

# **Roundtable Team Guide**

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# Roundtable Team Guide

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The Roundtable plug-ins use OpenEdge Architect and the OpenEdge Java Open Client from Progress Software Corporation.

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# Preface

## Purpose

This book provides the Roundtable Team user with detailed information on effectively using and implementing the Roundtable Team server.

## Audience

This book is intended for users of the Roundtable Team client and administrators responsible for installing and maintaining the Roundtable Team server and Repository database.

## Organization

- Chapter 1 - Introduction

Provides a high-level overview of Roundtable Team including features and architecture.

- Chapter 2 - Installation

Provides detailed instructions on installing Roundtable Team server, setting up the Repository database and configuring the OpenEdge AppServer.

- Chapter 3 - Administration

Discusses the Configuration Utility and the steps necessary to set-up and maintain your Roundtable Team server installation.

- Chapter 4 - Concepts

Introduces you to all the key concepts necessary in implementing and successfully using Roundtable Team.

## Notices

### Unauthorized Modification of Repository Data

The Roundtable Team repository database contains complex data relationships that must be maintained to ensure proper functionality.

In order to preserve the referential integrity of repository data, the Roundtable Team repository data must NOT be altered outside of the Roundtable Team application, unless specifically directed to do so by Roundtable Technical Support personnel. Any unauthorized modification to repository data can result in an unusable repository and may render the installation unsupported by Roundtable Technical Support.

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# Chapter 1. Introduction

## What is Roundtable Team?

Roundtable Team is a team-oriented version control system that provides a collaborative solution for tracking and managing ongoing changes to development projects, application source code and related files. Utilizing a centralized Repository to record changes over time, users can both view and recover previous versions of resources, explore the history of committed changes, and compare differences between revisions. Users can also easily tag milestones in the development process and create new baselines from any point in time.

## Roundtable Team Features

The following table contains a brief list of Roundtable Team features, with a short description of each:

Feature	Description
Atomic Commits	Atomic commits ensure that all related file modifications committed as part of a single change set remain together. If a commit is interrupted, the Transaction is undone.
Named Branching	Named Branching enables you create a named Branch from any folder at any revision. You can create named branches — with descriptions — for a variety of purposes, such as private research, versions of your application, and customizations of the baseline.
Tags	A Tag allows you to create labels to easily identify and navigate to significant points in the development history.
Folder and File Versioning	Changes to both folders and files are versioned and stored in the Repository as part of committed Change sets.
Extensive Compare Capabilities	You can compare any two files, folders, Branches, Tags, Revisions and Change sets.
Comments	Persistent, editable, versioned comments can be entered for each file and folder. The comments are independent of Change descriptions.
File Revisions	File versions within each Branch receive a sequential revision number for Branch-specific file history.
Lineage Tracking	Identifies files versions that have a common ancestor to facilitate the comparison of branches.
Synchronize to Change	Optionally synchronize a project to a specified Change level, rather than the latest repository Change.
Merge	The Merge feature enables combination of two distinct versions of files, folders, or projects located in separate Branches. Any Change of the contributor Branch can be selected for Merge into the local target project. Committed merges are tracked to prevent reconsideration of previously-merged changes, and are shown in Revision history.
OpenEdge Technology	The Roundtable Team server runs on OpenEdge technology, instead of additional third-party products.
Multi-platform Server	The Roundtable Team server can be hosted on any OpenEdge-compatible Windows or UNIX/Linux system.



## Note

Detailed descriptions of features can be found in other sections of this guide.

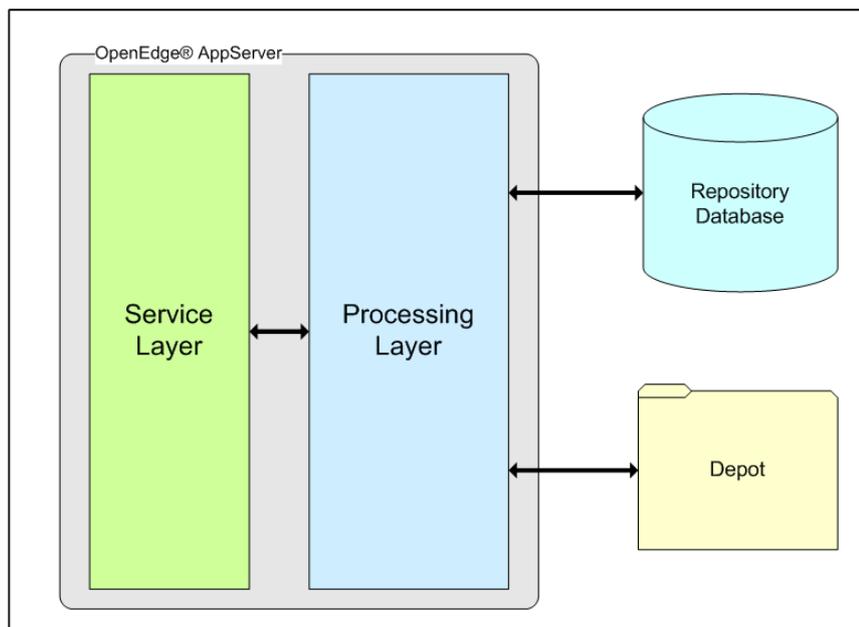
# Roundtable Team Architecture

The Roundtable Team client is delivered as a plug-in to the Eclipse Workbench.

The Roundtable Team server was developed using OpenEdge ABL from Progress Software Corporation and utilizes OpenEdge Appserver and OpenEdge RDBMS technology employing the following high-level components:

- Service Layer
- Processing Layer
- Repository Database
- Depot

The relationship of these components is shown in the following diagram:



Client requests are received in the Service Layer via calls to the OpenEdge AppServer broker. These requests are then routed to the Processing Layer to perform the requested action or fetch the requested data.

Structural and historical data are stored in an OpenEdge database Repository, while the user-designated Depot directory contains the content of committed file resources.

