MKS®

Integrity

MKS Integrity 2009 SP6

Getting Started Guide

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PART 1

Client Installation

Installing MKS Integrity Client

You can install the MKS Integrity Client in the following ways:

- from the DVD
- from the network (if the installation program has been made accessible from a shared network location)
- as a silent install

The procedures in this section describe the steps required to perform a new installation of the MKS Integrity Client on Windows and UNIX platforms.

Before Installing the MKS Integrity Client

Before installing the MKS Integrity Client, you need to do the following:

- If you are using any IDE integrations with MKS Integrity, disable all integrations before you install the new client. Then, shut down and remove any earlier MKS Integrity Client. Failure to do so may cause operational problems later on.

  NOTE To disable an integration or uninstall an earlier release, follow the instructions provided in the product documentation accompanying that release.
  The contents of your existing Sandboxes are not lost during an upgrade.

- Ensure your system has sufficient disk space and virtual memory. The installation program does not report an error when your system is running out of disk space. For UNIX systems, if there is insufficient free space in the `/tmp` directory, the installation program attempts to unpack in your `$HOME` directory. For disk space and virtual memory recommendations, contact your administrator.
- Before installing MKS Integrity on Windows, ensure you preserve existing system settings by manually creating a system restore point. Creating a restore point allows for system restoration in the case of error. For information on creating restore points, refer to `www.microsoft.com` and find the restore procedure for the version of Windows you are running.

Installing With Previous MKS Integrity Client Installation

If you install to the same location as a previous client install, your existing configuration files are copied to the following directory:

installdir`/backup-`*year-month-day_hour-minute-second*

The files that are copied include:

installdir`/IntegrityClientSite.rc`

installdir`/lib/patch`

installdir`/lib/patchmksclientboot.jar`

installdir`/lib/patchmksclient.jar`

where *installdir* is the path to the directory where you installed the MKS Integrity Client.

Installing MKS Integrity Client From DVD

On Windows and on certain UNIX systems, the MKS Integrity DVD wizard starts automatically. To start the wizard manually, open `index.html` in the root.

If you do not want to use the wizard, you can run `mksclient.exe` or `mksclient.bin`, which are located on the MKS Integrity DVD in the platform-specific `/installs/client` directory.

RELEASE NOTES allows you to view the release notes for the MKS Integrity Server and MKS Integrity Client.

DOCUMENTATION allows you to view the product documentation in Adobe Acrobat PDF format.

To install the MKS Integrity Client

- For Windows, run or save the installation program (`mksclient.exe`).

  IMPORTANT Before installing MKS Integrity on Windows, ensure you preserve existing system settings by manually creating a system restore point. Creating a restore point allows for system restoration in the case of error. For information on creating restore points, refer to `www.microsoft.com` and find the restore procedure for the version of Windows you are running.

- For UNIX platforms, complete the following steps:
  - Copy `mksclient.bin` to a temporary directory on your server computer.
  - Make sure the environment variable *`$DISPLAY`* is set, if appropriate.
  - To make `mksclient.bin` executable, run:

    ```
    chmod +x mksclient.bin
    ```

  - To run the installation, type:

    ```
    ./mksclient.bin
    ```

  Notes about installing on UNIX:

  - MKS recommends that you install the MKS Integrity Client as a non-root user, if non-root users are running the MKS Integrity Client.
  - MKS does not certify any PC X-Servers. If your PC X-server provides full support for Xwindows, the MKS Integrity Client may operate.

Making the MKS Integrity Client Available to Users for Installation

Administrators can make the MKS Integrity Client executable accessible from a shared location network location for users to install.

To set up the MKS Integrity Client so users can install it from a shared network location

1. Copy, as appropriate for your platform, `mksclient.exe` or `mksclient.bin`, which is located on the MKS Integrity DVD in the platform-specific `/installs/client` directory.
2. Make sure all users have appropriate access to the network directory where the file resides.
3. Notify users about where to find the MKS Integrity Client executable program and the MKS Integrity Server name(s) and port number(s) they need to connect to.

   NOTE The MKS Integrity Server home page is also a convenient location to distribute the MKS Integrity Client executable program from.

For shared client installs on UNIX, the `IntegrityClient2009/bin` directory must be writable for all users so that the `IntegrityClient.log` file can be created correctly.

If you do not want to make that directory writable by all, change the properties for `lax.stderr.redirect` and `lax.stdout.redirect` to point to a file that is writable by all users working with an MKS Integrity Client. The properties for `lax.stderr.redirect` and `lax.stdout.redirect` are found in the following file:

installdir`/bin/IntegrityClient.lax`

where *installdir* is the path to the directory where you installed the MKS Integrity Client.

Installing MKS Integrity Client From Shared Network Location

If the MKS Integrity Client executable program is accessible from a shared location, users can choose to run the executable program from the network, or copy the executable file to their local machines and then run it.

To install the MKS Integrity Client from a shared network location

1. Do one of the following:
   - Copy, as appropriate for your platform, the `mksclient.exe` or `mksclient.bin` executable program from the directory specified by your administrator to a temporary directory on your computer and run it.
   - Run, as appropriate for your platform, the `mksclient.exe` or `mksclient.bin` executable program from the directory specified by your administrator.

   The InstallAnywhere window displays as the files needed for the installation are extracted, followed by the **License Agreement** panel.
2. Continue the installation, starting at step 4 of the procedure for installing from the DVD.

Improving MKS Integrity Client Performance Over Network

If you are working over a network with less than 10 Mbit of available bandwidth, you can adjust compression for the MKS Integrity Client under:

```
<installdir>/IntegrityClientSite.rc
#Compression properties
```

where `<installdir>` is the path to the directory where you installed the MKS Integrity Client.

