or maintenance, a user connecting with StarTeam SDK or StarTeam Cross-Platform Client gets a message stating, "Unable to connect to server." Since they do not know what the reason is, they might raise issues with their IT department. When using the Offline Proxy utility, administrators can better communicate the reason for the disruption in the Server, avoiding unnecessary IT service tickets.

Server Message Notification

The new Server Message Notification alerts users when logging in or when the StarTeam Offline Proxy is running. Configure the message from the Server Administration Tool Configuration.

Server Hooks

Server hooks are scripts that run automatically every time a particular event occurs in the StarTeam Server repository. Server hooks allow the user to trigger customizable actions at key points in the development life cycle. For more information, refer to the "Server Hooks" topic in the *Server Administration Help*.

Custom Component Builder Enhancements

StarTeam Server now provides the ability to add Primary Descriptors and Secondary Descriptors using Custom Component Builder.

Support for Oracle Database Character Set AL32UTF8

StarTeam Server now supports Oracle database character set AL32UTF8.

Support for Oracle Database 12c Container Databases

StarTeam Server now supports Oracle Database 12c container databases.

Support for Oracle 12c version 12.2

StarTeam Server now supports Oracle 12c version 12.2.

Support for SQL Server 2016

StarTeam Server now supports SQL Server 2016.

Support for Microsoft Windows Server 2016

StarTeam Server now supports Microsoft Windows Server 2016.

Support for PostgreSQL 9.6

StarTeam Server now supports PostgreSQL 9.6.

De-support of Object Caching on Server

Object Caching is de-supported on the server. StarTeam Server will ignore `ObjectTypes Setting` setting defined in `CacheAgentConfig.xml` file for all cache agents which include root and remote cache agents.

Workflow Extensions

The following are the new features for this release of StarFlow Extensions.

New Controls for Extensions `guicomponents.jar`

New controls have been added to the extensions `guicomponents.jar`. The controls are:

- `MultiSelectCheckBoxControl`
- `UserListPropertyEditor`
- `ContentEditor`

For more details, refer to the *Workflow Extensions User's Guide*.

StarTeam Web Client

The following are the new features for this release of the StarTeam Web Client.

New File Service Button in File List Perspective

The StarTeam Web Client **File List** perspective now has a **Use File Service** button.

This is a toggle button that indicates whether you want to use file service or not.

When the button is not clicked, the file list loads without file statuses.

If you want to use the file service, click the **Use File Service** button and click **Refresh**. The File Service launches and file statuses, check in, and check out files is visible.

16.1 Update 1

The following are the new features in this release.

StarTeam Eclipse Plugin

The following are the new features for this release of the StarTeam Eclipse Plugin.

StarTeam Eclipse Plugin Now Supports Stories

StarTeam Eclipse Plugin now supports Stories, giving you the ability to:

- List Stories
- Create, edit, and delete Stories
- Modify Story properties in the Item Editor, including support for Rich Text.
- Access Story Preference page
- Edit Rich Text using Content Property

StarTeam Eclipse Plugin Available for Download Only

The installation for StarTeam Eclipse Plugin is available only from the Micro Focus Update site: <http://altd.borland.com/update/starteam16/4.4>.

StarTeam Quality Center Synchronizer

Support for 64-Bit Quality Center Synchronizer

StarTeam now supports a 64-bit Quality Center Synchronizer.

16.1

The following are the new features in this release.

StarTeam Command Line Tools

The following are the updates for this release of the StarTeam Command Line Tools.

Add-User Command

Three new parameters have been added to the `add-users` command:

- | | |
|------------------------------------|---|
| -distinguishedname | User's directory service distinguished name |
| -directoryservicevalidation | If specified, turns on directory service validation. |
| -fixedlicense | If specified, sets the user to inherit a fixed license. |

Update-User Command

Use the `update-user` command to update a user properties on the StarTeam Server.

Either `-logonname` or `-userid` are required to identify the user. All other parameters are optional.

If specified, the new property will be applied to the user.

Only users with administrative privileges can run this command on behalf of any user.

Manage-User Command

Use the `manage-user` command to manage another user. The command must be run by an administrator, and must specify the logon name of the user being managed.

It is not possible to manage your own account with this command unless you are changing a password with `-changePassword`.

Select Command

The `Select` command now contains new queries:

- attachments** Use this option to generate a report identifying all the attachments by name, ID, size, and md5 for each item in the select list.
- duplicate-shares** Use this option to override properties. If specified, it generates an exception report of all items which are shares of each other in the selected view.
- missing-artifacts** Use this option to override properties. If specified, it generates an exception report of all items which are not attached to the label (specified by `attached-to-label`) in the selected view.

Share Command

The `Share` command shares any StarTeam artifact from one view to another view, from a folder to another folder in the same view, and etc. The `Share` command returns the item ID of the newly created share.

Attachment Command

Use the `attachment` command to attach an item to a change request, task or requirement.

Check Out Command

A new parameter, `-chgpkgid 1234567`, has been added to the `co` command.

If specified, the checkout is based on a committed change package, with the specified view member ID.

All files attached to that change package are checked out at the revisions they were at when the change package was committed.

Make Public Command

Use the `make-public` command to convert private filters or queries to public.

Reorganized Command Line Help

Common options no longer reside in a separate topic. Common options appear among options within each command, making it easier to select options while working within a command's help topic.

StarTeam Cross-Platform Client

The following are the new features for this release of the StarTeam Cross-Platform Client.

Support for Microsoft Visual Studio 2017

StarTeam now supports Microsoft Visual Studio 2017.

Bulk Updates

Edit multiple items of a particular type in bulk (as a group).

For example, you can update three Change Requests status collectively to Finished.

This feature has a new **Bulk Update** menu item, and is available for Change Request, Requirements, Tasks types, and custom components.

Search Supports Wildcard Queries

Search now support wildcard and prefix queries.

Search Using Display Name of Property

Search now supports the use of property display name. In past releases, search queries of the type field:value were possible only on internal field names. Now, the field parameter accepts input of the property's display name.

Auto Client Update

Administrator's can distribute StarTeam Cross-Platform Client updates to each client. To run the update, choose **Download Client Update** from the **Help** menu.

Ability to Turn Private Filters to Public Filters

StarTeam now provides the ability to turn private filters into public filters.

Full View Name Displays in Results

The full view name now displays in the search result page for each matching artifact.

Matching Artifact Field Displays in Results

The matching artifact fields from the search query now displays in the result page.

Distribute starteam-client-options.xml through StarFlow Extensions

Check `staream-client-options.xml` into StarFlow Extensions to ensure all clients use customized personal option values. The users need to have access right permissions to see StarFlow Extensions project and to see and check-out the files in order to use the functionality.



Note: Do not use options in the `staream-client-options.xml` that are path specific.

Ignore Files

Ignore acts as a note to self to ignore the marked files. It does not change any functionality within the files or within StarTeam. You can restore files back to their StarTeam status when you are done ignoring them.

VCM Skip a Revision

Skip-a-Revision feature has been modified to show an extra "In scope" column. If the VCM session is scoped with Process item, the revisions that include the process item will be marked with red triangles.

Use Last Modification Time for Folders During Checkout

Using last modification time for folders during check out uses the last modification time when Working folders are created. Otherwise, the current time is used. To select or deselect this option, go to Personal Options.

Sort Open Window by Name

You can now sort the opened windows by name. Windows are sorted by the order in which they are opened as default. To activate this option, go to Personal Options.

StarTeam Server

The following are the new features for this release of the StarTeam Server.

Enable Sandbox Server Search

A new configuration option has been added to `starteam-search-configs.xml` to exclude items in a sandbox type view from being indexed/searched. Refer to *Search Index Configuration* topic in the *Server Administration Help*.

Project Access Rights

You can now configure project access rights from the Server Administration tool. The areas you can configure are:

- View/edit project access rights
- User access rights report
- Clone Project rights
- Clone view rights

Enable SDK Workflow Server Configuration Option

If Enable SDK Workflow is turned on, SDK Workflow is enabled. Refer to *Managing Log and Initialization Files* and the `starteam-server-configs.xml` in the *Server Administration Help*.

Upgrade Distribution through StarFlow

A new Client Upgrade feature allows StarTeam administrators to easily make StarTeam Cross-Platform Client releases available to their user base. To distribute:

Check the StarTeam Cross-Platform Client release build(s) into the StarTeam Server, StarFlow Extensions project, default view, root folder.

The build file names are required to follow specific patterns which are described below:

Installer Type	Build File Name
64 bit windows	<code>starteam-cpc-win64-{nn.mm.oo.pp}.exe</code>
32 bit windows	<code>starteam-cpc-win32-{nn.mm.oo.pp}.exe</code>
Linux client	<code>starteam-cpc-ux-{nn.mm.oo.pp}.tar.gz</code>
Mac Client	<code>starteam-cpc-mac-{nn.mm.oo.pp}.mpkg.zip</code>

PostgreSQL

New script `starteam_postgres_create_compute_stats.sql` added to this release.

`starteam_postgres_create_compute_stats.sql`

Updates query optimization statistics. Updating statistics ensures that queries compile with up-to-date statistics. Can be run online or offline.

`starteam_postgres_create_index_maintenance_script.sql`

Rebuilds indexes. Can be run online or offline.

Analyze Server Log or Analyze Archived Server Logs

Analyze Server Log and Analyze Archived Server Logs are new menu options for Server Administration, under **Tools > Administration**. These new Administrative user options analyze the server log(s) and report the connections usage over time. These options can also be used by launching the Server Administration Tool bundled with the Windows version of StarTeam Cross-Platform Client.

16.0

The following are the new features in this release.

StarTeam Command Line Tools

The following are the updates for this release of the StarTeam Command Line Tools.

Select Command

The `Select` command now contains new queries:

changed-files Use this option to generate a software lines-of-code count report.

Update-Property Command

Updates the display name of any StarTeam property on any type.

StarTeam Cross-Platform Client

The following are the new features for this release of the StarTeam Cross-Platform Client.

Change Request User Lists Only Show Active Users

From version 16.0 onwards (client and server), all user lists, such as **Responsible Users** for a Change Request, exclude *Suspended* or non-active users.

Full Change Package Rollback

The new **Rollback** menu item in the Change Package perspective rolls back all of the files attached to the committed Change Package.

A new workspace Change Package is created and can be committed. The revision attached to the Change Package is reverse merged out of the tip content. The reverse merge process itself is manual. You are prompted to run the merge using the *Delta II* tool. When the reverse merge is complete, the updated content is stored as part of the session. When committed to the current view, you get the desired effect.

Multi-Select Context Menu

The new multi-select context menu options help moving or sharing items across projects or views. This new UI provides an alternative to the traditional drag-and-drop approach.

Spell Checker

The new spell checker component tracks text as it is typed in multi line text fields, such as Task Notes and Change Request Synopsis. It underlines incorrectly spelled words using a red wavy font and offers suggestions for correction. To toggle the spell checking option, check your **Personal Options**.

This is supported in English, French, German and Portuguese.

Symbolic Links

The File type now contains a symbolic link property. If content is checked in or out via a symbolic link, the address of the target is stored in the new property value.

Support for Mac Client

The StarTeam Cross-Platform Client now supports the Mac client. See the StarTeam Cross-Platform Client *System Requirements* for supported versions.

VCM Commit with Full History

Multiple revisions of a file (it's history) can be propagated to the parent view during a VCM promote session. This is typically likely if you have checked in multiple versions of a branched file in the child view, and then you ran the promote and want to carry the history of all subsequent revisions since the last promote.

Since the historical revisions in the child view may have been created by other users (than the user doing the commit), the person performing the commit must be granted impersonation rights at the server.

This feature can only be turned on at the project level using the new project option: **Merge File History during VCM commits**, and is supported on StarTeam Server versions 16.0+.