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# Chapter 2. Installation

## System Requirements

**Roundtable Team Server.** The Roundtable Team server has the following **minimum** system software requirements:

- OpenEdge 10.2A-supported Operating System
- OpenEdge 10.2A personal AppServer license (Basic or Enterprise for multi-user installations)
- OpenEdge 10.2A personal Database license (Workgroup or Enterprise for multi-user installations)

**Roundtable Team Client.** The Roundtable Team plug-in client requires OpenEdge Architect 10.2A or Eclipse 3.4

## Installation Overview

Installing Roundtable Team involves these 4 processes:

1. Installing the Roundtable Team server software.
2. Running the Install Wizard.
3. Configuring the Roundtable Team server.
4. Installing the Roundtable Team plug-in

## Installing the Server Software

The server software is distributed as an archive file that contains the necessary files to setup the server partition. The archive file for Windows platforms is `rtb_team_server_[version].exe`, and `rtb_team_server_[version].tar` for UNIX/Linux platforms.

For Windows platforms, run `rtb_team_server_[version].exe` to begin the installation process. For UNIX/Linux platforms, extract the contents of `rtb_team_server_[version].tar` to a new, empty directory that will be accessible by the OpenEdge AppServer Agent to be used for the server partition.

## Running the Install Wizard

After extracting the software from the archive file, you will need to run the install wizard. The wizard should be run on the same computer where the server files were extracted to.

The install wizard will perform the following tasks:

- Create the repository database.
- Compile the server code.
- Create a database server.
- Create the AppServer broker.
- Optionally start the database server and AppServer broker.

You can perform either a default installation or a custom installation. The default installation will use the following property values:

**Table 2.1. Default Installation Values**

Property	Value
Database Path	<install_path>/db where <install_path> is the location of the extracted files.
Database Name	rtb
Database Server Port	8326
Database Block Size	Default (Create from DLC/empty.db)
AppServer Broker Port	3092
AppServer Broker Owner/ Password	None (inherited from AdminService)
Register with NameServer	No (Clients will connect directly to the AppServer using AppServerDC protocol)

If you need to modify any of the default values, choose the Custom installation option when prompted during the install wizard. The Custom option requires that you have administrative knowledge of OpenEdge databases and the OpenEdge AppServer.

Follow these steps to run the install wizard:



**Note**

For Windows platforms, this wizard will be launched automatically during the installation process.

1. Login to the server computer as a system administrator.
2. Run the OpenEdge **proenv** command.
3. At the proenv command prompt, use the **cd** command to change to the directory where the server files were extracted to.
4. Launch the Setup utility with the following command:

```
session-cmd -baseADE rtb -rx -p _update.w -reusableObjects 0
```

where **session-cmd** is **prowin32** on Windows installations, and **pro** on UNIX/Linux installations. The Welcome page appears.

5. Follow the instructions on each page of the install wizard. Use the Next button to advance to the next page. On each page, enter or override the indicated data as required.

After successfully finishing the install wizard, you must set the Depot directory and define at least one user. To perform these tasks, follow the instructions found in the section called Configuration Utility.

## Installing the Roundtable Team Plug-In

The Roundtable Team client software can be downloaded using the Eclipse Software Updates interface (Help # Software Updates...).

Use the URL below when setting up an Eclipse Software Update for the Roundtable Team client:

```
http://www.tugboatsoftware.com/roundtable/eclipse/team/update
```

---

# Chapter 3. Administration

## Server Configuration

Before the Roundtable Team server can be used, it must be configured for your specific environment. This includes specifying the Depot directory, entering license data and specifying the users that will have access. These tasks are accomplished using the Roundtable Team Configuration utility.

The following sections describe the Roundtable Team Configuration utility and how to use it.

### Configuration Utility

The Roundtable Team Configuration utility is a menu-driven, text-based tool. It is used to update license data, specify the Depot directory and to perform user maintenance.

To run the Configuration utility, start an OpenEdge PROENV session and enter the following commands:

- `CD Team_Install`

where *Team\_Install* is the path to the root of the Roundtable Team server installation .

- `_progres -baseADE rtb -p conf/Config.p -reusableObjects 0`

```
Roundtable Team Configuration
Main Menu
D > Edit Depot Directory
L > Edit License Data
U > User Maintenance
Q > Quit

Enter Selection: █
```

### License

Before the Roundtable Team server can be started, it is required that you enter a valid license key. A license key includes your unique serial number and control code combination.

To update your license key, run the Roundtable Team Configuration utility and choose the **Edit License Data** menu option.

```
Roundtable Team Configuration
Main Menu
D > Edit Depot Directory
L > Edit License Data
U > User Maintenance
Q > Quit
      Serial: [REDACTED]
      Control Code: [REDACTED]
      User Limit: 0
Enter Selection: L
```

Once a valid license key is entered, your licensed user count will be displayed.



### Note

You will not be able to add user data until a valid license key is accepted.

## User Maintenance

Before a user can connect to, browse, and commit resources to the Roundtable Team Repository, they must be defined with a user name and password.

To add or update user information, run the Roundtable Team Configuration utility and choose the **User Maintenance** menu option.

```
Roundtable Team Configuration
User Maintenance
L > List Users
A > Add User
C > Change User Password
R > Remove User
M > Main Menu
Enter Selection: [REDACTED]
```

From this screen, you can add users, list currently defined users, change the passwords for existing users, or remove users.



### Important

Roundtable Team licensing is based upon a named-user model. You cannot define more users than your license key allows.

## Depot Configuration

The Depot directory contains the content for all resources committed to the Roundtable Team Repository.

Content is written to and read from the Depot directory by the OpenEdge AppServer on which the Roundtable Team server is running. You must ensure that the owner of the AppServer broker has both read and write permission to the specified directory. It is recommended that you use OS-level security to limit access to the Depot directory only to the user specified as the AppServer broker owner. For more information on configuring the OpenEdge AppServer, please refer to the *OpenEdge ApplicationServer: Administration* guide.

Since the number of folders and files in the Depot directory can grow quite large, you must also ensure that the Depot directory specified exists on a filesystem large enough to hold your baseline projects and all potential revisions. It is recommended that the Depot be placed on the fastest available disk and on the machine hosting the Roundtable Team application.



### Warning

You should never attempt to manually modify the content or structure of the Depot directory. Data loss could occur.