The default settings for the properties are:

```
IntegrityClient.compress.transfers=false
IntegrityClient.compress.file.transfers=false
```

The properties should only be set to `true` if compression is required because your network is dealing with the transfer of numerous large files. Adjusting the compression properties is not helpful on a fast LAN because, typically, the time to compress the file is greater than the time required to make the transfer.

MKS Integrity Client Installation Wizard

This section describes the contents of the panels in the MKS Integrity Client installation wizard. It also describes specifics required when entering data in each panel.

Step	Panel	Instruction/Notes
1	License Agreement	Obtain your license agreement from MKS Customer Care.
2	Shortcut Installation	MKS Integrity Client MKS Administration Client
3	Installation Location	■ Accept the default path location or specify another location by browsing or typing the path of the directory where you want to install the MKS Integrity Client. ■ The path location may not include special characters, such as #. ■ The MKS Integrity Client installer will follow the expected behavior of Windows applications defaulting to install under `c:/MKS/<install dir>`. ■ If at any time you want to restore the default location, click **Restore Default Directory**, and click **Next** to continue. ■ If you attempt to install a new version of the MKS Integrity Client and you haven't uninstalled an existing version, the installation process will fail. Uninstall the MKS Integrity Client via **Control Panel > Add Remove Progams** first and then remove the delete the remaining physical directory in the installation location.
4	Specify Server Connection Default	■ The **Specify Server Connection Default** panel displays. Specify whether the components for workflows and documents, and configuration management are installed on the same server or different servers. ■ The **Specify Default MKS Integrity Server Connection(s)** panel displays, providing fields for server host name(s) and port(s) based on the component you chose to install. Type the applicable server host name(s) and port information in the fields provided. **Note:** By default, the listening port for the MKS Integrity Server is 7001. Administrators must notify users of the assigned port number. ■ If you enabled the Configure proxy server settings option, the **Specify Default Proxy MKS Integrity Server Connection** panel displays, providing options for supplying credentials and server information for the default proxy server. Enable the appropriate options and type the applicable proxy server host name and port information in the fields provided.
5	Installation Complete	MKS Toolkit is only installed if it is not already. The **System Environment Changed** panel displays, informing you that your system environment has changed and that you need to log out and reboot your system for the changes to take effect. To quit the installer, click Done.

Installing MKS Integrity Client Using Silent Install

A silent install enables you to configure the client installation options in a properties file and then run it on the MKS Integrity Client without the need for any further interaction.

If you are installing on a UNIX platform, using a silent install means that you do not need to set the environment variable *$DISPLAY*.

There are two components to installing the server using a silent install:

- configuring the `mksclient.properties` file
- running the silent install command

> **NOTE** Errors that occur during the silent install are not displayed in the GUI or text output. To verify that the silent install was successful, check the return code by using the `echo ?` command from a command line. Non-zero exit code indicates the silent install failed.

Configuring MKS Integrity Client Properties File

The `mksclient.properties` file is located in the *severinstalldir*`/config/install` directory. Review the following properties and update as required. Once the file is configured, make it accessible to all clients from a shared location.

IMPORTANT Since the silent install is intended to be used without any user intervention, it is important that all information provided in the `mksclient.properties` file be valid.

Property	Description
`INSTALLER_UI`	Specifies what mode to use for installation. By default, property is set to `silent`, which installs client based on values in this properties file. To run GUI installation and display prompts for server installation parameters, set property to `gui`.
`MKS_LICENSE_AGREEMENT`	Specifies whether you accept terms of license agreement. Copy of license agreement can be found on DVD in `support/install-properties` folder. By default, property is set to `false`.

`MKS_CREATE_INTEGRITY_CLIENT_SHORTCUT`
`MKS_CREATE_ADMIN_CLIENT_SHORTCUT`
	Specifies whether to create shortcuts for MKS Integrity Client and MKS Integrity Administration Client on Windows desktop. By default,
	`MKS_CREATE_INTEGRITY_CLIENT_SHORTCUT=true`
	`MKS_CREATE_ADMIN_CLIENT_SHORTCUT=false`

`USER_INSTALL_DIR`	Where to install MKS Integrity Client. By default, property is set to: *installdir*`/IntegrityClient` If client is running Windows, use double backslashes for paths in properties. Spaces in path should be preceded by backslash.
`INSTALL_OVERWRITE`	Specifies whether to overwrite any existing files in installation directory. Certain files are backed up in installation location. By default, property is set to `true`.
`MKS_USE_SAME_SERVER`	Specifies whether to use same MKS Integrity Server for workflows and documents, and configuration management. If set to true, you must also specify `MKS_COMMON_HOST` and `MKS_COMMON_PORT`. By default, property is set to `true`.
`MKS_COMMON_HOST=localhost` `MKS_COMMON_PORT=7001`	If `MKS_USE_SAME_SERVER=true`, these properties specify host name and port number of common server used for workflows and documents, and configuration management. By default, `MKS_COMMON_PORT=7001` Valid port numbers range from `1` to `65535`.
`MKS_IM_HOST` `MKS_IM_PORT`	If `MKS_USE_SAME_SERVER=false`, these properties specify host name and port number of server used for workflows and documents.Valid port numbers range from `1` to `65535`.