VCM Content Differences Display

The File Content differences pane for File Compare/Merge operations has been expanded to include two new panes. The first pane displays the file content differences between the Source File and the Common Ancestor picked for the merge. The second pane displays the file content differences between the Common Ancestor and the Target File.

VCM Process Item and Attached Revisions

The VCM wizard has been expended so that if a Story is used as an aggregator (rollup) of attached process items, the Story resolves to in-view Tasks created by Agile, and the in-view Tasks are used as cross project process items to files in a completely different view. A Sprint can be used for VCM as an aggregator of attached Stories. The attached Stories follow the same rules. The VCM wizard automatically changes its context to the project/view in which the files reside, and runs the VCM session for the *attached* files.

VCM Skip Multiple Revisions

The **Skip-A-Revision** feature in VCM has been modified to support skipping multiple revisions. Each selected revisions needs to be reverse merged out of the content using the merge tool *Delta all*.

Workspace Modified Time

The StarTeam Server has introduced a new property on the view called `Workspace Modified Time`.

This property value is automatically updated to the *current* time whenever files are checked into the view. This property value is visible through the **View Property** dialog box in the StarTeam Cross-Platform Client, and is returned as part of the list-views query of the command line.

StarTeam Server

The following are the new features for this release of the StarTeam Server.

Cloning Users

You can now clone existing users to facilitate creating a new user based on another. In the **User Manager**, right click and select **Clone**.

Custom Component Builder

The Custom Component Builder now allows you to:

- Clone a component definition to quickly create a new one based on another.
- Export a definition to save a copy of it.
- Read and display the XML file from other server configurations.

Database Migration

You can now use the database migration function to migrate PostgreSQL to Oracle or Microsoft SQL Server.

Additionally, database migration is now supported on StarTeam Server running on Linux operating system.

Import/Export Manager

You can now use **Import/Export Manager** to copy data between Microsoft SQL Server and PostgreSQL.

Online Purge

Online Purge now supports PostgreSQL.

Server Configuration Settings

DefaultBinaryExtensions This new setting in `starteam-server-configs.xml` allows you to specify a semi-colon separated list of extensions which will automatically be treated as binary files on check-in.

Search

The following are the new features for search:

- You can select multiple configurations to search.
- You can search using non-Windows Clients.
- You can search using the StarTeam Web Client.
- You can search users and groups in the **User Manager**.

Shut Down Remote Server

You can now use the **Server Administration Utility** to shut down remote server configurations. Click **Actions > Shut Down Server**.

15.1

The following are the new features in this release.

StarTeam Command Line Tools

The following are the updates for this release of the StarTeam Command Line Tools.

Select Command

The Select command now contains new queries:

- connections-log** Reads and parses the server log, maps the connections to the user accounts, cross joins it to the available licenses and returns a table of all the results.
- merge-counts** Produces output that counts the number of times a file has been merged from another view to this one.

-locale Parameter

For every command that takes a `-pattern` parameter, a `-locale` parameter is optionally available. This is the "two character country code".

-netmon Parameter

Use this option to capture the network traffic between the command line program and the StarTeam Server and write it in a file.

StarTeam Web Server Command Support

The following command line options are now available for the StarTeam Web Server:

- Label Attach.
- Label Detach.
- JVM Parameter passing to the APE's launched by the StarTeam Web Server.

StarTeam Cross-Platform Client

The following are the new features for this release of the StarTeam Cross-Platform Client.

File Rollback

The StarTeam Cross-Platform Client now supports a file rollback feature. The menu option is named **Undo Revision**, and when selected, the selected revision is used as the source, and the tip is used as the target to cause a reverse merge. Specifically, it removes the changes (introduced by that revision) from the tip. The resultant (reverse) merged content is written out to the working folders on disk, and you can check them in when ready.

Multi-Configuration Search

StarTeam allows users of the StarTeam Cross-Platform Client to search across multiple server configurations that may be running on different machines. Each UI provides the user an option to select from a list of available servers from which to search. Appropriate access rights checks are performed on all servers containing matching artifacts.

Federated Tracing

The new *Federated Tracing* server configuration allows you to store all traces on a single federated server allowing clients easy access to the traces. Refer to *Configuring Federated Tracing* in the Installation Guide.

Microsoft Edge

Microsoft Edge is now supported.

Microsoft Windows 10

Microsoft Windows 10 is now supported.

Skip a Revision in VCM

View Compare/Merge now supports the ability to skip a selected revision of a source file when merging to the target.

StarTeam Server

The following are the new features for this release of the StarTeam Server.

TLS/SSL Support for Email Notifications

The StarTeam Server now provides TLS/SSL support for email notifications. Refer to *Configuring Email Support and Email Notification* in the StarTeam Server Help.

TLS Support for Directory Service

The StarTeam Server now provides TLS support for Directory Service. Refer to *Configure Server Page (Directory Service Tab)* in the StarTeam Server Help.

Windows Authentication Support for SQL Server

StarTeam Server now supports Windows Authentication support for SQL Server. Refer to *Windows Authentication Support* in the Installation Guide.

64-bit SUSE Linux Support

SUSE Linux 64-bit version is now supported.

Import/Export Manager Supports PostgreSQL

The Import/Export Manager now supports the PostgreSQL database.

Multi-Configuration Search

StarTeam allows users of the StarTeam Cross-Platform Client to search across multiple server configurations that may be running on different machines. Each UI provides the user an option to select from a list of available servers from which to search. Appropriate access rights checks are performed on all servers containing matching artifacts.

Red Hat Enterprise Linux 6.7

Red Hat Enterprise Linux 6.7 is now supported.

StarTeam Web Client

The following are the new features for this release of the StarTeam Web Client.

Changing Password

The StarTeam Web Client now allows you to change your password from directly within the StarTeam Web Client.

15.0

The following are the new features in this release.

All Components

Search Locale Support

Search is now supported for locales - English, Portuguese, Chinese, Japanese, French and German. The indexing process picks up the locale of the machine to decide what analyzer to use.

StarTeam Cross-Platform Client

The following are the new features for this release of the StarTeam Cross-Platform Client.

Report Directory Configuration

You are now able to customize the directory where the reports are located by customizing the `starteamcp` file.

Datamart

The following are the new features for this release of Datamart.

Sample Web Reports Support for Oracle


The sample web reports introduced in the last release of Datamart now support Oracle.

MPX

The following are the new features for this release of the MPX components.

ActiveMQ MPX

This release introduces ActiveMQ MPX, based on *Apache ActiveMQ* technology, an updated messaging platform that can be used instead of StarTeamMPX (*Tibco SmartSockets*). The MPX and Cache Agent features have been updated with these supporting libraries which will be leveraged going forward to expand and improve upon the platform support of the StarTeam Server and its related components. This new technology will be the default messaging platform.

 **Important:** We will continue to support the StarTeamMPX technology. However, server configurations can use one or the other, but not both, platforms. The *Installation Guide* and the *MPX Administration Guides* contain the full implementation details for this feature and what you may need to do. For more information regarding *Tibco SmartSockets* end of support, please refer to <https://support.tibco.com/docs/TIBCOEndofSupportInformation.pdf>.

StarTeam Command Line Tools

The following are the updates for this release of the StarTeam Command Line Tools.

Checkout

- Now supports the `-pattern` parameter. This allows a user to control the date keyword expansion format.
- Now supports the `-e` parameter. This will throw an exception if `-filter` includes `M`, `G`, or `U` and any of the identified file statuses match `Merge`, `Modified`, or `Unknown`. The thrown exception will prevent all other files from being checked out as well.

Detach-Label

If a folder path is specified in `-p`, in conjunction with `-all` or `-type`, then only the items of the appropriate types in that folder path will be detached. Items not in that folder path will be retained.

Label

The `label` command now supports updating an existing label.

List-Labels

Now takes optional `-d` parameter. If specified, then a list of deleted labels will be generated.

Select

- Now takes an `enhanced-links` parameter. If specified, it generates an enhanced links report, which provides trace visibility across all views in the project for which trace the queried items shares exist. The columns identify revision details of all attached traces to the queried item. The rows identify the attached queried items. The report can span multiple items.
- Now takes `attached-labels` parameter. This parameter produces a report combining all historical revisions of the selected item(s) with the labels attached to each of those revisions. The rows of this report match the label tab details in the client.
- Now takes optional `workspace` parameter. Acts as a constraint on file queries. If specified, it locates *not-in-view* folders and files from the file system (the view path mapped to working folders on disk) and includes them in the report.
- Now includes an `unlabeled-revisions` report that lists historical revisions of selected items that are unlabeled as of the last build.

Starteamsserver.exe

`-mb` - This is a new optional parameter used when creating a new server configuration. Use the following values to set the type of message broker:

- 0 = None
- 1 = StarteamMPX
- 2 = ActiveMQ MPX

If this value is not specified, the new configuration is configured with ActiveMQ message broker.

StarTeam Web Client

The following are the new features for this release of the StarTeam Web Client.

Alternate Property Editor Support

Alternate property editors (APE) created through StarFlow Extensions are now fully supported via the StarTeam Web Client. If APEs are enabled for the project, then the user will be shown the editor as a local dialog for updating with all workflow being fully enforced. When using APEs through the StarTeam Web Client, the APE will make a direct connection to the StarTeam Server and thus firewall settings between the user's machine and the StarTeam Server should be taken into consideration.

14.4

The following are the new features for version 14.4.

All Components

Search for PostgreSQL

StarTeam now supports search for the PostgreSQL database.

Datamart

The following are the new features for this release of Datamart.

Sample Web Reports

Datamart now contains a set of sample web reports designed using BIRT (<http://eclipse.org/birt>), an open source technology for data reporting. These reports can be viewed against any database configuration by using the Tomcat web server installed with StarTeam Server.

Continuous Mode

The *continuous* data extraction mode provides near real-time data reporting. This feature requires an MPX-enabled StarTeam Server for optimal performance. With this option, Datamart will run as a continuous process listening to events on the views/projects that have been selected for extraction and only queries the database when there is an update of interest on the server.

PostgreSQL for Datamart

Datamart now supports the PostgreSQL database.

StarTeam Command Line Tools

The following are the updates for this release of the StarTeam Command Line Tools.

Add-Enum Command

Use the `add-enum` command to add an enumerated value to an existing enumerated property of a type on the server.

Add-Group Command

Use the `add-group` command to add a group to the server.

Add-Property Command

Use the `add-property` command to add a property to an existing component the server.

Add-Type Command

Use the `add-type` command to add a type to the server.

Add-User Command

Use the `add-user` command to add a user to the StarTeam Server.

List-Groups Command

Use the `list-groups` command to list all of the groups in the server.

List-Users Command

Use the `list-users` command to list all of the users in the server.

Merge-Label Command

The `merge-label` command creates a new label (if it does not already exist) in the target view, copying the properties of the source label from the source view.

Insert Command Parameters

revisions Treats the contents in the file as a set of revisions of the same item.

Select Command Parameters

*	An asterisk may be used as a wildcard targeted for expansion. This happens when a property name in the <code>where</code> clause identifies a text property, the relation is <code>=</code> , and the value starts with a <code>"**"</code> .
attached-to-label	Specifies a label to which the items of the specified type have been attached. The items to be selected are the ones attached to the label.
backlog	The returned stories, constrained by conditions specified in the <code>where</code> clause, will only include stories without links to sprints. It excludes all stories related to sprints via traces.
historical-revisions	<code>historical-revisions</code> is a report that identifies and lists all the revisions at which the items are actually attached to the specified label.
newline	New lines inside text fields will be replaced by the provided separator.
scopechange	Generates a scope change report that is targeted at measuring the total scope (cost) of the sprint.
toexcel	Produces an output file which is in <code>CSV</code> format.

StarTeam Cross-Platform Client

The following are the new features for this release of the StarTeam Cross-Platform Client.