## Specifying the Depot Directory

To specify the Depot directory, run the Roundtable Team Configuration utility and choose the **Edit Depot Directory** menu option.

```

Roundtable Team Configuration
Main Menu
D > Edit Depot Directory
L > Edit License Data
U >
Q >
    Depot Location
    Enter the directory to be used by the Roundtable Team Depot.
    CAUTION
    If you change an existing directory, you may not be able to
    retrieve content for existing revisions. Please see the User's
    Guide for instructions on relocating the Depot.
    Directory: C:\work\RTB\rtbteam\depot
Enter Selection: D
  
```

Enter the server directory where you wish to store all Repository content.

## Relocating an Existing Depot

The configured Depot directory can be modified at any time using the Roundtable Team Configuration utility. However, the contents of the Depot directory must be manually moved to the new location.

Perform the following steps to relocate your Depot contents:

1. Stop the OpenEdge AppServer on which the Roundtable Team server is running
2. Create the new directory with appropriate permissions
3. Using the appropriate OS commands for your platform, move the contents of the Depot directory to the new location

4. Using the Roundtable Team Configuration utility, update Depot directory location
5. Restart the AppServer

## Database Parameter Tuning

The Roundtable Team Repository database is an OpenEdge database and can be tuned and maintained like any other OpenEdge database you may currently have installed.

For better performance of the Repository database, consider adjusting the following database server startup parameters below. These are simply recommendations and may not be applicable for your environment. For more information on specifying tuning parameters for the OpenEdge RDBMS, please refer to the *OpenEdge Data Management: Database Administration* guide.

Parameter	Description
-bibufs	<p>Before-image Buffers</p> <p>This parameter is initially set to 20.</p> <p>Increase it if there are any empty buffer waits in the PROMON Activity screen.</p>
-B	<p>Blocks in DB Buffer</p> <p>This parameter is initially set to 8192.</p> <p>Increasing the buffer size decreases the amount of database record I/O by increasing the number of buffers available in memory. A higher value also increases memory usage. Use the highest value permissible for your server environment.</p>
-L	<p>Lock Table Entries</p> <p>This parameter is initially set to 50000.</p> <p>This value limits the number of simultaneous record locks. Increase the value if the following message appears in the server log:</p> <p>SYSTEM ERROR: Record lock table too small. Increase -L parameter.</p>

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# Chapter 4. Concepts

## The Roundtable Team Repository

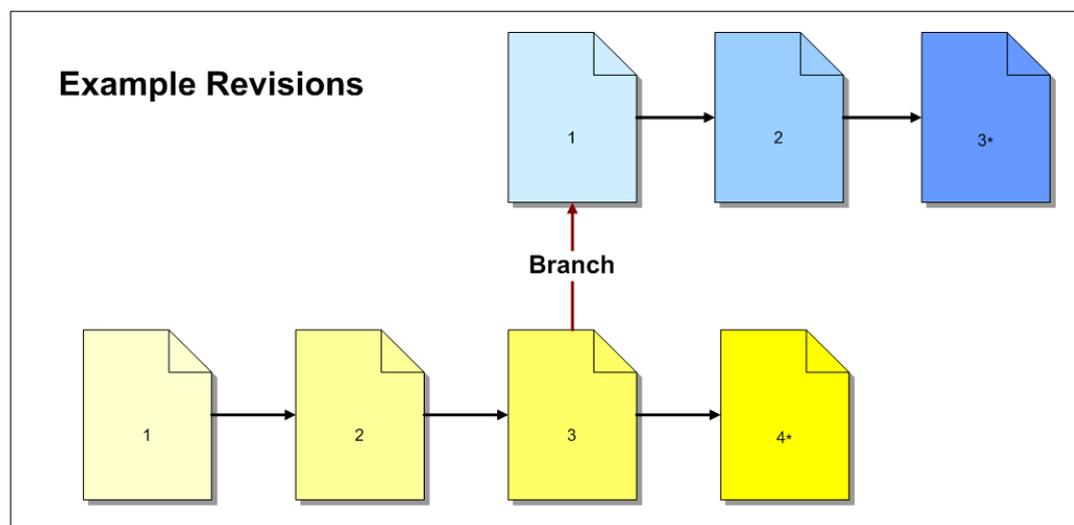
The Roundtable Team Repository consists of an OpenEdge database and a Depot. The Repository database stores the structural and historical data for files and folders, including Change, Branch, and Tag details. The Depot holds the content for each file participating in each Change. Both the database and the Depot are required to form a complete Repository.

The file and folder names in the Depot are hexadecimal identifiers that are meaningful to the Repository database. The actual hierarchy and names of your application files cannot be determined without the Repository database. Similarly, file content cannot be retrieved without the Depot. Regular backups and appropriate security measures are essential to protect the Repository database and the Depot.

## Revisions

Revisions identify the sequential changes to a file or folder in the Repository. The first Revision committed to the Repository in a series is Revision 1. The Revision is incremented by one with each subsequently committed change to the series such that the second committed Revision is 2 and so on.

When a Branch is created a new related series is created for each file and folder in the Branch. Each newly-created series in the Branch will begin with Revision 1 and progress independently of the related source series. The initial Revision of each newly-created series in the Branch is identical to the related source Revision in the source series.



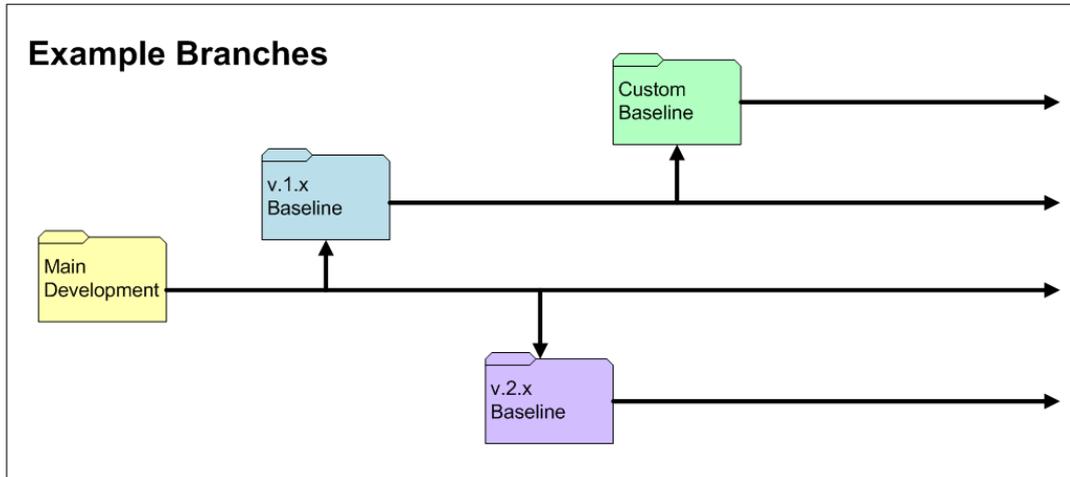
## Branches

To facilitate parallel development, Roundtable Team supports the creation and maintenance of Branches. The following sections explain what a Branch is and why you would use one.