Property	Description
MKS_SI_HOST MKS_SI_PORT	If MKS_USE_SAME_SERVER=false, these properties specify host name and port number of server used for configuration management. Valid port numbers range from 1 to 65535.
MKS_PROXY_SAME_USER MKS_PROXY_CONFIRM_USER MKS_PROXY_GLOBAL_USER MKS_PROXY_USE_DEFAULT MKS_PROXY_HOST MKS_PROXY_PORT	Specifies default credentials and server information for connecting to a proxy server. MKS_PROXY_SAME_USER specifies to use the same username and password for the proxy and server. MKS_PROXY_CONFIRM_USER specifies to always confirm the proxy username and password. MKS_PROXY_GLOBAL_USER specifies to reuse the current proxy username and password for all connections. MKS_PROXY_USE_DEFAULT specifies to use the default proxy for all unlisted connections. MKS_PROXY_HOST and MKS_PROXY_PORT specify host name and port number of the proxy server. By default, MKS_PROXY_HOST are MKS_PROXY_PORT are blank. All other properties are set to true.

Running Silent Install

1. Copy `mksclient.properties` from the directory specified by your administrator to a temporary location on your computer.
2. Install the MKS Integrity Client by doing one of the following.
   - If the location of `mksclient.properties` is not in the same directory as the `mksclient.exe`, run:

     `mkssclient -l` *locale* `-f mksclient.properties`

     or

     `./mksclient -l` *locale* `-f mksclient.properties`

     where

     `-l` *locale* specifies the locale, for example, `-l ja` for Japanese or `-l en` for English.

     `-f` flags the location of `mksclient.properties`.
   - If the location of `mksclient.properties` is in the same directory as `mksclient.exe` run, as appropriate for your platform, either `mksclient.exe` or `mksclient.bin`.

Installing Multiple MKS Integrity Clients on a Single Machine

For large organizations using multiple MKS Integrity Servers, it may not be practical to upgrade all servers at the same time. Servers that are maintained by different groups within an organization may operate on independent schedules, upgrading to new releases of the MKS Integrity Server at different times.

To access functionality available in specific releases and connect to different versions of the MKS Integrity Server, individual users may require multiple versions of the MKS Integrity Client installed on a single machine.

Each installation of the MKS Integrity Client contains a corresponding set of configuration and data files. By default, these files are stored in the user's `$HOME` (UNIX) or `Documents and Settings/` *username* (Windows) directory, consisting of the following:

- `IntegrityClient.rc` (preferences)
- `.mks` directory (ViewSets)

- `SIDist` directory (Sandbox registry)

To install a later version of the MKS Integrity Client on a machine with an existing, older version of the MKS Integrity Client, you must set the `MKS_IC_INSTANCE_DIR` system environment variable that specifies an alternate location for these configuration and data files. For example, if you have MKS Integrity Client 2009 currently installed and want to install MKS Integrity 10 Client or higher, you set the system environment variable for the latest version of the MKS Integrity Client.

IMPORTANT

- The following steps apply to installing MKS Integrity Client 2009 or higher.
- Perform the following steps in order. If you start the latest version of the MKS Integrity Client before the environment variable is set, the ViewSets and Sandbox registry belonging to the older version of the MKS Integrity Client may be corrupted.

To install multiple MKS Integrity Clients on a single machine

1. For the currently installed MKS Integrity Client, back up the following files and directories in `$HOME` (UNIX) or `Documents and Settings/`*username* (Windows):
   - `IntegrityClient.rc`
   - `.mks` directory
   - `SIDist` directory
2. Create a new `MKS_IC_INSTANCE_DIR` system environment variable for the latest MKS Integrity Client you want to install. The value can be set to any directory as long as it is not one that belongs to the currently installed, older version of the MKS Integrity Client. For example, on Windows you can specify the MKS Integrity 10 client install directory as:

   ```
   MKS_IC_INSTANCE_DIR=C:/Program Files/MKSClient10/homedirectory
   ```

   TIP On Windows, set the variable through **Control Panel > System > Advanced > Environment Variable**.
3. Install the latest MKS Integrity Client in the directory you specified for the system environment variable. On initial launch, the client uses the `MKS_IC_INSTANCE_DIR` environment variable instead of the default directory.
4. After the MKS Integrity Client starts, an `IntegrityClient.rc` file is created in the directory specified for the system environment variable. In the `IntegrityClient.rc` file, add the following line:

   ```
   IntegrityClient.port=port_number
   ```

   where *port_number* can be any value outside of currently used ports, such as `1-25` and port `31000` (this is the default port for the 2007 MKS Integrity Client), for example:

   ```
   IntegrityClient.port=31001
   ```
5. To prevent the log files from the multiple client installs from overriding one another, add the `logFileName` property to the `IntegrityClient.rc` file. This property specifies the alternate location of the latest MKS Integrity Client's log file, for example:

   ```
   logFileName=C:/Program Files/MKSClient10/homedirectory/IntegrityClient.log
   ```
6. Restart the latest MKS Integrity Client.

MKS Integrity Client Post-installation Considerations

- MKS recommends that you only connect to an MKS Integrity Server from a MKS Integrity Client of the same version.
- After the installation is complete, client preferences can be changed at any time by selecting **Options** in the MKS Integrity Client.
- On UNIX, users must have file permissions to the MKS Integrity Client directory. Specifically, users must have `write` access to the `IntegrityClient.log` file located in *installdir*`/bin`.

Configuring Environment Variables for UNIX

On UNIX, you can configure the following environment variables after you install the MKS Integrity Client:

- Add the *installdir*`/bin` directory to the `PATH` environment variable.

  Modifying the `PATH` environment variable eliminates the requirement to type the full path to executables for the workflow and document component, configuration management component, MKS Integrity Administration Client, and Authorization Administration application.

- Add the *installdir*`/etc` directory to the `MANPATH` environment variable.

  Modifying the `MANPATH` environment variable ensures that the **`man`** command can access the man pages for workflows and documents, configuration management, MKS Integrity Administration Client, and the Authorization Administration application.