Rich Reports

The StarTeam Cross-Platform Client offers Rich reports based on the BIRT report designer to create custom reports. You can easily select your data source and tables and fields from the StarTeam schema to customize your report.



Note: The Rich reports are not localized in this release. They are only available in English.

StarTeam Eclipse Plugin

The following are the new features for this release of the StarTeam Eclipse Plugin.

Windows 8

This version now supports Windows 8.

Eclipse Version 4.3

This version now supports Eclipse 4.3.

StarTeam Server

The following are the new features for this release of the StarTeam Server.

Custom Component Builder

StarTeam Server's **Custom Component Builder** is used to create custom components analogous with StarTeam's own internal components, such as the *File*, *Change Request*, *Task*, or *Topic*. The **Custom Component Builder** in the StarTeam Server walks you through creating the component, its properties and values and finally, deploying your component in a single click.

StarTeam Visual Studio Plugin

The following are the new features for this release of the StarTeam Visual Studio Plugin.

Windows 8

This version now supports Windows 8.

Visual Studio 2013

This version now supports Visual Studio 2013.

14.3


The following are the new features for version 14.3.


All Components

Search

StarTeam allows full text search on all server-wide artifacts. Search components are installed as part of StarTeam Server.

After the search components are configured on the StarTeam Server, you can use search in many StarTeam clients.

 **Note:** Search only works for the English locale. Support for other locales will be introduced in future releases.

 **Note:** Search is available for:

- The StarTeam Web Client.
- The StarTeam Cross-Platform Client on Microsoft Windows.

StarTeam Command Line Tools

The following are the updates for this release of the StarTeam Command Line Tools.

Move Command

Use the `move` command to move StarTeam items. You can use this command to move all item types: Folder, File, Change request, Task, Topic, Requirement, Sprint, Story, Concept, WhiteBoard, and custom components.

Trace Command

A trace is a link between any two StarTeam items. It expresses a join relationship. Use the `trace` command to create or to find and update a trace in a project/view described by the `-p` parameter (or preceding `connect/set` commands). A trace will only be created if its endpoints are guaranteed to exist.

Command Line Parameters

The following commands have new parameters:

apply-label command		Use the <code>-folder</code> parameter with the <code>apply-label</code> command to apply labels to specified folders.
select command	workrecords	Use the <code>workrecords</code> parameter with the <code>select</code> command to select Tasks.
	links and changes	Use these parameters with the <code>select</code> command to create reports on all item types.

StarTeam Cross-Platform Client

The following are the new features for this release of the StarTeam Cross-Platform Client.

Plugin for Jenkins CI

The plugin for Jenkins CI has been updated to use the latest APIs and to address bugs and performance issues. Look for the new version 1.0+ available from the plugin manager within your own Jenkins installation or contact your Micro Focus support representative. More details available on the Jenkins-StarTeam wiki: <https://wiki.jenkins-ci.org/display/JENKINS/StarTeam>.

History and Log Keywords

StarTeam supports Log and History Keywords from the StarTeam Server and from the MPX Cache Agent.

SendTo Email

The `SendTo` email feature now supports specifying recipients by typing user names as well as selecting them using a list. This allows you to copy and paste long lists of recipients into the StarTeam Cross-Platform Client.

DateTime Grouping

Grouping by the `DateTime` property is now supported such that the month, day, and year are used for grouping and time of day is ignored.

Project Specific Filters

The StarTeam Cross-Platform Client now supports the ability to create and use project-specific filters.

StarTeam Server

The following are the new features for this release of the StarTeam Server.

PostgreSQL Database Support

In addition to Oracle and Microsoft SQL Server, StarTeam Server now supports PostgreSQL as a database. Refer to the *StarTeam Installation Guide* for more information.

Import/Export Manager Support for Oracle

This version of the **Import/Export Manager** supports Oracle.

StarTeam Web Client

The following are the new features for this release of the StarTeam Web Client.

Opening Items in the StarTeam Cross-Platform Client

The StarTeam Web Client can now open items in the StarTeam Cross-Platform Client.

TeamInspector

The following are the new features for this release of TeamInspector.

64-bit TeamInspector

TeamInspector is now available and compiled as a 64-bit application.

System Requirements

This section contains system requirements for StarTeam components.

StarTeam Cross-Platform Client System Requirements

The StarTeam Cross-Platform Client is implemented in Java and can be installed on Microsoft Windows and any system that supports the Java Runtime Environment (JRE) 1.8.0_102. The StarTeam Cross-Platform Client has been tested on the following systems with the noted hardware and software:

Software

Operating Systems (32- and 64-bit)

- Microsoft Windows 10
- Microsoft Windows 8
- Microsoft Windows 7
- Microsoft Windows XP Professional SP3
- Microsoft Windows Vista SP1
- Solaris Sparc 10
- RedHat Enterprise Linux 7.3
- RedHat Enterprise Linux 6
- Ubuntu 14.04
- SUSE 11.3
- Mac: El Capitan, Yosemite.

Adobe Acrobat

For viewing the PDF manuals

Web browser (for online help)

- Internet Explorer 8 or later (Microsoft Windows only)
- Firefox 4 or later

Hardware

Processor 32-bit dual core

RAM 2 GB minimum


Hard disk space 200 MB to install the application. Also, sufficient disk space is required for your working files. The amount will vary depending on your use of the product.

Display	Required	SVGA, high color mode, 1024x768
	Recommended	1280x1024 or more

Mac Models

- MacBook (Early 2015).
- MacBook (Late 2008 Aluminum, or Early 2009 or newer).
- MacBook Pro (Mid/Late 2007 or newer).
- MacBook Air (Late 2008 or newer).
- Mac mini (Early 2009 or newer).
- iMac (Mid 2007 or newer).
- Mac Pro (Early 2008 or newer).

- Xserve (Early 2009).

 **Note:** Support is for physical Apple computers. OS X Virtual Machines are not supported.

Datamart System Requirements


The following are the system requirements for installing and running this release of Datamart.

Operating Systems

- Microsoft Windows Server 2016
- Microsoft Windows Server 2012
- Microsoft Windows Server 2008 R2 (64-bit)
- Microsoft Windows Server 2008 (64-bit)

Databases

- Microsoft SQL Server 2016
- Microsoft SQL Server 2012
- Microsoft SQL Server 2008 R2
- Microsoft SQL Server 2008
- Microsoft SQL Server 2005 SP3
- Oracle 12.2
- Oracle 11g R2
- Oracle 11g, version 11.1.0.6.0
- Oracle 10g R2, version 10.2.0.4.0
- PostgreSQL 9.6
- PostgreSQL 9.3

 **Note:** For database system requirements, refer to the database vendor guidelines.

JDBC Drivers

It is necessary to download and install the native JDBC drivers for your databases on the computer that hosts the Datamart Extractor. The native drivers provide greater performance than other re-distributable drivers and include support for double-byte characters. You can download these drivers for free at the web site for the appropriate vendor:

Microsoft SQL Server Download at <http://msdn.microsoft.com/en-us/data/aa937724.aspx>

Oracle Download at http://www.oracle.com/technology/software/tech/java/sqlj_jdbc/index.html

PostgreSQL Download at <https://jdbc.postgresql.org/download.html>

Processor

- 600-MHz Pentium III-class processor or greater
- 600-MHz Sun SPARC/UltraSPARC


RAM

- 512 MB minimum
- 1 GB or more recommended

Optional reporting software

- Business Objects 6.5, XI, and XIR2 or higher (required when using Datamart Synchronizer)
- Crystal Reports 10 or higher

Hard disk space 100 MB available disk space for application and installation

 **Note:** The Datamart Extractor benefits from hardware that provides faster data write speeds such as high RPM hard drives.

StarTeam Eclipse Plugin System Requirements

The following are the system requirements for running the StarTeam Eclipse Plugin.

 **Important:** For the StarTeam Eclipse Plugin, we recommend the use of a 1.6+ JRE. The latest JRE can be downloaded at <http://www.oracle.com/technetwork/java/javase/downloads/index.html>. To specify the use of the JRE when launching Eclipse, place the `-vm` command line argument at the beginning of the `eclipse.ini` file (example: `-vm C:\jre1.6.0_29\bin\javaw.exe`).

Eclipse Versions 4.4 and above

Java Versions 1.6 and above

Operating Systems


- Microsoft Windows 8
- Microsoft Windows 7 (32-bit and 64-bit)
- Microsoft Windows XP Professional SP3 (32-bit and 64-bit)
- Microsoft Windows Vista Business SP2 (32-bit and 64-bit)
- Solaris 10 (32-bit)
- Red Hat Enterprise Linux 5.5 (32-bit)
- Ubuntu 14.04


StarTeam Server Versions 2009 and above

Product Interoperability

- This release of the StarTeam Eclipse Plugin was tested with Rational Application Developer 7.5, and JBuilder 2008 R2. While the tests were limited, no problems in using this version of the StarTeam Eclipse Plugin with any of these products have been found.

Hard Disk Space In addition to the space required for Eclipse, hard disk space of 37 MB to install the application.

 **Note:** Sufficient disk space is required for your working files. The amount will vary depending on your use of the product.

 **Note:** It is strongly recommended that the Java memory allocation heap be increased when using this product. This setting is specified using the Java commands (`-vmargs`) `-Xms` and `Xmx`. Determining the proper settings will depend on the amount of physical memory available. Significant performance improvement will be recognized by utilizing greater amounts of memory. However, large heaps should be avoided if there is insufficient physical memory to avoid paging. For additional information regarding memory heap settings please refer to Eclipse.org, IBM.com and Java.Sun.com.

If a previous version of this product is installed on the target computer it should be uninstalled or disabled prior to installing this version.

StarTeam Layout Designer System Requirements

The Layout Designer can be installed on Microsoft Windows systems that support the Java Runtime Environment (JRE) 1.8.0_112. The system requirements are listed below:

Software

Operating Systems (32-bit)

- Microsoft Windows 8
- Microsoft Windows XP Professional SP3
- Microsoft Windows Vista SP1
- Red Hat Enterprise Linux (WS) 5.1

Hardware

Processor 32-bit dual core

RAM 2 GB minimum

Hard disk space 200 MB to install the application. Also, sufficient disk space is required for your working files. The amount will vary depending on your use of the product.

Display	Required	SVGA, high color mode, 1024x768
	Recommended	1280x1024 or more

Mac Models

- MacBook (Early 2015).
- MacBook (Late 2008 Aluminum, or Early 2009 or newer).
- MacBook Pro (Mid/Late 2007 or newer).
- MacBook Air (Late 2008 or newer).
- Mac mini (Early 2009 or newer).
- iMac (Mid 2007 or newer).
- Mac Pro (Early 2008 or newer).
- Xserve (Early 2009).



Note: Support is for physical Apple computers. OS X Virtual Machines are not supported.

MPX System Requirements



Important: Prior to installing, please read the appropriate *MPX Administrator's Guide* and the *StarTeam Installation Guide* on the **Product Documentation** page of the Micro Focus web site at <http://supportline.microfocus.com/productdoc.aspx>. Proper planning is required in order to achieve best results from MPX.

The StarTeam Server must be installed prior to installing the Message Broker and MPX Cache Agent. MPX transmitters have the same system requirements as the StarTeam Server because they are part of that system. The MPX Message Broker is required - it can be the ActiveMQ MPX Message Broker or the StarTeamMPX Message Broker. The MPX Message Broker is a publish/subscribe messaging engine that broadcasts messages to subscriber components on a topic basis. It is a stand-alone process that can run on a separate computer to offload network processing overhead in high-volume environments. For details, see the StarTeam Server *System Requirements* in this document. You can also set up MPX Cache Agents in tiers at a variety of locations so that file contents and objects, transmitted by the file transmitter, can be a local network near any StarTeam user. MPX Cache Agents work with the StarTeam Cross-Platform Client to check out files and fetch objects faster.