### What is a Branch?

A Branch identifies a named, independent line of development. Branches in Roundtable Team are somewhat analogous to branches of a living tree. In the early life of a tree, the trunk splits into branches. On larger, more mature trees, the first branches themselves will often split into new branches, and those branches may form even more branches.

A Branch in Roundtable Team can be created from any existing folder in a Repository (including the root folder of a Repository and other Branches) at any point in a repository's Change history. When a Branch is created, its initial content is identical to the point (a folder at a specific Change) from which it was branched; that is, a new Branch will contain the same folders and files as the folder that the Branch was created from.



Although the content of a newly-created Branch looks identical to its starting point, the content of a Branch is independent. Changes made to the original content will not affect a Branch, and changes made to a Branch will not affect the original content.

## Why Use Branches?

A Branch is typically created to facilitate parallel development of different versions of an application. The Branches might contain specific releases of an application, site-specific customizations, or even serve as an isolated area for experimentation.

As an example of release-oriented Branches, suppose that a development team have completed a stable version of their application, and releases it to the end users. At that point, they create a Branch of the baseline, and then begin to work on new features in the original baseline. If any bugs are discovered in the released version, the bugs can be fixed in the Branch, without having to wait until the new development is stable enough for the next release.

In the case of site-specific customizations, you may have end-user sites that each run a customized version of your application. By creating a Branch for each of these sites, you can maintain their customizations separate from the baseline development, preventing potential incompatibilities between the customized versions and the baseline code.

You might also create a Branch if you need to try out some changes that might be disruptive to the main development baseline. An individual developer or a development team could perform their research and development work in a Branch created for this purpose.

Using the Merge feature, changes made in one Branch can be merged into another Branch. For example a bug fix made in a release Branch can be merged into the mainline development, so that the same fix will be contained in new releases.

## Merge

In order to facilitate parallel development, Roundtable Team provides the means to share changes between related branches, so that multiple developers can commit file and folder modifications to one or more branches, and later merge those modifications into a related branch that is checked-out to the user's local workspace.

The ability to merge changes between related branches is further enhanced by merge tracking. When changes are merged from one branch to another, Roundtable Team keeps a record of the merges so that users are not presented with the same actions during subsequent merges. For example, if a user merges the changes from revision 2 of a file into the local project and later initiates a merge from a different branch that contains revision 1 of the file, the user will not see an incoming change for the file, since they have already merged changes from a later revision.

When performing a Merge, a 3-way compare is done between the local selected resource (the merge Target), the corresponding remote selected Repository object (the merge Contributor), and the common ancestor between the selected items (Common). The results of this comparison, coupled with merge tracking, yield the merge action(s) for review.

Each row in the following table represents a possible merge item case. A value in the column indicates that there is a resource (file or folder) in the corresponding source. Columns with the same letter represent revisions with a common ancestor. Columns with the same letter and numeral represent the same revision of the same resource. Different letters represent resources with the same pathname, but without a common ancestor.

**Table 4.1. Merge Cases and Actions**

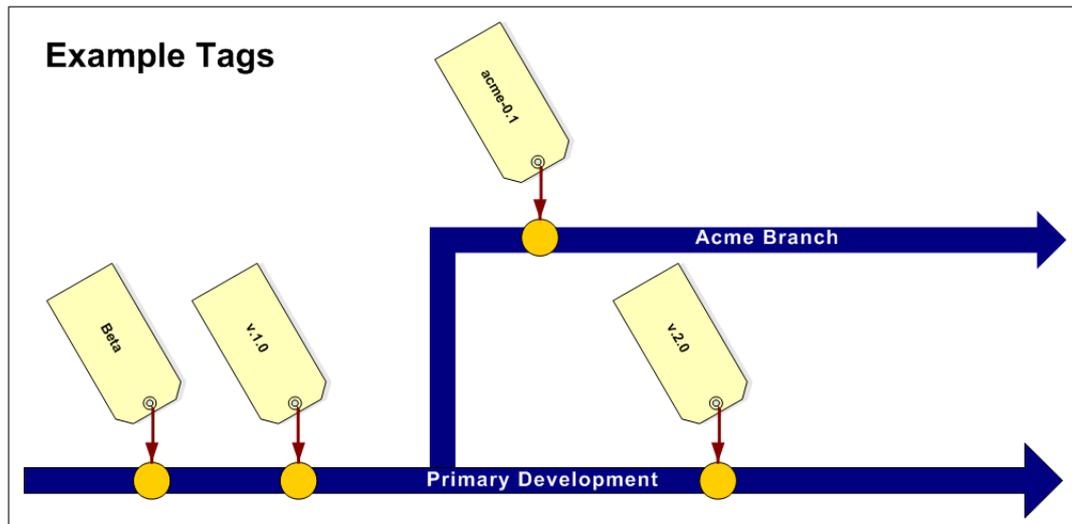
Target	Common	Contributor	Merge Action	Explanation
	A1	A1	None	The Contributor resource is unchanged.
		A1	Add	A Contributor resource was added.
	A1	B1	Add	A Contributor resource was added.
	A1	A2	Add	The Contributor resource was changed. Since a Target resource does not exist, the Contributor change will result in the addition of a Target resource.
	A1		None	The resource was deleted from both branches, so both Target and Contributor are in-sync.
A1	A1	A1	None	The Contributor resource is unchanged.
A2	A1	A1	None	Same as above.
A1	A1	A2	Update	The Contributor resource was changed.
A1	A1	B1	Update	A new Contributor resource was added (after a resource with the same pathname was deleted). Since a Target resource with the same pathname exists, the Contributor change will result in an update to the Target resource.
B1		C1	Update	Same as above.
B1			Delete or None	If the Target resource was originally created as the result of a merge, and the corresponding Contributor resource was deleted, then the merge action will be "Delete"; otherwise the Target item is unrelated to the Contributor item, so no merge is necessary.
B1	A1		Delete or None	Same as above.
A1	A1		Delete	The Contributor resource was deleted.
A2	A1		Delete	Same as above.