The *installdir* is the path to the directory where you installed the MKS Integrity Client.

Uninstalling the MKS Integrity Client

Before attempting to uninstall the MKS Integrity Client, disable all integrations and then quit the client. If you installed and enabled the Windows Explorer integration, exit Windows Explorer before beginning the uninstall process (you may need to log out and log in again to make the Windows Explorer integration disappear).

With the exception of your ViewSets, `IntegrityClientSite.rc` file (MKS Integrity Client preferences), and directories and files added to the *installdir* directory after the initial installation, the uninstaller removes all other directories and their contents from the *installdir* directory.

To uninstall the MKS Integrity Client on Windows

1 Do one of the following:

- From the Windows **Start** menu, select **Programs > MKS Integrity > Uninstall >** MKS Integrity Client.
- Run the uninstall program file:

  installdir`/uninstall/IntegrityClientUninstall.exe`

  where *installdir* is the path to the directory where you installed the MKS Integrity Client.

The **InstallAnywhere Uninstaller** panel displays.

> **NOTE** If you installed the client using a silent install, the uninstall is also silent. No dialog box displays and no further action is required.

The uninstall program removes all installed components, except any files or directories created after the installation.

2 Click **Uninstall**. The MKS Integrity Client files are uninstalled, and the **Uninstall Complete** dialog box displays.

3 Choose whether to have your system restarted automatically or restart it yourself and click **Done**. Your computer restarts automatically or continues to operate according to the selection you made.

To uninstall the MKS Integrity Client on UNIX

To uninstall the MKS Integrity Client on UNIX, make sure the environment variable *`$DISPLAY`* is set, if necessary.

> **NOTE** If you installed the client using a silent install, the uninstall is also silent. You do not need to set this variable.

1 Run the uninstall program file:

installdir`/uninstall/IntegrityClientUninstall`

where *installdir* is the path to the directory where you installed the MKS Integrity Client.

The **InstallAnywhere Uninstaller** panel displays.

> **NOTE** If you installed the server using a silent install, the uninstall is also silent. No dialog box displays and no further action is required.

The uninstall program removes all installed components, except any files or directories created after the installation.

2 Click **Uninstall**. The MKS Integrity Client files are uninstalled and the **Uninstall Complete** dialog box displays.

3 Choose whether to have your system restarted automatically or restart it yourself and click **Done**. Your computer restarts automatically or continues to operate, according to the selection you made.

Updating the MKS Integrity Client

Periodically, the MKS Integrity Client may require updates in the form of service packs. Your MKS Integrity administrator makes service packs available for downloading from the MKS Integrity Server. If you are using the graphical user interface or Web interface, updates are automatic, and no further user tasks are required.

To update from the command line interface, use the **`im updateclient`** or **`si updateclient`** command. For more information, see the *MKS Integrity 2009 CLI Reference Guide for Workflow and Documents* and the *MKS Integrity 2009 CLI Reference Guide for Configuration Management*.

Starting the MKS Integrity Client

The MKS Integrity Client is accessible in three interfaces: the graphical user interface (GUI), the Web interface, and the command line interface. For information on the CLI, see the *MKS Integrity 2009 CLI Reference Guide for Workflow and Documents* and the *MKS Integrity 2009 CLI Reference Guide for Configuration Management*.

You must establish a connection with the MKS Integrity Server before you can perform any MKS Integrity Client operations. All commands automatically prompt you for information and will connect you to the appropriate server if you are not already connected. If your system is appropriately configured, there may be nothing for you to specify. Additionally, if you are using a Win32 system connecting to an NT server with single signon enabled, you are automatically authenticated as the current user on your local system.

Before You Start the MKS Integrity Client

Before you start the MKS Integrity Client, ensure you have the following:

- the name and port number of the MKS Integrity Server you want to connect to
- a copy of the MKS Integrity Client installed locally on your computer
- your user name and password

> **NOTE** Your administrator provides you with a server name, port number, user name, and password.

Key Considerations

- You do not need to install the MKS Integrity Client to access the MKS Integrity Web interface.
- Before starting, ensure you have the following (if not, contact your administrator):
  - MKS Integrity Client installed locally on your computer so you can access MKS Integrity in the graphical user interface
  - a Web browser, such as Mozilla, Firefox, or Internet Explorer, to use the MKS Integrity Web interface
  - the name of the MKS Integrity Server host name and port number you want to connect to
  - your MKS Integrity user name and password
  - login permission assigned to you
- If you are using the GUI and there are no ViewSets open from the previous MKS Integrity session or this is your first time starting the MKS Integrity Client GUI, you are prompted to import a ViewSet.

The following table describes how to start the MKS Integrity Client:

Interface	OS	Procedure
GUI	Windows	Select **Start > Programs > MKS Integrity > MKS Integrity Client** (default **Start** menu shortcut)
	UNIX	Open a shell and type `im gui` or `si gui`.
Web interface	all	Open a Web browser and, in the location or address field, type the URL of the MKS Integrity Server, for example: `http://abc.Business.com:7001` Press ENTER. The MKS Integrity Server welcome page opens. Click one of the following: ■ **Start** MKS Integrity **Web Interface** (workflows and documents) ■ **Start MKS Source Web Interface** (configuration management) You can connect to a read-only version of the configuration management Web interface by clicking the **read-only mode** link displayed under **Start MKS Source Web Interface**. The **Enter Network Password** dialog box displays. Type your user ID and password, and press ENTER. The Web interface opens in a new browser window.