Message Brokers and MPX Cache Agent



Note: For the MPX Cache Agent, these requirements should be sufficient for teams that have 50 to 100 members.

Operating Systems

- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 R2 (64-bit)
- Microsoft Windows Server 2012 (64-bit)
- Microsoft Windows Server 2008 (64-bit)
- Microsoft Windows Server 2008 R2 (64-bit)
- Red Hat Enterprise Linux 6.7 (64-bit)
- SUSE Linux 11.3 and 11.4 (64-bit)



Note: You cannot install a 64-bit Windows StarTeam component on a 32-bit Windows system. The installer will return an error.

Processor/ Hardware

- Disk appropriate for size of cache; fast disk preferable but not mandatory
- 100 Megabit NIC or better
- 1 CPU P4 1Ghz or better

RAM

256 MB memory or better



Note: A MPX Cache Agent supports memory caching, which is important if object caching is enabled. Therefore, additional memory should be available to support the desired amount of memory caching. The default memory cache size is 100MB.

Hard disk space

12 MB to install the application plus sufficient disk space for the desired size of each MPX Cache Agent's cache

Display

SVGA, high color mode, 1024x768 or greater

Recommended resolution: 1280x1024 or more

Other

Adobe Acrobat Reader for viewing the *MPX Administrator's Guide*

Hardware Recommendations

The following are the recommended system configurations according to the number of peak users:

Less than 100	64-bit, dual-core systems with 4GB of memory
100-200	64-bit, quad-core systems with 4-8GB of memory
More than 200	64-bit, quad-core systems with 8-16GB of memory

For the Message Broker, the number of peak users is typically lower than the number of peak users connected to the StarTeam Server since multiple Message Brokers are used in medium-to-large deployments. The number of peak users connected to a MPX Cache Agent is significantly lower because MPX Cache Agents are only used in short bursts. As a result, less hardware resources are typically required to support the Message Broker and MPX Cache Agent compared to the StarTeam Server. Moreover, for a given geographic location, the Message Broker and MPX Cache Agent are typically deployed on the same machine.

StarTeam Quality Center Synchronizer System Requirements


StarTeam Quality Center Synchronizer has been tested on Microsoft Windows Server 2003 SP2 (32-bit version) and Microsoft Windows Server 2008 R2. It is recommended that you install the Synchronizer on the same computer on which the Synchronizer for Quality Center database resides, unless that is not a Microsoft Windows platform. Because of the OTA APIs, the Synchronizer must run on a Microsoft Windows operating system. It has no unusual operating system requirements.

- The Enterprise or Enterprise Advantage edition of the StarTeam Server for Microsoft Windows 15.0.
- Quality Center 9.0, 9.2, 10.0, 11.0, and 12.5.
- A Java Runtime Environment (JRE), version 1.8.0_112 or later.

The software listed above does not need to be located on the same machine as the Synchronizer, which can, if desired, run on a separate machine. However, the Synchronizer must have network access to the Synchronizer for Quality Center database and the StarTeam Server.

StarTeam Server System Requirements


We recommend installing the StarTeam Server on a dedicated application server and installing the database on a separate server unless you are using a supported version of Microsoft SQL Server Express as your database.


 **Important:** You must uninstall the previous version before installing the current version of the software. You should also delete the following folders if they exist:

```
<Server Installation folder>\<Apache Webserver Installation Folder>\webapps
\search
<Server Installation folder>\<Apache Webserver Installation Folder>\apache-
tomcat-[version]\webapps\ConnectWeb
<Server Installation folder>\<Apache Webserver Installation Folder>\webapps
\borland
```

There should be a dedicated connection between the computers running the StarTeam Server and the database management system. For optimal performance, both machines should be on the same physical switch.

The following shows the minimum and recommended hardware for the computer on which you deploy the Server application and database. Although specific processor speeds are listed, you should always use the fastest available CPU to maximum performance.

 **Note:** The StarTeam Cross-Platform Client only supports StarTeam Server versions 12.0+.

 **Important:** If you are upgrading from a previous version of StarTeam Server, you must review the upgrade instructions in the *StarTeam Installation Guide*. There are some steps that you must complete in order for the upgrade to complete successfully. Failure to complete these steps can cause the upgrade to fail.

Operating Systems

- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 R2 (64-bit)
- Microsoft Windows Server 2012 (64-bit)
- Microsoft Windows Server 2008 (64-bit)
- Microsoft Windows Server 2008 R2 (64-bit)
- Red Hat Enterprise Linux 6.7 (64-bit)
- SUSE Linux 11.3 and 11.4 (64-bit)

StarTeam Server for 64-bit Microsoft Windows Operating Systems

The minimum memory requirement for StarTeam Server and ActiveMQ MPX Message Broker is 8 GB without the database engine installed on same server. The minimum requirement for StarTeam Server with ActiveMQ MPX Message Broker and database engine installed on the same computer is 16 GB.

Databases

StarTeam Server supports both 32-bit and 64-bit databases. The following databases have been tested and are supported:

- Microsoft SQL Server 2016
- Microsoft SQL Server 2014
- Microsoft SQL Server 2012 Express
- Microsoft SQL Server 2012 SP1
- Microsoft SQL Server 2008 Express R2
- Microsoft SQL Server 2008 Express
- Microsoft SQL Server 2008 R2 SP2
- Microsoft SQL Server 2008 SP3
- Oracle Database 12c version 12.2
- Oracle Database 12c version 12.1.0.2.0
- Oracle Database 11g R2
- PostgreSQL 9.6
- PostgreSQL 9.3



Note: You can install PostgreSQL as part of the StarTeam Server installation. You must purchase the other database products from the appropriate vendor. Refer to the *StarTeam Installation Guide* for more information about recommended system configurations for running StarTeam and your database on the same computer and for running StarTeam Server and its associated database on separate computers.



Important: Never modify database contents or vault files other than through the StarTeam client or the Server Administration Tool. Direct database manipulation is unsupported.

Database User and Password

The PostgreSQL database server installed by default with StarTeam Server has two default users created:

- Admin user = `postgres`
- Superuser = `Borland_Login`

The password for both is `Borland_123`.

When you use the default PostgreSQL database, you will be asked for a **System Password**. It is the same as the Admin user password, `Borland_123`.

Web Browsers

- Internet Explorer 8 or later
- Firefox 4 or later

Third Party Software

Please ensure these other software requirements are met:

JRE

The StarTeam Server uses the Java Runtime Environment (JRE) 1.8.0_102 which is automatically installed at `C:\Program Files\Micro Focus\StarTeam Server <version>\jre`.

Adobe Acrobat

Required for viewing the documentation in PDF format.

Virus Scanning Utilities

Every StarTeam Server computer should be equipped with a virus protection utility that has up-to-date virus definition files. All StarTeam Servers should also be equipped with up-to-date virus protection and the settings should be set to alert only the administrator. The StarTeam administrator should halt the StarTeam Server immediately upon virus detection, perform a full backup, and then follow the instructions provided by the virus protection vendor for cleaning the virus from the infected file. If the infected file cannot be cleaned or if problems exist, contact <http://supportline.microfocus.com> before restarting the StarTeam Server. Some viruses can be immediately destructive to the repository and in rare cases data loss will be inevitable. We strongly recommend that you perform regular backups.

A virus that might be a nuisance to a file system can be far more destructive when checked into the repository. For example, many virus protection utilities are set by default or can be set to delete infected files. If an archive file is deleted by the virus protection utility, data may be lost.

Another example is that a virus may not be detected in the archive and may sit dormant waiting to infect the computers of all project users. Your network will rapidly spread the virus and a data loss could occur.



Note: If any process or program such as anti-virus software alters files under StarTeam control the system could behave erratically. It is highly recommended that these processes not be allowed to modify system or data files under StarTeam control.

StarTeam Server and Microsoft SQL Server Express on the Same Computer

When Microsoft SQL Server Express is used, the database typically resides on the same computer as the corresponding StarTeam Server application. The following hardware recommendations for a joint StarTeam Server/Microsoft SQL Server Express computer are based on the number of seats (registered users). However, your situation might vary depending on the size of your StarTeam projects and the number of projects managed by the StarTeam Server configuration.

The following lists suggested system configuration requirements if you are using Microsoft SQL Server Express and the StarTeam Server on the same computer:

Less than 50 Seats	64-bit dual core machine with 4 GB of RAM
50-100 Seats	64-bit quad core machine with 4-8 GB of RAM



Note: Microsoft SQL Server Express is not recommended for configurations serving more than 100 registered users.

StarTeam Server and Database on Different Computers

The following hardware recommendations apply when the StarTeam Server application is executing on a different computer than the database server. They are based on the number of peak users (maximum concurrent users during peak periods). However, your situation might vary depending on the size of your StarTeam projects and the number of projects managed by the server configuration.

Number of Peak Users

Less than 100	64-bit, dual-core systems with 4 GB of memory
100 - 200	64-bit, quad-core systems with 4-8 GB of memory
More than 200	64-bit, quad-core systems with 8-16 GB of memory

Database Server System Requirements

The following recommendations apply to the database server when it is not on the same computer as the StarTeam Server. The number of peak users is the maximum number of concurrent users during peak usage periods.

Number of Peak Users

Less than 100		Computer with a dual core processor and 4 GB of RAM
100-200	Minimum	Computer with quad processors and 4 GB of RAM
	Recommended	Minimum configuration plus RAID system
More than 200	Minimum	Any high-performance Enterprise Server with quad processors and 4-8 GB of RAM
	Recommended	Minimum configuration plus RAID system

Unicode Character Sets

While StarTeam Server supports data in all languages that can be encoded in UTF-8, it only uses ASCII characters (0-127) as it expands keywords. Keyword expansion and EOL conversion should work for all “ASCII-based” encodings, which include UTF-8, Cp1252, and so on. For the various UTF-16 encodings, StarTeam Server currently performs EOL conversion, but does not expand keywords.

The internal names of custom fields must be ASCII, but the display names can be in non-English character sets.

System Requirements for Linux

- Linux Suse 11.3 and 11.4 (64-bit)
- JDK or Java Runtime Environment (JRE) 1.8.0_102+
- Oracle Client 11g R2
- PostgreSQL version 9.3



Note: The Oracle database does not have to reside on the same machine as the StarTeam Server.

StarTeam Visual Studio Plugin System Requirements

The StarTeam Visual Studio Plugin should run on any platform on which Microsoft Visual Studio 2012, 2013, 2015, or 2017 is supported.

This integration was tested with the following:

Platforms

- Microsoft Windows 10
- Microsoft Windows 8
- Microsoft Windows 7
- Microsoft Windows Vista Business SP1
- Microsoft Windows XP SP3 (32-bit versions)

Microsoft Visual Studio

- Microsoft Visual Studio 2017 Professional and Standard Editions

- Microsoft Visual Studio 2015 Professional and Standard Editions
- Microsoft Visual Studio 2013 Professional and Standard Editions
- Microsoft Visual Studio 2012 Professional and Standard Editions

StarTeam Server

16.1

StarTeam Web Client System Requirements

Web Browsers

- Microsoft Edge
- Internet Explorer 9 or later
- Firefox 4 on Microsoft Windows and Linux
- Chrome

StarTeam Web Server System Requirements

Operating Systems

- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 R2 (64-bit)
- Microsoft Windows Server 2012
- Microsoft Windows Server 2008 R2 SP1 (64-bit)

Hardware

Processor	64-bit quad core
RAM	8 GB minimum
Hard disk space	200 MB to install the application

Software

Java and Tomcat are installed with the installation package.



Note: You cannot install a 64-bit Microsoft Windows StarTeam component on a 32-bit Microsoft Windows system. The installer will return an error.

StarTeam Workflow Extensions System Requirements

Extensions and the Workflow Designer

They have the same system requirements as the StarTeam Cross-Platform Client.