## Tags

Roundtable Team allows you to create Tags to facilitate the identification of significant points during development. The following sections explain what a Tag is and why you would use one.

### What is a Tag?

A Tag identifies a folder (and any children it has) in the Repository at a specific Change. You can think of it as taking a snapshot of the Repository at a particular point in time. Unlike photographs, however, you can create a Tag for a Change in the past.



Tags are a way to identify significant points during development (past or present). A Tag does not copy files or folders, nor does it establish an independent line of development. As the name implies, a Tag is essentially a label. Tags can be created and deleted at any time without affecting the files that they identify. You cannot commit changes to a Tag, since it is only a marker for a particular point in the development history.

### Why Use Tags?

Tags expedite the process of locating significant points in the development history. Your development organization decides what points are significant. Some examples of potentially significant points are product releases (internal and external), immediately prior to a set of specific changes, or even at the time of a nightly build.

You can create Tags in any Branch to serve as reference points for such purposes as code comparisons, performance benchmarks, and creating Branches. Instead of repeatedly scrolling through Change history descriptions to find a specific place in the development timeline, you can create a Tag at that point. A meaningful description for the Tag will ensure that you can quickly locate and access that point in history for any future operations — perhaps to identify all of the changes since the time of the Tag, or to checkout code for testing.

## Transactions

Typically, file modifications are made to implement a particular feature or bug fix, and the modifications are interdependent; consequently, all of the modified files should be committed together. Roundtable Team helps to maintain code base stability by using transactions. Every Change committed to the Repository occurs within a single database transaction. If the commit of a Change is interrupted — either by a system error or the user — the transaction is rolled back.

The time required to roll-back the transaction is proportional to the number of modified files already processed. For this reason (and others), it is usually good practice to limit the files in a Change to a logical, cohesive grouping, such as modifications required to correct a specific defect, or files directly affected by a database modification.

## Changes

A Change is a repository-wide numeric identifier for file and/or folder modifications that were committed together to the Repository. A Change records the file and/or folders changed, and the actions (Add, Delete, Update) taken on them. Additionally, a Change associates a user-entered description of the modifications.

The first resources ever committed to repository are identified as Change 1. Each subsequent commit — from any project — results in a Change of the next sequential number (2, 3, 4, etc.).

Changes provide the means for reviewing the Change history of any file or folder committed to the repository, as well as providing points from which to create Branches or create Tags.

## Comments

Every resource that is committed to the Roundtable Team Repository can have an associated comment. This comment is independent of the Change description that may have been entered when the resource was committed.

Comments can be useful in describing the specific purpose for programs, classes and include files. Comments can also be used as a developer-maintained, independent revision history of all changes that have been made to a resource.

---

# Chapter 5. Command Line Interface

## Introduction

The Roundtable Team Command Line Interface (CLI) is designed for automated integration tools to interface with the Roundtable Team Repository. The CLI is packaged as an Executable Java Jar file and requires a Java Virtual Machine to be installed on the computer. Consult the Java SE Documentation [<http://www.oracle.com/technetwork/java/javase/documentation/index.html>] for more information about Executable Java Jar files.

The CLI can execute a single command or it can execute a series of commands located in a CLI commands file. To execute a single command ensure all required properties are set and include a command when executing the jar. To execute a series of commands ensure all required properties are set as well as the optional RTBTeamCLI\_Commands property when executing the jar.

There are two Roundtable Team Command Line Interface executable jar files. The `rtbteamcli.102b.jar` file should be used to connect to OpenEdge 10.2B application servers and requires a 1.5 or higher Java Virtual Machine. The `rtbteamcli.11.jar` file should be used to connect to OpenEdge 11 application servers and requires a 1.6 or higher Java Virtual Machine.

## Properties

The Roundtable Team Command Line Interface (CLI) uses properties for configuring connection information and other settings. Properties can be set as Command File Variables, Java System Variables, or as Environment Variables. The order of precedence for properties is Command File Variable, Java System Variable, then Environment Variable.

### Command File Variables

A Command File Variable is set using the `Property` value format in the CLI commands file. Properties may be set multiple times in the CLI commands file.

### Example 5.1. Extract using Command File Variables

```
D:\>java -jar rtbteamcli.11.jar
```

In this example the file `D:\RTBTeamCLI_Commands.txt` contains the following text:

```
RTBTeamCLI_URI AppServer://wintest02:5168/team
RTBTeamCLI_UserID daniel
RTBTeamCLI_Password pass
```

```
Extract -Directory D:\CLI -Path Client\Common\com.rtbtsn
```

### Java System Variables

A Java System Variable can be set using the `-DProperty=value` option of the java command line tool. Consult the Java SE Documentation [<http://www.oracle.com/technetwork/java/javase/documentation/index.html>] for more information about the java command line tool.

### Example 5.2. Extract using Java System Variables

```
D:\>java -DRTBTeamCLI_URI=AppServer://wintest02:5168/team -DRTBTea
```

## Environment Variables

Environment Variables are set in an operating system dependent manner. Please consult the documentation for your operating system on how to set Environment Variables.

**Example 5.3. Extract using Environment Variables**

```
D:\>set RTBTeamCLI_URI=AppServer://wintest02:5168/team
D:\>set RTBTeamCLI_UserID=daniel
D:\>set RTBTeamCLI_Password=pass
D:\>java -jar rtbteamcli.11.jar Extract -Directory D:\CLI -Path Client\Comm
```

## Required Properties

## RTBTeamCLI\_URI

The connection URI for the Roundtable Team Repository. The CLI supports three URI Connection Methods and each method supports both secure and unsecure connections. Secure connections require setting the path to the SSL Certificate Store.