MKS Integrity Client System Tray Icon

After you start the MKS Integrity Client on Windows, an MKS Integrity Client icon displays in the system tray, indicating that the client is running:

Right-clicking the icon allows you to select the following commands:

- **About** displays the client version number. Hovering your cursor over the icon in the system tray also displays this information.
- **Server Alerts** displays alert messages for all of the servers you are currently connected to. Alert messages notify users about important information, such as an impending server upgrade in which the server will be shut down.
- **Disconnect Server Connection** disconnects a server connection from the list of active server connections. For more information, see "Logging Out of the MKS Integrity Client" on page 16.
- **Open** displays the client, if not currently open.
- **Shutdown** closes the client and disconnects all active server connections. For more information, see "Shutting Down the Client" on page 17.

Quitting an MKS Integrity Client Session

When you are finished working in the MKS Integrity Client, you have three options for ending your session. You can log out, close the client window (but leave the MKS Integrity Client running), or shut down the client completely.

Since the Web interface does not involve a client, logging out is sufficient.

> **NOTE** When you exit or shut down the MKS Integrity Client, the current state of the active ViewSet is saved.

Logging Out of the MKS Integrity Client

In the Web interface, you can log out of the MKS Integrity Client and log in as another user, or allow another user to log in.

In the GUI, you can disconnect an active server connection. This disconnects the server connection for *all* views sharing the server connection and clears information in all the views. To quit a session in the GUI, MKS recommends closing the client. For more information, see "Closing the Client" on page 17.

To log out using the GUI

1. Do one of the following:
   - In the MKS Integrity Client, select **File > Disconnect Server Connection > <user@hostname:port>**.
   - On Windows, right-click  in the system tray, and select **Disconnect Server Connection > <user@hostname:port>**.

   Depending on your system preferences, a dialog box displays asking you to confirm that you want to close all current views and disconnect your server connection.
2. To disconnect from the server, click **Yes**. The **Confirm Disconnect** dialog box displays.

   > **NOTE** Disconnecting from the server clears information in all views sharing the server connection.

3. To disconnect all clients that are connected to that server, click **Yes**. The server connection is disconnected for all clients. If multiple servers are available in your **Server Connection** list, all clients running automatically connect using the next available server. For example, the Administration Client connects to the next available server in the **Server Connection** list.

   Once the server connection is disconnected, information in all views sharing the server connection is cleared. Each view displays a **Reload** button and a message informing you that the server connection has been terminated.
4. To re-establish the server connection and reload the view, click **Reload**. The server connection is re-established and information populates the view.

To log out using the Web interface

To quit the Web interface, do one of the following:

- In the workflows and documents Web interface, click **Logout** on the right side of the title pane.

> **NOTE** When the view is maximized, click in the title pane and select **Logout**.

- In the configuration management Web interface, select **Session > Logout**.

The **Logout** dialog box confirms that you have successfully logged out.

Closing the Client

You can close the MKS Integrity Client so that it is no longer displayed on the desktop, but stays running in the background, and logged in with client windows intact.

Do one of the following:

- Select **File > Close Window**.
- Click **X** at the top right-hand corner of the MKS Integrity Client window.

> **NOTE** By default, these commands close the MKS Integrity Client; however, you can also configure them to shutdown the MKS Integrity Client.

Even though the client is not displayed on the desktop, it is still running in the background. On Windows, a running client is indicated by in the system tray.

Display the client by doing one of the following:

- Clicking the application shortcut (see "Starting the MKS Integrity Client" on page 14).
- On Windows, right-clicking the MKS Integrity Client icon in the system tray and selecting **Open**.
- On Windows, double-clicking the MKS Integrity Client icon in the system tray.

Shutting Down the Client

When you are finished using the MKS Integrity Client, you can shut it down completely in one action.

To shut down the MKS Integrity Client in the GUI

1. Do one of the following:
   - From the MKS Integrity Client, select **File > Exit**.
   - On Windows, right-click in the system tray and select **Exit**.
2. The **Confirm MKS Integrity Client Shutdown** dialog box displays.

> **IMPORTANT** Clicking **Yes** shuts down all clients in addition to the MKS Integrity Client, such as the Administration Client.

3. To shut down all clients, click **Yes**. All Integrity Clients close, all server connections are disconnected, and the client process shuts down.

Logging In to the MKS Integrity Client

MKS Integrity uses client/server architecture to protect and manage your files. Project files, items, queries, charts, reports, and dashboards reside on the server in a database and are accessed by requests from the client application on your workstation. Problems and error messages on the MKS Integrity Client are logged to `<client install dir>/bin/IntegrityClient.log`.

In the Web interface, you must establish a connection with the MKS Integrity Server before you can perform any operations.

In the command line interface, you must establish a connection with the MKS Integrity Server when you perform a command that requires a connection with the MKS Integrity Server.

In the GUI, you establish a connection with the MKS Integrity Server when you open a specific view that requires a connection with the MKS Integrity Server. Upon opening a view, the MKS Integrity Client consults your server connection preferences and connects to the server associated with the view. For example, when you open a **Projects** or **Items** view, the MKS Integrity Client connects to the server specified in your server connection preferences. Depending on your server connection preferences, you may be prompted to specify server information and credentials.

> **IMPORTANT** If you work with multiple MKS Integrity Servers, you *must* configure your server connection preferences to prompt you for server information. If you do not configure your server connection preferences to prompt you for server information, the view you are opening attempts to connect to the server listed in your server connection preferences.

Key Considerations

- All or some of the login dialog boxes may appear, depending on the configuration setup by your administrator.
- Ensure that the MKS Integrity Server you are connecting to is the same version as your MKS Integrity Client. Attempting to connect with an incompatible client (for example, from an earlier version) results in error messages and unpredictable behavior. To determine the version of your MKS Integrity Client, do one of the following:
  - In the MKS Integrity Client, select **Help > About**. The client version displays on the dialog box.
  - On Windows, hover over or right-click  in the system tray. For more information, see "MKS Integrity Client System Tray Icon" on page 15.