Notification Agent

Has the same system requirements as the StarTeam Server.

We recommend installing the StarTeam Server prior to installing the StarTeam Notification Agent.

TeamInspector System Requirements

TeamInspector provides a release readiness and build quality management system through the following features:

- Build and test automation environment with flexible continuous integration options
- Comprehensive monitoring of build, test, and code analysis results through a dashboard

- A portfolio view that presents relevant current and trending data for projects
- Email and SMS message alerts of build events
- Support for heterogeneous build environments
- Built-in support for commonly used tools and SCM systems
- OpenInspector™ framework enables user-defined inspectors to support open-source tools, third-party tools, and user-defined tools
- Support for distributed builds and dependent builds

The following are its system requirements:

- | | |
|---|---|
| Processor | <ul style="list-style-type: none"> • Dual Processor 3 GHz • Dual Intel Xeon 5000 Quad-core (recommended) |
| RAM | <ul style="list-style-type: none"> • 4 GB system memory • 16 GB system memory (recommended) |
| Hard disk space | <ul style="list-style-type: none"> • 100 GB of available space • 750 GB of available space (recommended for large enterprise environments) |
| Operating System | <ul style="list-style-type: none"> • Microsoft Windows Server 2012 • Microsoft Windows Server 2008 • Microsoft Windows Server 2003 • RedHat Linux 4.x |
| Web Browsers | <ul style="list-style-type: none"> • Mozilla Firefox 3.x • Internet Explorer 7.x |
| Build Tools | <ul style="list-style-type: none"> • Apache Ant 1.7.x (the <code>JAVA_HOME</code> system environment variable must point to the JDK 1.5 or later) • NAnt 0.85 • Any tool that can be encapsulated inside a NAnt or Ant script • Command-line builders |
| Source Control System | <ul style="list-style-type: none"> • StarTeam 2006, 2008, with the StarTeam SDK 10.0 or later • Subversion 1.5.x, with the SVNKit 1.2.3 • Perforce 2008.1, with the command line client (P4) • IBM Rational ClearCase 7.1, with the ClearCase Remote Client |
| Versions Supported for Standard Inspectors (test/analyzer tools) | <ul style="list-style-type: none"> • JUnit 4.5 • NUnit 2.4.x • Checkstyle 4.4 • Emma 2.0.5312 • Silk Central Test Manager 2008 or later |
| Supported OpenInspectors | <ul style="list-style-type: none"> • Code-analysis tools that output to XML format • Unit-test tools that output to XML format • Code-coverage tools that output to XML format |

StarTeam Microsoft SCC Integration Requirements

Following are the system requirements for installing and running the integration.



Note: This release of the integration is built with and supports Java version 1.6.0_02.

Platforms

- Microsoft Windows 10
- Microsoft Windows 8
- Microsoft Windows 7
- Microsoft Windows XP Professional SP3
- Microsoft Windows Vista SP1

SCC Third-Party Products

The integration works with various third-party products that use the Microsoft SCC API. This API enables you to perform version control operations, such as checking files in and out, using StarTeam as the SCC provider.

StarTeam Server

2009 and above

StarTeam Cross-Platform Client (optional)



Note: You do not need to install the StarTeam Cross-Platform Client on the workstation running the integration. However, the integration does not provide a way for you to change any StarTeam personal options or StarTeam project properties. Pre-existing settings for the StarTeam projects that you are accessing using the integration remain in effect.

Hardware

Processor

32-bit dual core

RAM

2 GB minimum

Known Issues

The following sections contain the known issues for this release.

Documentation Known Issues

StarTeam Server Help

Help content when viewed using Internet Explorer 10 does not display correctly. This issue can be resolved by setting the browser **Compatibility Mode** to Internet Explorer 9 in the **Developer Tools** (F12) preferences of Internet Explorer 10.

Eclipse Infocenter

When you open the first instance of a StarTeam application, such as the StarTeam Cross-Platform Client, and click on the **Help Topics** menu, the Eclipse Infocenter opens and displays the correct help contents for that application. However, when you close the application, and/or open another StarTeam application, such as the **Server Administration** tool, when you click on the **Help** menu, the Eclipse Infocenter displays the help from the previous application, in this case, the StarTeam Cross-Platform Client. The workaround for this is to go into the installation directory of the first application in which you clicked **Help** (StarTeam Cross-Platform Client in this example), and in the `\help` subfolder, double-click `shutdown.bat`. This releases the previous applications Help contents from memory so the correct help will display when you open it in the second application.

StarTeam Command Line Known Issues

stcmd Path Specifications

stcmd path specifications must use Java conventions (not Microsoft Windows). For example, the following will throw an `IndexOutOfBoundsException` exception:

```
stcmd co -rp "c:\temp" -p
"Administrator:Administrator@localhost:49201/StarDraw/
StarDraw" *
```

The following will work correctly on all platforms that support the java virtual machine (Microsoft Windows, Unix, and Mac):

```
stcmd co -rp "c:/temp" -p
"Administrator:Administrator@localhost:49201/StarDraw/
StarDraw" *
```

Quoted Argument with a Space

When specifying a quoted argument that contains a space, the beginning quote must be preceded by a space. The following are examples of both incorrect and correct syntax for arguments with spaces:

Incorrect: `stcmd set project="StarFlow Extensions"`

Correct: `stcmd set project = "StarFlow Extensions"`

Incorrect: `stcmd select name from File where query="Flagged Items"`

Correct: `stcmd select name from File where query = "Flagged Items"`

StarTeam Cross-Platform Client Known Issues

- On Windows XP, Search perspective does not work when using 32-bit version of StarTeam Cross-Platform Client. The root cause is the JRE upgrade to 1.8.112 in this release. You can downgrade your JRE version to 1.8.102 to work around this problem.
- On a Mac, PDFs installed within *StarTeamAdmin* application folder will not open because of permissions restrictions. The same files can be accessed from *StarTeamCPC* application folder.
- You cannot open the web help directly from the product on a Mac. Use *Finder* to navigate to the installation directory and open up the PDF version of the help.
- The external File Compare Merge tool is not included with the StarTeam Cross-Platform Client on Mac. However, you can still use the embedded File Compare Merge.
- The spell checker does not work when running on Mac.
- If you receive the error, `Unable to watch file system path...` when running the StarTeam Cross-Platform Client, do the following: Click **Tools > Personal Options**, and turn off the **Enable File System Watching** option. Then, shutdown and restart the StarTeam Cross-Platform Client. This will resolve the problem.
- Enabling the BIRT Report Editor in Eclipse:
 1. Download the Eclipse plus BIRT bundle from <https://www.eclipse.org/downloads/packages/eclipse-ide-java-and-report-developers/lunasr2>.
 2. Install the bundle on your Linux system.
 3. Add the three BIRT plugins to the `Plugins` folder of Eclipse. For example, `cp <cpc install dir>/lib/org.eclipse.birt.report.data.oda.starteam*.jar <eclipse dir>/plugins`.
 4. Set the `ST_BIRT_HOME` environment variable to point to the Eclipse binary. For example, in your `.profile` (or however environment variables are set in the users linux distro) add:
`export ST_BIRT_HOME=/<eclipse install dir>/eclipse`.
- The StarTeam Cross-Platform Client is localized to run natively in English, German, French, Portuguese, Chinese and Japanese, on those respective platforms.

However, for users on platforms other than the six described above, or for users who wish to specifically run the StarTeam Cross-Platform Client in a different locale from the native platform, the system property `-Duser.language` can be specified on the options entry in the `StarTeamCP.stjava{32|64}` file.

- For Japanese, specify `-Duser.language=ja`.
- For Chinese, specify `-Duser.language=zh`.
- For Portuguese, specify `-Duser.language=pt`.
- For German, specify `-Duser.language=de`.
- For French, specify `-Duser.language=fr`.
- For English, specify `-Duser.language=en`.
- Micro Focus recommends that you shut down all other applications when installing StarTeam components because other applications can cause the installer to hang. Shutting down all applications resolves such issues during installation.
- On a Microsoft Windows 7 platform, the Help is only available in PDF version. Access the help from the **Start** menu or from the `pdf` subfolder in the client installation folder. For example, `C:\Program Files\Micro Focus\StarTeam Cross-Platform Client Client <version>\PDF`.
- On Microsoft Windows XP SP3, opening Help (**Help > Help Topics**) requires you to change your Internet Explorer security setting to view the Help. As a workaround, follow the steps below:
 1. Open Internet Explorer.
 2. Select **Tools > Internet Options**.

3. Select the **Advanced** tab.
 4. Scroll down to the **Security** options.
 5. Select the option to **Allow active content to run in files on My Computer**.
- When running the StarTeam Cross-Platform Client with 'User Account Control' turned on, you may experience some security warnings regarding local files that are not accessible. Launching the StarTeam Cross-Platform Client for the first time, and initializing the log with help launched, are two examples where you will experience the security issue.



Note: If a security warnings does appear, it will not prevent you from working normally in StarTeam.

StarTeam Eclipse Plugin Known Issues

- StarTeam Eclipse Plugin does not work with the default Firefox shipped with Solaris 11, which is located in `/usr/lib/firefox` due to a missing library in that release. To fix the issue:
 1. Download Mozilla 1.7 from <http://ftp.mozilla.org/pub/mozilla.org/mozilla/releases/mozilla1.7.13/contrib/mozilla-1.7.13-sparc-sun-solaris2.8-gtk2.tar.bz2>.
 2. Extract it to a user accessible path accessible such as the user home at `/export/home/user/mozilla`.
 3. Add the following variables to the user profile file in `~/.profile`
 - `export MOZILLA_FIVE_HOME=/export/home/user/mozilla`
 - `export LD_LIBRARY_PATH=$MOZILLA_FIVE_HOME:$LD_LIBRARY_PATH`
 4. Log out and log back in to pick up the environment variables that you added.
- If the folder `C:\Users\\AppData\Borland\StarTeam` does not exist, servers are not saved.

This occurs on clean environments, specifically those where no StarTeam products have been installed.

To correct this, change the StarTeam Preferences from Eclipse. Changing the preferences creates the folder.

- You cannot view the properties of a change package in the **Change** view in the StarTeam Eclipse Plugin, but you can view this information in the **Change** tab in the StarTeam Cross-Platform Client .
- When using the StarTeam Eclipse Plugin along with the **Tasktop Dev** plug-in for StarTeam, the preferences for **Team > StarTeam > Synchronize** should all be turned off since the **Tasktop Dev** plug-in will handle the synchronization capabilities. The preferences for **Team > StarTeam > Synchronize** have all been turned off by default now as well.
- The StarTeam Eclipse Plugin does not support the ability to perform a check out and merge action. You will receive a message that an internal error occurred if you try this option.
- In Eclipse 4.2, if you close Eclipse while an embedded item editor is open, an error occurs when you reopen Eclipse as it attempts to reopen the editor document window. You will need to close the document window and reopen the item in the StarTeam Classic view.
- Checkout of a linked file from the **Link** view does not check out the revision linked, instead it checks out the tip revision of the linked file.
- To check out a missing file, you cannot use an item view pane, you must use the **Synchronize** view.
- The **Error Log** window may show warnings such as, `NLS unused message: ... in: com.borland`. These messages can be ignored.
- The **Detail** view uses Firefox to display the contents in HTML. An error message containing the phrase `No more handles ...` may be displayed if the browser has been updated. Please see <http://www-01.ibm.com/support/docview.wss?uid=swg21271865> for more information on how to resolve this issue.
- Only the latest version of StarTeam File Compare/Merge works as an alternate merge/compare tool. The 11.0.xxx versions will not correctly auto-merge the file content. Pre-11.0.xxx versions will work, but

the latest version is recommended. You can download the StarTeam File Compare/Merge installation file from the Micro Focus Product Updates downloads site.