## RTBTeamCLI\_UserID

The User ID for the Roundtable Team Repository.

## RTBTeamCLI\_Password

The Password for the Roundtable Team Repository.

## Optional Properties

## RTBTeamCLI\_CertificateStore

The location of the files that contain the root digital certificates used when a secure protocol is used to connect to a Roundtable Team Repository. The value can be a single filename, a semi-colon delimited list of filenames, or the name of a directory that contains multiple certificates.

## RTBTeamCLI\_Commands

The location of the CLI commands file. If not specified the interface will look in the current working directory for the file `RTBTeamCLI_Commands.txt`.

The commands file is a simple text file that contains CLI commands. Each command must appear on a separate line with all of its parameters. Any line which begins with `//` or does not contain a recognized command will be ignored. The commands file may also include all of the other CLI properties. Each property must appear on a separate line.

**Controlling Commits.** All of the commands in the commands file will be processed in a single Roundtable Team Repository commit which creates a single history item. However if you want to break up the commands file into multiple commits you can do so. Any command that contains the optional `[Description]` parameter will cause a commit to occur if a description is included. The commit will include all of the commands processed from the beginning of the commands file or since a prior commit. Changing any of the following properties will also cause a commit to occur.

```
RTBTeamCLI_URI
RTBTeamCLI_UserID
RTBTeamCLI_Password
RTBTeamCLI_CertificateStore
```

RTBTeamCLI\_Verbose

True/False - Turns on additional output.

## URI Connection Methods

**Connecting directly to a Repository.** The following is the URI syntax for connecting directly to a Repository:

```
{ AppServerDC: | AppServerDCS: } [ //AppServer-host ] [ :AppServer-port ] / [ AppService-name ]
```

**Connecting through a NameServer.** The following is the URI syntax for connecting through a NameServer:

```
{ AppServer: | AppServerS: } [ //name-server-host ] [ :name-server-port ] / [ AppService-name ]
```

**Connecting using HTTP.** The following is the URI syntax for connecting using HTTP:

```
{ http: | https: } [ web-user-id [ :web-password ] @ ] web-server-host [ :web-server-port ] / aia-path [ ?AppService=service-name ]
```

## Commands

The following list is a summary of all Roundtable Team Command Line Interface commands. All parameters begin with - and are specified with the format `-Parameter Value`. Parameters enclosed within [ ] are optional while all others are required. Parameters separated with | mean only one can be specified.

- Extract *-Directory* [*-Change*] [*-ID*|*-Branch*|*-BranchID*|*-Tag*|*-TagID*] [*-Path*]
- Add *-File*|*-Directory* [*-Comment*] [*-ID*|*-Branch*|*-BranchID*|*-Tag*|*-TagID*] [*-Path*] [*-Description*]
- Update [*-File*] [*-Comment*] [*-ID*|*-Branch*|*-BranchID*|*-Tag*|*-TagID*] [*-Path*] [*-Description*]
- Delete [*-ID*|*-Branch*|*-BranchID*|*-Tag*|*-TagID*] [*-Path*] [*-Description*]
- AddBranch *-Name* [*-Comment*] [*-Change*] [*-ID*|*-Branch*|*-BranchID*|*-Tag*|*-TagID*] [*-Path*] [*-Description*]
- UpdateBranch *-ID* [*-Name*] [*-Comment*] [*-Description*]
- DeleteBranch *-ID*|*-Name* [*-Description*]
- AddTag *-Name* [*-Comment*] [*-Change*] [*-ID*|*-Branch*|*-BranchID*|*-Tag*|*-TagID*] [*-Path*] [*-Description*]
- UpdateTag *-ID* [*-Name*] [*-Comment*] [*-Description*]
- DeleteTag *-ID*|*-Name* [*-Description*]
- Move [*-M\_ID*|*-M\_Branch*|*-M\_BranchID*|*-M\_Tag*|*-M\_TagID*] [*-M\_Path*] [*-ID*|*-Branch*|*-BranchID*|*-Tag*|*-TagID*] [*-Path*] [*-Description*]
- Commit [*-Description*]
- Path *-ID* [*-Change*]
- ID [*-Change*] [*-ID*|*-Branch*|*-BranchID*|*-Tag*|*-TagID*] [*-Path*]

- BranchID *-Name [-Change]*
- TagID *-Name [-Change]*

## Extract

The Extract command copies the specified Files/Folders from the Roundtable Team Repository to the local machine.

**Extract** *-Directory [-Change] [-ID/-Branch/-BranchID/-Tag/-TagID] [-Path].*

- Directory      The local directory where the Files/Folders will be copied.
- Change        A Change Number for the Roundtable Team Repository. If specified the copied Files/Folders will reflect the information in the Repository as of the given Change Number. The values for other parameters must also reflect the information in the Roundtable Team Repository as of the given Change Number.
- ID             The ID of a File/Folder in the Roundtable Team Repository. The File/Folder will be extracted or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
- Branch        The name of a Branch in the Roundtable Team Repository. The associated Folder of the Branch will be extracted or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
- BranchID     The ID of a Branch in the Roundtable Team Repository. The associated Folder of the Branch will be extracted or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
- Tag            The name of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be extracted or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
- TagID        The ID of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be extracted or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
- Path          A delineated path to a File/Folder in the Roundtable Team Repository. The path delimiter can be either / or \. The path is relative to the root of the Repository unless one of the optional parameters [-ID|-Branch|-BranchID|-Tag|-TagID] is specified in which case the path is relative to the File/Folder associated with the optional parameter.

## Add

Adds new Files/Folders to the specified parent File/Folder in the Roundtable Team Repository.

**Add** *-File/-Directory [-Comment] [-ID/-Branch/-BranchID/-Tag/-TagID] [-Path] [-Description].*

- File            The local file or directory to add to the Repository. Only a single File/Folder will be added when using the -File parameter.
- Directory     The local directory to add to the Repository. If specified the directory and all of its files and sub-directories will be recursively added.
- Comment      A comment for the new File/Folder.