  To determine the version of the MKS Integrity Server, contact your administrator, or in the command line interface, use the **`si servers --showversion`** or **`im servers --showversion`** command.
- If your preferences are not set to prompt for a server connection, the **Specify Server Connection** dialog box does not appear.
- To disconnect from the MKS Integrity Server in the active view, select **File > Disconnect Server Connection > <server connection>**. For more details, see "Logging Out of the MKS Integrity Client" on page 16.

  After connecting to an MKS Integrity Server, you may be prompted to install (or rollback) a service pack. Your administrator specifies if a service pack installation (or rollback) is optional or required. If you are unsure how to proceed when prompted, contact your administrator for more information.

To log in using the GUI

1. Open a view that requires a server connection, for example, select **Project > View Projects** or **Item > View Items.**
2. If you do not currently have a server connection established, the **Specify Server Connection** dialog box displays. Proceed to step 4.

   If you currently have a server connection established, the **Select Server Connection** dialog box displays. Proceed to step 3.
3. Do one of the following:
   - To use an existing server connection, select a server connection from the list.

     To save the selected server connection as the default connection for the component displayed, enable the check box, and click **OK**.
   - To establish a new server connection, click **New**. The **Specify Server Connection** dialog box displays. Proceed to step 4.
4. In the **Host Name** field, type the name of the MKS Integrity Server you want to connect to, for example, `abcBusiness_nt`, or the numerical IP address, for example `1.2.34.56`.
5. In the **Port Number** field, type the port number.
6. To accept the server information, click **OK**. The **Enter Credentials** dialog box displays.
7. In the **User Name** field, type your user name. Your user name displays by default in the **User Name** field.
8. In the **Password** field, type your password.
9. To accept the user information, click **OK**. The MKS Integrity Client establishes a connection with the server.

   In the lower right corner of the GUI, an icon indicates the status of the server ( ) for the active view. Next to the server icon, the server connection displays your user name, server, and port number, for example, `mkern@dev_nt:7001`.

   NOTE Floating views display server connection information in the title bar.

To log in using the Web interface

1. Start your Web browser.
2. Browse to the location of the MKS Integrity Server home page. Your administrator can provide you with its location. The URL for the MKS Integrity Server home page displays in the form:

   `http://`*servername*`:`*portnumber*

   for example,

   `http://intra-wif:7001`

   The MKS Integrity Server home page displays.
3. Click **Start Configuration Management Web Interface** or **Start Workflows and Documents Web Interface**. A browser password dialog box displays, prompting you for your user name and password.
4. In the **User Name** field, enter your user name.
5. In the **Password** field, enter your password.

6 To save your password so you do not need to enter it each time you log in, select the **Save this password in your password list** option (Internet Explorer) or **Use Password Manager to remember these values** option (Mozilla and Firefox).

7 To accept the login information, click **OK**. MKS Integrity validates your login information, then the Web interface displays.

When you point to the MKS icon () a ToolTip displays showing your user name, server, and port number for the session. This information also displays in the status bar at the bottom of the browser window, for example, `mkern@dev_nt:9001`.

Changing Your MKS Domain Password

If you are using the MKS Domain authentication scheme, you can change your MKS Domain password after you log in the first time.

> **NOTE** By default, the **File > Change MKS Domain Password** command is not visible in the GUI. You must enable it for the MKS Integrity Client.

To change your MKS Domain password

1. In the GUI, select **File > Change MKS Domain Password**. In the Web interface, click **My Profile** on the right side of the title pane and then click **Change Password** in the **My Profile** dialog box.

   The **Change MKS Domain Password** dialog box appears, displaying your user name and the server name and port number you are currently connected to.
2. In the **Old Password** field, type your old password.
3. In the **New Password** field, type your new password.
4. In the **Confirm New Password** field, type your new password again.
5. Click **OK**.

Understanding Access Permissions

Your ability to perform specific tasks depends on the permissions granted to you by your administrator through Access Control Lists.

An Access Control List (ACL) is a collection of entries that permits or limits entry to the functionality of a software program or server. The Access Control List allows the administrator to manage user access by requiring authentication of the user's identity or membership in a predefined group. Access is then granted according to the assigned permissions.

ACLs comprise principals and permissions. *Principals* control the users and groups who have access to the functionality of MKS Integrity operations. *Permissions* specify the particular operations that are available. Each ACL entry identifies the allowance or denial of pre-defined sets of permissions. These permissions are configured by your administrator.

If you find you are unable to perform necessary operations or access the necessary items, contact your administrator.

IMPORTANT If your administrator assigns you a new set of permissions, you must update your permissions by disconnecting your MKS Integrity Client and then reconnecting to the MKS Integrity Server. An out-of-date permission set may prevent you from accessing new functionality. To disconnect from the server, follow the steps outlined in "Quitting an MKS Integrity Client Session" on page 16.

Workflow and Document Management Access Permissions

The following is a list of permissions that allow you to perform certain user tasks:

Permission	Description
`Login`	Allows you to log in to MKS Integrity.
`CreateQuery`	Allows you to create and edit a Quick Query and named queries. If your administrator has given you `Login` permission, but has not given you `CreateQuery` permission, when you log in, MKS Integrity automatically creates a Quick Query that returns no results. Consult your administrator to change to your permissions.
`ViewMyNotification`	Allows you to view your personal e-mail notification preferences.
`ModifyMyNotification`	Allows you to edit your personal e-mail notification preferences.
`TimeTrackingAdmin`	Allows you to create, edit, and delete time entries on the behalf of other users.
`ViewChangePackage`	Along with other change package permissions allow you to review and work with change packages in MKS Integrity.