- Alternate Property Editors are not available to display as embedded editors and will show in a dialog regardless of the embedded editor setting.
- If you change the Working Folder while the StarTeam Eclipse Plugin is running, it can cause Team Synchronization errors.
- This release will not open the StarTeam **Classic** perspective in Solaris 10.
- Solaris cannot open the **Annotation View** or the **Details View**. Therefore, annotation hover hyperlinks can not be displayed.
- Solaris does not support embed-able browsers. Therefore, annotation pop-ups in Solaris will not include selectable process links.
- If your monitor's display appearance is set to the Microsoft Windows Classic theme, filter combo boxes display incorrectly (too narrow) in the Eclipse UI. The workaround is to use the Microsoft Windows XP theme. To change this setting, select **Display** from the Microsoft Windows **Control Panel**. The theme is set on the Appearance tab. This is an Eclipse bug. For more information, see https://bugs.eclipse.org/bugs/show_bug.cgi?id=155159.
- If you enable MPX for both the StarTeam Eclipse Plugin and StarTeam Server, and you log on manually in the StarTeam Eclipse Plugin, the client prompts you to take advantage of MPX. If your logon is performed automatically using stored account information, the client does not display any MPX prompts. However, a system job for MPX is started. System jobs handle all MPX events. These jobs are initially invisible in the Eclipse **Progress** view. You can display them by clicking on the drop down view menu in the **Progress** view, selecting **Preferences**, and checking the option to **Show sleeping and system operations** in the **Progress Preferences** dialog box.
- You can only overwrite files with outgoing changes using the context menu **Replace** with commands. For files with incoming changes only, you must first modify the files locally (to make them conflicting) before performing a force check-in.
- When you refresh the status after renaming a folder with a file added to it, the client shows the set of changes as an incoming deletion of the folder and an incoming addition of that folder and its new files. The local history is disconnected. However, this does not damage the continuity and consistency of the remote history on the server.
- While you can use drag-and-drop to move workspace resources, you cannot use it to share workspace resources. This is an Eclipse bug. For more information, see https://bugs.eclipse.org/bugs/show_bug.cgi?id=187972.

MPX Known Issues

- If you receive either of the following errors when installing MPX Cache Agent:

Error 1723

There is a problem with this Microsoft Windows installer package. A DLL required for this install to complete could not be run. Contact your support personnel or package vendor.

WARNING! Failed to install Visual C++ Runtime Libraries. Please make sure to run vcredist_x86.exe before running MPX Cache Agent.

This happens when you have an old version (2.0) of Microsoft Windows installer. Microsoft Windows Installer 3.0 or later is recommended. For more information, see <http://www.microsoft.com/downloads/details.aspx?FamilyId=32BC1BEE-A3F9-4C13-9C99-220B62A191EE&displaylang=en>.

- Checkout data will not be included in the generated `.cotrc` file if a MPX Cache Agent performed the checkout. Data will only be included in the `.cotrc` file if the check-out operation was performed by the StarTeam Server.

StarTeam SDK Known Issues

PATH Variable When you install the product on Microsoft Windows, the StarTeam SDK runtime will also be installed if necessary. If an error indicates that you must manually edit the *PATH* system variable and refers you to the readme file, the length of the *PATH* variable on the target computer has exceeded the Microsoft Windows maximum. You must shorten the text and either include the new path for the StarTeam SDK runtime or run the StarTeam installer a second time. The *PATH* system variable cannot exceed 1024 characters. The 1024 characters must include the StarTeam SDK runtime paths which, by default, are C:\Program Files\Micro Focus\StarTeam SDK <version>\bin and C:\Program Files\Micro Focus\StarTeam SDK <version>\lib.



Note: Removing text from the Microsoft Windows path may cause undesired application failure. It is very important to be certain that a path is obsolete before manually deleting it from the *PATH* system variable. If you are uncertain, please use the obsolete application's uninstaller or consult your system administrator before taking any action.

StarTeam Server Known Issues

Search Issue

Search may not work when using Atlas Planning and Tracking Suite 3.2.1 with Atlas Hub 16.0.

64-bit Linux Server running an un-patched version of SUSE 11.3 or 11.4 is unable to load Event Transmitter with ActiveMQ

This can be resolved by either applying the security patch, or by creating symbolic links in StarTeam Server folder to the older versions of these files. The syntax for creating symbolic links is:

```
ln -s /usr/lib64/libcrypto.so.0.9.8 ./libcrypto.so.10
ln -s /usr/lib64/libssl.so.0.9.8 ./libssl.so.10
```

32-bit Linux Server

In order to open Server Administration Tool in 32-bit version of Linux Server, it is necessary to install the compatible Open LDAP 2.3 library for SUSE 11 SP3 and RHEL 6.7.

- For SUSE 11 SP3 32-bit the library is compat-libldap-2_3_0 version number 2.3.37_2.24.36.
- For RHEL 6.7 32-bit the library is compat-openldap-1:2.3.43-2.el6.

Oracle 12c on 64-bit Linux Platform

When using Oracle database version 12c on a 64-bit Linux platform for StarTeam Server configurations, ensure that the Oracle client being used is also of the same version (12c). Using an older version of Oracle client, like 11.0, crashes Admin Tool while attempting to connect to the database.

ODBC/DSN Decommission Process and the workaround

During the database upgrade process for existing pre-13.0 configurations, the ODBC DSN information in the configuration file is replaced with entries for direct database connectivity. During this time, we are able to detect the database server and instance name and update the configuration accordingly.

Connecting to a database (Microsoft SQL Server or Oracle) running on a non-default port is now supported directly during the creation of a new configuration. There is an option to select the port, if desired. However

for Microsoft SQL Server configurations upgraded to 12.0 from previous versions of StarTeam, the default port will always be assumed. This is because the workaround to connect to a Microsoft SQL Server on a non-default port using ODBC does not return the port information when queried.

If attempting to upgrade an existing configuration to the latest, where the Microsoft SQL Server ODBC DSN used by the existing configuration references a non-default port, it may be necessary to edit the StarTeam Server configuration file to enter the correct port.

Installation Issues

- Multiple SDKs on 64-bit OS** If you install multiple SDKs on a 64-bit OS (one 32-bit and one 64-bit), the shortcuts for the first SDK will be overwritten with the shortcuts to the last SDK installed. This means that you can only uninstall the 'last' SDK using the shortcuts in the program group.
- Linux** On Linux, selecting the **Embed Preedit String into client window** option is preventing input into the **Password** field in the Japanese language (like it was in previous releases), and also in the English language in this release. French and German are fine. We recommend you uncheck the **Embed Preedit String into client window** option in both English and Japanese languages.
- Canceling an Installation** If you cancel the installation of the StarTeam Server after you have already installed the StarTeam Runtime, and then install the StarTeam Server again, letting it finish, at the end of the installation you will not be prompted to reboot the computer, even though rebooting is required.

Server Issues

- Native-II Vault** Disk volumes used for hives by one StarTeam Server configuration should not be used by any other process including other StarTeam Server configurations.
- Hive threshold limits should never be set to 100%. You should never totally fill a drive anyway, but when a hive is set to 100% and runs out of disk space, the Server still checks this hive when it is this hive's turn in the hive rotation. The resulting error is: `no space left on device`. The workaround is to clear the **Allow new archives** check box in **Hive Manager** for this hive.
- Time Issues** StarTeam Server stores time stamps in UTC (also known as Universal Coordinated Time, Greenwich Time, or Zulu Time) format and adjusts the time stamp for the time zone that the computer specifies. For example, if a file is saved and checked in at 5 P.M. in California, its time stamp in California is 5 P.M. However, its time stamp on a computer in New York would be 8 P.M., the time it was in New York when the file was checked in. When a file is modified, the time stamp reflects that of the operating system. This means that if a file is checked in by a user in one time zone and modified by a user in another, the file's time stamp may appear to be earlier than the most recently checked-in revision. This does not affect file statuses within StarTeam because the UTC times are used to calculate statuses.
- If you are in an area that observes Daylight Savings Time (DST), the StarTeam status bar may display the incorrect time when rolling back a view (**ViewSelect Configuration Configuration As Of**). For example, if you are currently in DST and rollback the view to a point in time prior to DST, the time display in the status bar (lower left corner of the StarTeam window) will be ahead by one hour. If you are not currently in DST and rollback the view to a point in time during DST, the time in the status bar will be behind one hour.
- Microsoft Project Tasks** Microsoft Project tasks imported into a StarTeam Server should not have work records that occur before the start date. If they do, the work hours will not be subtracted from the remaining work.

- Disk-Imaging Software** Disk-imaging software, such as Norton Ghost, does not work well with StarTeam. StarTeam needs to be installed on each workstation. StarTeam creates a unique `connectionmanager.ini` file for each workstation. The `connectionmanager.ini` is used to identify one workstation from another. If you use disk-imaging software, this `.ini` file is copied, and when the image is installed to another computer, there are now two or more workstations with the same `.ini` file. This can lead to unusual status problems.
- Logging in Using Previously Logged on User** When working in the **Server Administration** tool and logging in using a previously logged on user, an error displays indicating that `A user has already been logged on for this session`. As a workaround, close and reopen the **Server Administration** tool and log on again. Click **OK** to terminate the program.
- To avoid this situation, be sure to stop the StarTeam Server application before shutting down Microsoft Windows or run the StarTeam Server as a service.

StarTeam Layout Designer Known Issues

- Buttons and Drag and Drop Components Do Not Work on Linux** On Linux systems, when attempting to create a new layout and add new components using the sidebar or dragging and dropping them from the left menu, the functions do not work. The issue happens for all types of layouts: Change Request, Task, Story, etc. To work around the issue:

1. Select a generic control from the palette to the right of the control list.
2. Open the Property page.
3. Right-click and choose **Paste**.

This creates the control window, which you can then expand/collapse.

Refer to the *Layout Designer User's Guide* for more information.

StarTeam Quality Center Synchronizer Known Issues

- StarTeam Quality Center Synchronizer support for Oracle requires `ojdbc7.jar` to be installed on the same computer where StarTeam Quality Center Synchronizer is installed. Make sure to install an Oracle client on the same computer as StarTeam Quality Center Synchronizer. The Oracle client that supports `ojdbc7.jar` is Oracle 12c client.
- StarTeam Quality Center Synchronizer support of ALM 12.5 using Oracle requires an edit to `run.bat` and `run-again.bat`. You must change the `ORACLE_PATH` line in the batch to match the installation of the Oracle 12c client installation directory. Change the `ORACLE_CLASSPATH` line from `classes12.zip` to `ojdbc7.jar`.
- Change Requests that are created in StarTeam and synchronized to Quality Center with a required field in Quality Center need to be map to a StarTeam field that must have a value. The fields in the `bug.ini` that are required fields in Quality Center must be set to use an equal sign (=) in the mapping information of `bug.ini`. Required fields in Quality Center must have history enabled because of the share ownership option that is enable in the `bug.ini` for StarTeam Quality Center Synchronizer.
- Large synchronizations may result in out of memory errors. In these cases, we recommend adding `-Xmx256m` (or up to `-Xmx1024m`, depending on available resources) to the following line in `run.bat` or `run-again.bat`.

```
%JAVA% -classpath "%_CLASSMATE% com.starbase.mtdsync.App BugSync.ini
```

such that it reads:


```
%JAVA% -Xmx256m -classpath "%_CLASSPATH% com.starbase.mtdsync.App BugSync.ini
```