-ID	The ID of a Folder in the Roundtable Team Repository. The Folder is the parent Folder or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-Branch	The name of a Branch in the Roundtable Team Repository. The associated Folder of the Branch will be the parent Folder or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-BranchID	The ID of a Branch in the Roundtable Team Repository. The associated Folder of the Branch will be the parent Folder or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-Tag	The name of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be the parent Folder or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-TagID	The ID of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be the parent Folder or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-Path	A delineated path to a Folder in the Roundtable Team Repository. The path delimiter can be either / or \. The path is relative to the root of the Repository unless one of the optional parameters[-ID -Branch -BranchID -Tag -TagID] is specified in which case the path is relative to the Folder associated with the optional parameter.
-Description	The description for the Roundtable Team Repository commit.

## Update

Updates the specified File/Folder in the Roundtable Team Repository.

**Update [-File] [-Comment] [-ID|-Branch|-BranchID|-Tag|-TagID] [-Path] [-Description].**

-File	The updated local file or directory.
-Comment	A comment for the File/Folder.
-ID	The ID of a File/Folder in the Roundtable Team Repository. The File/Folder is updated or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-Branch	The name of a Branch in the Roundtable Team Repository. The associated Folder of the Branch is updated or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-BranchID	The ID of a Branch in the Roundtable Team Repository. The associated Folder of the Branch is updated or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-Tag	The name of a Tag in the Roundtable Team Repository. The associated Folder of the Tag is updated or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-TagID	The ID of a Tag in the Roundtable Team Repository. The associated Folder of the Tag is updated or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-Path	A delineated path to a File/Folder in the Roundtable Team Repository. The path delimiter can be either / or \. The path is relative to the root of the Repository

unless one of the optional parameters [ -ID | -Branch | -BranchID | -Tag | -TagID ] is specified in which case the path is relative to the File/Folder associated with the optional parameter.

-Description      The description for the Roundtable Team Repository commit.

## Delete

Deletes the specified Files/Folders from the Roundtable Team Repository.

**Delete [ -ID / -Branch / -BranchID / -Tag / -TagID ] [ -Path ] [ -Description ].**

-ID                      The ID of a File/Folder in the Roundtable Team Repository. The File/Folder will be deleted or if the optional [ -Path ] parameter is specified it becomes the starting point for the path calculation.

-Branch                 The name of a Branch in the Roundtable Team Repository. The associated Folder of the Branch will be deleted or if the optional [ -Path ] parameter is specified it becomes the starting point for the path calculation.

-BranchID              The ID of a Branch in the Roundtable Team Repository. The associated Folder of the Branch will be deleted or if the optional [ -Path ] parameter is specified it becomes the starting point for the path calculation.

-Tag                     The name of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be deleted or if the optional [ -Path ] parameter is specified it becomes the starting point for the path calculation.

-TagID                 The ID of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be deleted or if the optional [ -Path ] parameter is specified it becomes the starting point for the path calculation.

-Path                    A delineated path to a File/Folder in the Roundtable Team Repository. The path delimiter can be either / or \. The path is relative to the root of the Repository unless one of the optional parameters [ -ID | -Branch | -BranchID | -Tag | -TagID ] is specified in which case the path is relative to the File/Folder associated with the optional parameter.

-Description          The description for the Roundtable Team Repository commit.

## AddBranch

Creates a new Branch for the specified Folder in the Roundtable Team Repository.

**AddBranch -Name [ -Comment ] [ -Change ] [ -ID / -Branch / -BranchID / -Tag / -TagID ] [ -Path ] [ -Description ].**

-Name                    The name for the new Branch.

-Comment                A comment for the new Branch.

-Change                 A Change Number for the Roundtable Team Repository. If specified the new Branch will reflect the information in the Repository as of the given Change Number. The values for other parameters must also reflect the information in the Roundtable Team Repository as of the given Change Number.

-ID                      The ID of a Folder in the Roundtable Team Repository. The Folder will be branched or if the optional [ -Path ] parameter is specified it becomes the starting point for the path calculation.

-Branch	The name of a Branch in the Roundtable Team Repository. The associated Folder of the Branch will be branched or if the optional [ -Path ] parameter is specified it becomes the starting point for the path calculation.
-BranchID	The ID of a Branch in the Roundtable Team Repository. The associated Folder of the Branch will be branched or if the optional [ -Path ] parameter is specified it becomes the starting point for the path calculation.
-Tag	The name of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be branched or if the optional [ -Path ] parameter is specified it becomes the starting point for the path calculation.
-TagID	The ID of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be branched or if the optional [ -Path ] parameter is specified it becomes the starting point for the path calculation.
-Path	A delineated path to a Folder in the Roundtable Team Repository. The path delimiter can be either / or \. The path is relative to the root of the Repository unless one of the optional parameters [ -ID   -Branch   -BranchID   -Tag   -TagID ] is specified in which case the path is relative to the Folder associated with the optional parameter.
-Description	The description for the Roundtable Team Repository commit.

## UpdateBranch

Updates the specified Branch in the Roundtable Team Repository.

**UpdateBranch -ID [-Name] [-Comment] [-Description].**

-ID	The ID of a Branch in the Roundtable Team Repository.
-Name	The new name for the Branch.
-Comment	The new comment for the Branch.
-Description	The description for the Roundtable Team Repository commit.

## DeleteBranch

Deletes the specified Branch from the Roundtable Team Repository.

**DeleteBranch -ID/-Name [-Description].**

-ID	The ID of a Branch in the Roundtable Team Repository.
-Name	The name of a Branch in the Roundtable Team Repository.
-Description	The description for the Roundtable Team Repository commit.

## AddTag

Creates a new Tag for the specified Folder in the Roundtable Team Repository.