Configuration Management Access Permissions

Depending on your permissions, you can view ACLs through MKS Integrity to see which project and member permissions your administrator has or has not assigned to you.

To view ACLs in the GUI

1 Select the project, Sandbox, or member that you want to view ACLs for.

2 Select one of the following:

- **Project > Views > View Permissions**
- **Member > Views > View Permissions**

An **ACL** view opens and displays the assigned access permissions for the selected project or Sandbox.

You can expand each principal to view the permissions.

It is not recommended that users attempt to modify these ACLs or create any specific ACLs. For more information on ACLs, see your administrator, and consult the *MKS Integrity Server 2009 Administration Guide*.

NOTE When your ACLs are based on group membership, it can be useful to use the command line interface to view the groups that you belong to. Use the **`aa users`** command:

```
aa users --groups username
```

where *username* specifies the ID of the user who you want to view group membership for.

Enabling / Disabling Integrations

You can enable or disable supported integrations between the MKS Integrity Client and third party tools. For complete information on using third party integrations, see the *MKS Integrity 2009 Integrations User Guide*.

To enable or disable an integration, select **File > Edit Integrations** and move the integration(s) to the appropriate column. To complete the process, restart your computer.

Finding Your MKS Integrity Server Serial Number

When contacting MKS Customer Care, you may be asked for your MKS Integrity Server serial number. To find your serial number, open a Web browser and, in the location or address field, type the URL of the MKS Integrity Server, and press ENTER. The serial number displays near the bottom of the MKS Integrity Server home page.

Part 2

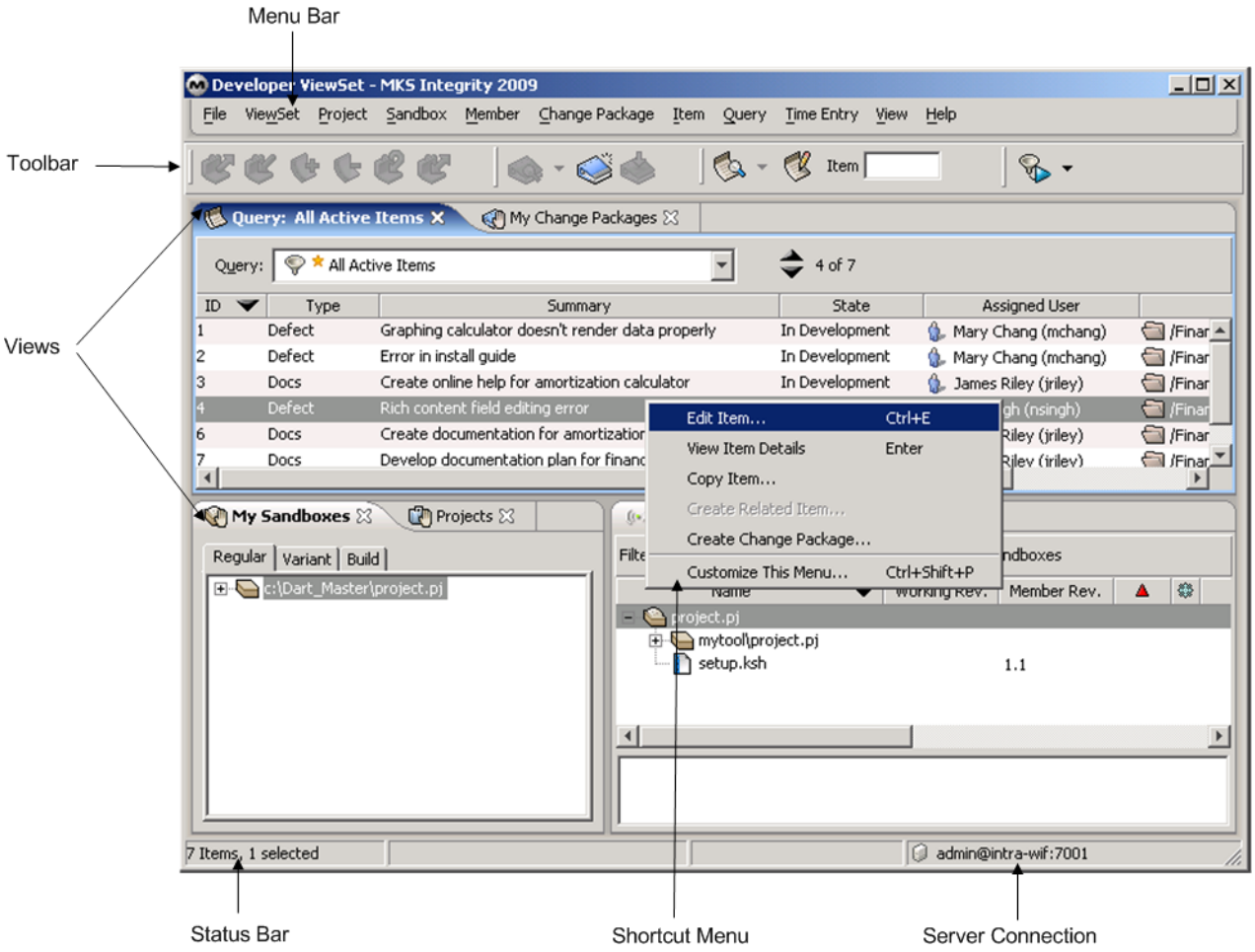
Choosing Your Work Environment

MKS Integrity Client Graphical User Interface

The *graphical user interface*, or GUI, is a program interface that uses a number of visual components (such as icons, pointers, and pull-down menus) to execute commands. Working in a GUI allows the user to give instructions to the computer without having to learn a specific command language.