- If the **LookupList** field value is also the name of the list, the StarTeam Quality Center Synchronizer will not create that value in the corresponding StarTeam enumerated field, but instead generates an error. The workaround is to manually add the value to the actual list in StarTeam Quality Center Synchronizer.
- The 2005 R2 StarTeam Quality Center Synchronizer allowed an empty Quality Center field mapped to a StarTeam enumeration to result in the StarTeam enumeration having an empty value. This was accomplished by setting the value of the StarTeam enumeration to 0 or -1. This functionality has been removed because these values are not allowed by the StarTeam client. If the Quality Center value is empty and is mapped to a StarTeam enumeration, the default value of the enumeration in StarTeam will be used. Even if the mapping is owned by Quality Center, if the value in StarTeam is empty, the StarTeam change request will be updated with the default value. In the 2005 R2 StarTeam Quality Center Synchronizer, if the `vts_create_custom_fields` directive was used to create an enumeration field in StarTeam, these newly created enumeration fields did not have the default value correctly set. If such a property is encountered during synchronization, a warning message is generated indicating that the user should use a 2006 or later client and set the default value in the customize dialog. If a Quality Center field is mapped to a StarTeam enumeration and that Quality Center field allows blanks, a warning is generated indicating that the user should customize the Quality Center field to make it *Required*.
- Quality Center does not convert times to local time when the Quality Center server is running in a different time zone than the StarTeam Quality Center Synchronizer, so times must be translated into the time zone of the server. Quality Center now performs the translation based upon a time zone ID code that specifies the time zone of the Quality Center server.
- For 12.5 you need to download HP ALM Connectivity Tool first, then go to `http://10.50.3.14:8080/qcbin/TDConnectivity_index.html` and click the **Download HP ALM Connectivity** link. After that, register the DLLs for QCSync to use. Otherwise, you will get `Unable to load QC jar` error. The two DLLs you need to register are:
 - `regsvr32 C:\Users\yet\AppData\Local\HP\ALM-Client\12.50.0.0\OTAClient.dll`
 - `regsvr32 C:\Users\yet\AppData\Local\HP\ALM-Client\12.50.0.0\webClient.dll`

StarTeam Visual Studio Plugin Known Issues and Limitations

Known Issues

- Occasionally, using StarTeam File Compare/Merge stand alone or running the compare/merge inside Visual Studio throws the following exception: "Could not find any JRE". To work around this issue, ensure that set system environment variable `JAVA_HOME` is set correctly. For example:


```
JAVA_HOME= C:\Program Files\Micro Focus\Java\Oracle1.8
```
- Component types for Atlas and StarTeam Agile, as well as custom component types, are now visible tabs in the StarTeam Visual Studio Plugin. While the Micro Focus web interfaces for these tools provide the preferred editing capabilities, if you would like users to be able to edit any of these item types from within Visual Studio, then an appropriate custom editor (either via Layout Designer or Alternate Property Editor) should be created and will be picked up by the StarTeam Visual Studio Plugin.
 -  **Note:** Rich text edit boxes on Custom Editors will not display in Visual Studio.
- The StarTeam Visual Studio Plugin does not support source code operations on Web Site projects that use a local IIS server. This is a known bug. There is no workaround other than using the embedded client and pointing it to the local files in the IIS server.
- When changing the source code provider for a solution from StarTeam SCC (or any SCC provider) to the StarTeam Visual Studio Plugin you must unbind the SCC integration using the **File > Source Control > Change Source Control** menu, then set StarTeam Visual Studio Plugin (**Tools > Options > Source Control**) as your source control provider. The system displays the **File > Source Control > Change Source Control** menu only if you have a solution that is bound to an SCC provider.

- When the connection to MPX has been broken for solutions or projects placed into StarTeam Server with MPX enabled, using the integration commands **Update Solution** or **Refresh** does not work. As a workaround for this issue, you can either:
 - Log off and log on to the StarTeam Server.
 - Perform a manual refresh using the StarTeam **Refresh** command or the **Refresh** button in the StarTeam **Items** or StarTeam **Folders** pane.
- Rich text support appears to be in place when copying and pasting text, images, or hyperlinks into text-based fields for a Change Request, Task, Topic, or Requirement. Once the item is saved to the StarTeam Server, the formatting and images are removed.
- When upgrading projects from the 2005 version of StarTeam Visual Studio Plugin to this integration, one person needs to migrate the project and check in the changes. That user must have the project and solution files current on disk so that they have the StarTeam sync records and no `Unknown` file statuses. After that, all users must pull the project or solution to their workspace for use in Microsoft Visual Studio 2012. You will get an error message if you try converting your Microsoft Visual Studio 2005 project to a Microsoft Visual Studio 2012 project by using the **StarTeam > Pull Solution** (or **Pull Project**) commands in Microsoft Visual Studio 2012. Perform the steps in the following example instead. For example:
 1. Open the StarTeam Cross-Platform Client (or Microsoft Windows client) and open the Microsoft Visual Studio 2005 project. Make sure that none of the files have an `Unknown` status. If any files have this status, select them, and choose **File > Update Status** from the main menu. If the files are not in your workspace, you will see a `Missing` status. In this case, you must check them out.
 2. Open the Microsoft Visual Studio 2005 `.sln` file in Microsoft Visual Studio 2012. Doing so automatically opens the **Conversion** wizard which converts the Microsoft Visual Studio 2005 solution and project files so that they can be used in Microsoft Visual Studio 2012.
 3. After completing the steps in the wizard, the solution and project files are marked as `Modified by StarTeam`. Choose **StarTeam > Pending Checkins** window to check in the files.
 4. Advise other users to open Microsoft Visual Studio, and choose **StarTeam > Pull Solution** (or **Pull Project**) to bring the files to their own respective workspaces for use in Microsoft Visual Studio.
- If you have a locally-modified file open and another user renames that same file and checks in the changes (including the solution file) and then you update the solution, you must manually merge the file from your local workspace with the renamed file to make sure that all of your changes are preserved. Additionally, you will no longer see the file by its original name in the Solution Explorer (your original file with its changes still exists in your local workspace), and you might see an error message if you have the file open in the **Designer**.
- Unlike Visual SourceSafe, you must save your files so that changes are recognized by the integration before accessing most StarTeam file commands. However, changes are automatically saved when using the StarTeam **Place Solution**, **Place Project**, **Update Solution**, **Update Project**, or **Commit Project** commands.
- If you use the options to either exclusively or non-exclusively lock files on check-out (found in the **File** tab of the StarTeam **Personal Options** dialog), and you check out but do not modify files or if you modify files and revert your changes, the files will not appear in the StarTeam Pending Checkins dialog. In this case, the files remained locked until you manually unlock them. This behavior differs from Visual SourceSafe where the check in dialog displays locked files and the check in operation unlocks unmodified files.
- Sometimes the **Project Load Failure** dialog box displays when you pull the project, but it can be ignored. The solution opens anyway.

Limitations

- In the embedded client, the following new custom field types are not available: Boolean, Content, Date, Map, Group, Group List, Time span, User, User List, and Multiple Enumerated.
- You cannot view the properties of either a change package or its changes in the **Changes** tab of the StarTeam Visual Studio Plugin embedded client, but you can view this information in the **Change** tab of the StarTeam Cross-Platform Client.

- The StarTeam Cross-Platform Client is optional software, but you cannot use the **Launch Client** menu item from the **StarTeam** menu if it is not installed. If the menu item is selected, but the StarTeam Cross-Platform Client is not installed, StarTeam generates an error message.
- Changing the working folder in the StarTeam Visual Studio Plugin does not change the alternate working folder in the StarTeam Cross-Platform Client.
- On Microsoft Windows Vista and Microsoft Windows 7, the default installation folder for the StarTeam File Compare/Merge component is C:\Users\Public\Micro Focus\File Compare Merge. If you change that location during installation, you must select a folder that all users can write to.

StarTeam Web Client Known Issues

- When using Edge browser, file service is not recognized as running even after it is started.
- StarTeam Web Server must be connected to an actual IP Address or Host Name for search to work in StarTeam Web Client. Do not use localhost.
- There is a known issue when checking in files from the web client. The first time a file is checked in, the **File Time Stamp at Check-In** field will not be populated, and will be displayed as "N/A". A subsequent check-in will update the time stamp correctly.
- There is a known issue when using non ASCII characters as the View Root Folder. Using non ASCII characters will result in incorrectly named folders being added to disk on check out. Therefore, please use only ASCII characters for folder names when setting the View Root Folder.
- If you access the StarTeam Web Client and the user interface is not in the language expected, you can specify the language by adding the locale as a request parameter. For example: `http://<server_name_and_port>/StarTeam/?locale=ja`

This will change the user interface to be rendered in Japanese. Changing the request parameter to: `locale=fr`, will render the user interface in French, and so on.

- If you are using non-latin characters for file and folder names, the following update to the tomcat configuration needs to be made:
 1. Open the `<installed web server location>/apache-tomcat-[version]/conf/server.xml` file.
 2. Search for the `Connector` element.
 3. Add `URIEncoding="UTF-8"` to the `Connector` element:


```
<Connector port="8080" protocol="HTTP/1.1" connectionTimeout="20000"
redirectPort="8443" URIEncoding="UTF-8" />
```
 4. Save the `server.xml` file.
 5. Restart Tomcat if it is currently running.
- If you access StarTeam Web Client using a hostname-only web address (for example `http://starteam`) using Internet Explorer 9, you may see an error message `Your browser does not support CORS` while using the file features. Internet Explorer 9 uses a *Compatibility Mode* to help display older intranet sites correctly, unfortunately this behavior interferes with the correct functionality of the StarTeam Web Client. There are two workarounds:
 - Access the application using a full web address (for example `http://starteam.mycompany.com`).
 - Set Internet Explorer 9 to not display intranet sites in compatibility mode (instructions available here: <http://blogs.msdn.com/b/ie/archive/2009/06/17/compatibility-view-and-smart-defaults.aspx>).
- Shutting down the File Service from the taskbar will not cancel any file operations that are currently under way. The File Service will stop once the operations have completed. Alternatively, the File Service may be shutdown immediately using Microsoft Windows **Task Manager**.
- Item properties of the types: **Content**, **Map**, **Multi-Select Enumeration**, **Boolean**, and **Date** cannot be edited in the StarTeam Web Client 13.0.
- On the first attempt to view **Item Properties** for a specific type of Item, if multiple Items are selected then the StarTeam Web Client will display a warning that the editor file could not be found. After closing

this warning, the editors display correctly and further attempts to open editors of this type will not display the warning. This issue is not present if only a single Item is selected for editing the first time.

StarTeam Web Server Known Issues

- StarTeam Web Server must be connected to an actual IP Address Or Host Name for search to work in StarTeam Web Client. Do not use localhost.
- When administering the StarTeam Web Server for multiple combined StarTeam repositories that add up to more than 1000 projects, you must use Mozilla Firefox 10.0.2 or greater. All other browsers fail or lock-up when trying to load the **Web Server Administration** user interface.
- The first person to log into a project that contains over 100 views will experience a load delay that could last several minutes depending on the quantity of views. This is a one-time cost for the project. No other user will experience the delay unless the StarTeam Web Server is restarted.
- On Microsoft Windows Server 2008, sometimes the StarTeam Web Server installation will fail to copy the required libraries from the StarTeam install location to the StarTeam Web Server install location. If this occurs, the files must be manually copied from the SDK to the StarTeam Web Server. Copy the following files to YOUR_PATH\StarTeam <version> Web Server\apache-tomcat-[version]\shared\lib:

```
YOUR_PATH\StarTeam SDK <version>\lib\ss.jar  
YOUR_PATH\StarTeam SDK <version>\lib\starteam130.jar  
YOUR_PATH\StarTeam SDK <version>\lib\starteam130-resources.jar  
YOUR_PATH\StarTeam SDK <version>\lib\StarTeam.Encryption.dll  
YOUR_PATH\StarTeam SDK <version>\lib\StarTeam.Environment.dll  
YOUR_PATH\StarTeam SDK <version>\lib\StarTeam.FileAccess.dll  
YOUR_PATH\StarTeam SDK <version>\lib\StarTeam.Profile.dll
```

- When the StarTeam Web Server is installed as a service, sometimes it may fail to stop. This can happen when the StarTeam Web Server is configured to support over 1000 projects. The process will exit, but Microsoft Windows will show a failed error message.
- Default memory settings may be insufficient for very large data-sets (>1000 projects). There are two files that may need to be modified before the StarTeam Web Server can be started, depending on the action you perform:

Running as a Service Edit either the file: YOUR_PATH\StarTeam <version> Web Server \StarTeamService32.bat Or YOUR_PATH\StarTeam <version> Web Server \StarTeamService64.bat depending on your operating system. Change the value of *JVM_MAX_MEMORY* to a value of your choice (in megabytes). For 32-bit operating systems, a maximum of approximately 1.8 GB is generally the limit. The *JAVA_HOME* and *PRODUCT_JVM* variables should be validated for accuracy. They are set according to typical path locations.