**AddTag -Name [-Comment] [-Change] [-ID/-Branch/-BranchID/-Tag/-TagID] [-Path] [-Description].**

-Name	The name for the new Tag.
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-Comment	A comment for the new Tag.
-Change	A Change Number for the Roundtable Team Repository. If specified the new Tag will reflect the information in the Repository as of the given Change Number. The values for other parameters must also reflect the information in the Roundtable Team Repository as of the given Change Number.
-ID	The Identity of a Folder in the Roundtable Team Repository. The Folder will be tagged or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-Branch	The name of a Branch in the Roundtable Team Repository. The associated Folder of the Branch will be tagged or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-BranchID	The Identity of a Branch in the Roundtable Team Repository. The associated Folder of the Branch will be tagged or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-Tag	The name of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be tagged or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-TagID	The Identity of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be tagged or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-Path	A delineated path to a Folder in the Roundtable Team Repository. The path delimiter can be either / or \. The path is relative to the root of the Repository unless one of the optional parameters[-ID -Branch -BranchID -Tag -TagID] is specified in which case the path is relative to the Folder associated with the optional parameter.
-Description	The description for the Roundtable Team Repository commit.

## UpdateTag

Updates the specified Tag in the Roundtable Team Repository.

**UpdateTag -ID [-Name] [-Comment] [-Description].**

-ID	The ID of a Tag in the Roundtable Team Repository.
-Name	The new name for the Tag.
-Comment	The new comment for the Tag.
-Description	The description for the Roundtable Team Repository commit.

## DeleteTag

Deletes the specified Tag from the Roundtable Team Repository.

**DeleteTag -ID/-Name [-Description].**

-ID	The ID of a Tag in the Roundtable Team Repository.
-Name	The name of a Tag in the Roundtable Team Repository.
-Description	The description for the Roundtable Team Repository commit.

## Move

The Move command moves the specified File/Folder in the Roundtable Team Repository to another location in the Roundtable Team Repository.

**Move [-M\_ID/-M\_Branch/-M\_BranchID/-M\_Tag/-M\_TagID] [-M\_Path] [-ID/-Branch/-BranchID/-Tag/-TagID] [-Path] [-Description].**

-M_ID	The ID of a File/Folder in the Roundtable Team Repository. The File/Folder will be moved or if the optional [-M_Path] parameter is specified it becomes the starting point for the path calculation.
-M_Branch	The name of a Branch in the Roundtable Team Repository. Only valid when the optional [-M_Path] parameter is specified. The associated Folder of the Branch becomes the starting point for the path calculation.
-M_BranchID	The ID of a Branch in the Roundtable Team Repository. Only valid when the optional [-M_Path] parameter is specified. The associated Folder of the Branch becomes the starting point for the path calculation.
-M_Tag	The name of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be moved or if the optional [-M_Path] parameter is specified it becomes the starting point for the path calculation.
-M_TagID	The ID of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be moved or if the optional [-M_Path] parameter is specified it becomes the starting point for the path calculation.
-M_Path	A delineated path to a File/Folder in the Roundtable Team Repository. The path delimiter can be either / or \. The path is relative to the root of the Repository unless one of the optional parameters [-ID -Branch -BranchID -Tag -TagID] is specified in which case the path is relative to the File/Folder associated with the optional parameter.
-ID	The ID of a Folder in the Roundtable Team Repository. The Folder will be the new parent for the moved File/Folder or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-Branch	The name of a Branch in the Roundtable Team Repository. The associated Folder of the Branch will be the new parent for the moved File/Folder or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-BranchID	The ID of a Branch in the Roundtable Team Repository. The associated Folder of the Branch will be the new parent for the moved File/Folder or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-Tag	The name of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be the new parent for the moved File/Folder or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-TagID	The ID of a Tag in the Roundtable Team Repository. The associated Folder of the Tag will be the new parent for the moved File/Folder or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.
-Path	A delineated path to a File/Folder in the Roundtable Team Repository. The path delimiter can be either / or \. The path is relative to the root of the Repository unless one of the optional parameters [-ID -Branch -BranchID -Tag -

TagID] is specified in which case the path is relative to the File/Folder associated with the optional parameter.

-Description The description for the Roundtable Team Repository commit.

## Commit

Commits all uncommitted commands. Only valid in the CLI commands file.

**Commit [-Description].**

-Description The description for the Roundtable Team Repository commit.

## Path

Returns the path for the File/Folder in the Roundtable Team Repository with the specified -ID.

**Path -ID [-Change].**

-ID The ID of a File/Folder in the Roundtable Team Repository.

-Change A Change Number for the Roundtable Team Repository. If specified the path will reflect the information in the Repository as of the given Change Number.

## ID

Returns the ID of the specified Files/Folders from the Roundtable Team Repository.

**ID [-Change] [-ID/-Branch/-BranchID/-Tag/-TagID] [-Path].**

-Change A Change Number for the Roundtable Team Repository. If specified the ID will reflect the information in the Repository as of the given Change Number. The values for other parameters must also reflect the information in the Roundtable Team Repository as of the given Change Number.

-ID The ID of a File/Folder in the Roundtable Team Repository. The ID of the File/Folder will be given or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.

-Branch The name of a Branch in the Roundtable Team Repository. The ID of the associated Folder for the Tag will be given or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.

-BranchID The ID of a Branch in the Roundtable Team Repository. The ID of the associated Folder for the Branch will be given or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.

-Tag The name of a Tag in the Roundtable Team Repository. The ID of the associated Folder for the Tag will be given or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.

-TagID The ID of a Tag in the Roundtable Team Repository. The ID of the associated Folder for the Tag will be given or if the optional [-Path] parameter is specified it becomes the starting point for the path calculation.

-Path A delineated path to a File/Folder in the Roundtable Team Repository. The path delimiter can be either / or \. The path is relative to the root of the Repository unless one of the optional parameters[-ID|-Branch|-BranchID|-Tag|-TagID] is specified in which case the path is relative to the File/Folder associated with the optional parameter.

## BranchID

Returns the ID of the Branch in the Roundtable Team Repository with the specified *-Name*.

**BranchID** *-Name* [*-Change*].

*-Name*      The name of a Branch in the Roundtable Team Repository.

*-Change*    A Change Number for the Roundtable Team Repository. If specified the *-Name* needs to reflect the information in the Repository as of the given Change Number.

## TagID

Returns the ID of the Tag in the Roundtable Team Repository with the specified *-Name*.

**TagID** *-Name* [*-Change*].

*-Name*      The name of a Tag in the Roundtable Team Repository.

*-Change*    A Change Number for the Roundtable Team Repository. If specified the *-Name* needs to reflect the information in the Repository as of the given Change Number.