Running from the Start Menu Edit the file: YOUR_PATH\StarTeam <version> Web Server\ apache-tomcat-[version]\bin\setenv.bat. Change the value of *-Xmx4096M* to a value of your choice (in megabytes). For 32-bit operating systems, a maximum of approximately 1.8 GB is generally the limit. The *JRE_HOME* variable should be validated for accuracy. It is set according to typical path locations.

- Properties whose values are Deleted Users will display as Deleted User in the StarTeam Web Client.

TeamInspector Known Issues

Installation and Configuration

- Cancelling the installation when TeamInspector is in the process of copying the installation files to the server can result in a situation in which TeamInspector fails to clean up all files. The TeamInspector directory, and Uninstall_TeamInspector

directory, as well as an `install.log` and other files remain. If you experience this problem, manually remove the remaining directories and files before attempting another installation of TeamInspector.

- During installation, pressing the **Cancel** button when in the **Database Connection** panel causes the installation to terminate but fails to clean up the TeamInspector installation directory. Manually remove the TeamInspector installation directory and files before attempting another installation of TeamInspector.
- If reinstalling or upgrading TeamInspector, you might experience a general logon error when you attempt to launch the TeamInspector application from your client computer. If you encounter this error, try clearing the cookies in your web browser.

Builds

- If running builds of large, multiple projects in TeamInspector, you might experience an out-of-memory problem. If this problem occurs, an out-of-memory exception is logged in a TeamInspector log file, such as the `teamInspector-master.log` or `teamInspector-job.log`. If you encounter this issue, increase the Java Heap size in the following TeamInspector wrapper files: `master-wrapper.conf`, `job-wrapper.conf`, and `web-wrapper.conf`.
- See *Troubleshooting Build Failures* in the online help for additional information.

Documentation

The first time you open the TeamInspector online help system from the product interface, the Table of Contents (TOC) opens collapsed, instead of in expanded mode in which all top-level headings in the help system are displayed.

To expand the contents in this pane and view the top-level topics, click on the plus sign next to the TeamInspector book icon. You can then expand any of the topics displayed to view a list of the sub-topics available under each heading

Thereafter, when you click the help icon on a page or from a dialog box the help system opens to the topic in context with the page or dialog screen that you are viewing.

StarTeam Microsoft SCC Integration Known Issues and Installation Notes

Known Issues

- The integration and PowerBuilder use separate Java VMs. Micro Focus recommends using PowerBuilder .NET version 11.2 to avoid Java VM conflicts.
- When you connect to a source control system, PowerBuilder instantiates a Java VM by default. For certain source code control (SCC) programs, such as StarTeam or TrackerLink, the Java VM instantiated by PowerBuilder conflicts with the Java VM instantiated by the SCC program. To prevent Java VM conflicts, add the following section and parameter setting to the PB.INI file:

```
[JavaVM]
CreateJavaVM=0
```

- You do not need to install the StarTeam Cross-Platform Client on the workstation running SCC. However, the SCC integration does not provide a way for you to change any personal options or project properties. Settings that do exist are in effect.
- To use alternate property editors (APEs) for a project, you must install the StarTeam Cross-Platform Client and configure it to use the APEs.
- If you plan to use StarTeam and the StarTeam 2008 Release 2 Microsoft SCC integration with Visual Basic 6.0: Copy the `ssvb.dll` and `ssus.dll` files from Visual SourceSafe to the Windows System32 folder. These files are usually found in `C:\Program Files\Microsoft Visual Studio\Common`

\VSS\win32, but ssus.dll may also be in C:\Program Files\Common Files\Microsoft Shared\vs98 or C:\Program Files\Microsoft Visual Studio\VIntDev98\bin.

- In order to enforce process rules, select the process item as part of the check-in operation.

Using Beyond Compare with the Integration

To use Beyond Compare with this version of the integration:

1. You must have Sun Microsystems Java Virtual Machine 1.5.0_09 installed in the C:\Program Files\Micro Focus\Java folder. If you installed a previously-released version of the integration, this version of the JVM is already installed on your system. If you do not have this version of the JVM installed, then install the StarTeam 2006 Release 2 SDK (which uses this JVM).
2. Create a file named sdkapp.ini.
3. Add the following information to the sdkapp.ini file:

```
[Java VM]
Name=Sun1.5.0_09
```

4. Save the sdkapp.ini file in the Beyond Compare installation folder. When loaded by Beyond Compare, this file forces the integration to use JVM 1.5.0_09.

Installation Instructions

1. Download the file from the Micro Focus download site.
2. Double-click the file.
3. Follow the directions on the screen.

The default installation location is C:\Program Files\Micro Focus\StarTeam Integrations\StarTeam Microsoft SCC Integration.

Contacting Micro Focus

Micro Focus is committed to providing world-class technical support and consulting services. Micro Focus provides worldwide support, delivering timely, reliable service to ensure every customer's business success.

All customers who are under a maintenance and support contract, as well as prospective customers who are evaluating products, are eligible for customer support. Our highly trained staff respond to your requests as quickly and professionally as possible.

Visit <http://supportline.microfocus.com/assistedservices.asp> to communicate directly with Micro Focus SupportLine to resolve your issues, or email supportline@microfocus.com.

Visit Micro Focus SupportLine at <http://supportline.microfocus.com> for up-to-date support news and access to other support information. First time users may be required to register to the site.

Information Needed by Micro Focus SupportLine

When contacting Micro Focus SupportLine, please include the following information if possible. The more information you can give, the better Micro Focus SupportLine can help you.

- The name and version number of all products that you think might be causing an issue.
- Your computer make and model.
- System information such as operating system name and version, processors, and memory details.
- Any detailed description of the issue, including steps to reproduce the issue.
- Exact wording of any error messages involved.
- Your serial number.

To find out these numbers, look in the subject line and body of your Electronic Product Delivery Notice email that you received from Micro Focus.

Creating a Dump File

If reporting a protection violation you might be asked to provide a dump (.dmp) file. To produce a dump file you use the Unexpected Error dialog box that is displayed when a protection violation occurs. Unless requested by Micro Focus SupportLine, leave the dump setting as `Normal` (recommended), click **Dump**, then specify a location and name for the dump file. Once the dump file has been written you can email it to Micro Focus SupportLine

You may also be asked to provide a log file created by the Consolidated Tracing Facility (CTF) - a tracing infrastructure that enables you to quickly and easily produce diagnostic information detailing the operation of a number of Micro Focus software components.

Creating Debug Files

If you encounter an error when compiling a program that requires you to contact Micro Focus SupportLine, your support representative might request that you provide additional debug files (as well as source and data files) to help us determine the cause of the problem. If so, they will advise you how to create them.

Licensing Information

This product includes software developed by the Indiana University Extreme! Lab (<http://www.extreme.indiana.edu/>) and software developed by the Apache Software Foundation (<http://www.apache.org/>).

Index

64-bit TeamInspector 24

A

add-enum command 20
add-group command 20
add-property command 21
add-type command 21
add-user command 21
all components 18, 20, 22

C

command line known issues 37
command line parameters 23
contact information 50
continuous mode 20
custom component builder 22
Customer Care 50

D

database support 30
datamart
 continuous mode 20
 sample web reports 20
Datamart
 system requirements 26
 what's new 18, 20
DateTime grouping 24
debugging
 error messages 50
documentation known issues 37
downloads 50

E

Eclipse 4.3 22

H

HCO
 errors 50
history and log keywords 23

I

import/export manager support 24

J

jenkins CI 23

K

known issues
 layout designer 43
 MPX 40
 SDK 41
 StarTeam Cross-Platform Client 38
 StarTeam Eclipse Plugin 39
 StarTeam Microsoft SCC Integration 48
 StarTeam Quality Center Synchronizer 43
 StarTeam Server 41
 StarTeam Visual Studio Plugin 44
 StarTeam Web Client 46
 StarTeam Web Server 47
 TeamInspector 47

L

licensing information 51
list-groups command 21
list-users command 21

M

merge-label command 21
move command 23
MPX
 system requirements 28
 what's new 18
multi-configuration search 16, 17

O

open items in StarTeam Cross-Platform Client 24

P

PostgreSQL database support 24
postgresql for datamart 20
PostgreSQL search 20
Product Support 50
project specific filters 24

R

report designer 22
reports
 directory 18
revisions parameter for insert command 21

S

sample web reports 20
search 22
search support 18
select command parameters 21
sendTo email 24
serial number 50
StarFlow ExtensionsWorkflow Extensions
 what's new 8
StarTeam Command Line Tools
 what's new 6, 9, 13, 16, 19, 20, 23
StarTeam Cross-Platform Client
 system requirements 25
 what's new 6, 10, 13, 16, 18, 21, 23
StarTeam Eclipse Plugin
 system requirements 27
 what's new 9, 22
StarTeam Layout Designer
 system requirements 27
StarTeam Microsoft SCC Integration 36
StarTeam Quality Center Synchronizer
 system requirements 29

- StarTeam Server
 - Adobe Acrobat 31
 - database on a different computer 32
 - database server system requirements 33
 - JRE 31
 - Linux system requirements 33
 - Microsoft SQL Server Express on the same computer 32
 - operating systems support 30
 - system requirements 30
 - virus scanning software 31
 - web browser support 31
 - what's new 7, 12, 15, 17, 22, 24
- StarTeam Visual Studio Plugin
 - system requirements 33
 - what's new 22
- StarTeam Web Client
 - system requirements 34
 - what's new 8, 17, 19, 24
- StarTeam Web Server
 - system requirements 34
- StarTeam Workflow Extensions
 - system requirements 34
- SupportLine 50
- system requirements
 - Datamart 26
 - MPX 28
 - StarTeam Cross-Platform Client 25
 - StarTeam Eclipse Plugin 27
 - StarTeam Layout Designer 27
 - StarTeam Microsoft SCC Integration 36
 - StarTeam Quality Center Synchronizer 29
 - StarTeam Server 30
 - StarTeam Visual Studio Plugin 33
 - StarTeam Web Client 34
 - StarTeam Web Server 34
 - StarTeam Workflow Extensions 34
 - TeamInspector 34

T

- TeamInspector
 - system requirements 34
 - what's new 24
- trace command 23

U

- unicode character sets
 - StarTeam Server 7, 12, 15, 17, 22, 24, 30–33

V

- Visual Studio 2013 22

W

- WebSync 50
- what's new
 - all components 18, 20, 22
 - Datamart 18, 20
 - MPX 18
 - StarFlow ExtensionsWorkflow Extensions 8
 - StarTeam Command Line Tools 6, 9, 13, 16, 19, 20, 23
 - StarTeam Cross-Platform Client 6, 10, 13, 16, 18, 21, 23
 - StarTeam Eclipse Plugin 9, 22
 - StarTeam Server 7, 12, 15, 17, 22, 24
 - StarTeam Visual Studio Plugin 22
 - StarTeam Web Client 8, 17, 19, 24
 - TeamInspector 24
- Windows 8 22
- works order number 50