The MKS Integrity Client's GUI is a *tabbed view interface* (or TVI). The TVI is a visual arrangement of multiple views in a single window. Views may be adjacent to each other or they may share the same space in a tabbed group. The TVI also provides you with maximum usability and flexibility to create the work environment suited to your needs.

The MKS Integrity Client GUI appears similar to the following:



The MKS Integrity Client includes the following user interface components:

Component	Description
Menu Bar	Three menus in the menu bar are always visible: **File**, **ViewSet**, and **Help**. The **File** menu contains MKS Integrity Client management commands, the **ViewSet** menu contains ViewSet management commands, and the **Help** menu contains commands that assist you with any problems or questions you may have. To display more menus, you must customize the ViewSet and define what functionality is available.
Toolbar	Toolbars that provide easy access to commands appear below the menu bar. Toolbars are grouped by objects that you can perform commands on, for example, the member toolbar or the item toolbar. Each toolbar contains buttons that correspond to a specific action that can be performed on the object; for example, the checkin button is part of the member toolbar; the create an item button is part of the item toolbar. Toolbars and buttons are highly customizable. For more information, see “Configuring Toolbars” on page 32. Certain buttons only become enabled when a specific item is selected in a certain view. Buttons that are not applicable to the active view or selected object are unavailable. For example, selecting a Sandbox in the **Sandbox** view allows you to select member and change package toolbar buttons but not item toolbar buttons; selecting an item in the Items view allows you to select items toolbar buttons but not member or change package toolbar buttons. ToolTips that explain the function of each button appear on top of the button and in the status bar when you hold the mouse pointer over the button.
Views	A *view* is a visual presentation of data that can be docked to the MKS Window or floating on top of the MKS Window. Most views are floating by default. A *docked* view has a title bar and may have a local toolbar that allows you to perform commands specific to the view. The docked view in focus, noted by a highlighted title bar, is called the *active* view. You can perform operations specific to the view by selecting commands from the **View** menu or the local toolbar. Docked views may be arranged adjacent to each other or multiple docked views may share the same region, forming a *tabbed* group of views. You can move a docked view anywhere within the MKS Window. For more information on managing views, see “Managing Views” on page 28. **Tip:** If a docked view has a local toolbar, you can hide it by right-clicking the title bar and selecting **Hide toolbar**. To display the local toolbar, right-click the title bar and select **Show toolbar**. A *floating* view is similar to a traditional window. It contains a title bar, the menu bar, and toolbars that appear in the MKS Window, and may have a local toolbar and **View** menu that allow you to perform commands specific to the view. **Note:** The **File** and **Help** menus and their toolbars do not appear in floating views.
Shortcut Menu	The MKS Integrity Client supports standard shortcut menus for most objects. To display the menu of actions you can perform on a selected item, select and right-click an object. You can also customize the actions that appear in a shortcut menu for most objects. For more information, see “Customizing Shortcut Menus” on page 31.
Status Bar	When you select an action from an menu, a brief explanation of its purpose and status displays in the status bar. The status bar also displays the progress and status for commands launched from the GUI. When you point to a toolbar button, you can see an explanation of its function in the status bar. Tip: If an action is taking a long time, you can right-click in the status bar and select commands that allow you to view the status of the action or stop it.
Server Connection	In the lower right corner of the GUI, an icon indicates the status of the server for the active view. Next to the server icon, the server connection displays your user name, server, and port number, for example, `admin@intra-wif:7001`. **Note:** Floating views display server connection information in the title bar.

Managing Views

When you open a view, you can perform a variety of tasks that allow you to manage the view according to your needs, such as moving the view to a desired location or printing the view’s contents.

CAUTION Opening too many instances of a view can cause the MKS Integrity Client to run out of memory resources.

To open a view, invoke a command that results in a view, for example, **Project > View Projects** or **Query > Manage Queries**.

> **NOTE** A view always opens in its default docking location, regardless of where you last moved a view of a similar type to.

Selecting Views

To select a view and bring it into focus (also known as making it the *active* view), click the view's title bar or within the view's content. The view is now the active view, noted by the colored title bar. If the desired view is hidden in a tabbed group, click its tab to make it the active view.

Moving Views

Adjacent views obscure less information and allow for easier interaction across views, particularly for drag-and-drop operations. To move an active view adjacent to another view, drag the active view's title bar or tab to any edge of an open view. When you see an outline and an arrow icon (the arrow icon indicates where the active view will appear in relation to the other view), release the mouse button.

Grouping multiple views together is useful when you do not need to see the views simultaneously. In addition, you can group multiple views to organize views of the same type and save space in the MKS Window. To group multiple views in the same region in the MKS Window, drag the active view's title bar or tab onto another view. When you see the outline of a folder and a folder icon, release the mouse button. This creates a *tabbed* group. The active tab, indicated by the highlighted title bar, determines which view is visible, while the other views are obscured except for their tabs. To display another view in a tabbed group, click its tab.

Resizing Views

To view more information in a view or to accommodate the sizes of other views, it may be necessary to resize the view. To resize a view, drag the splitter bar between two adjacent views to increase or decrease that view's size. This resizes the views on both sides of the splitter bar. This action requires two or more adjacent views.

You can also resize the entire MKS Window, which proportionally resizes all open views.

Maximizing and Restoring Views

To maximize a view within the MKS Window, double-click the view's title bar or right-click the view's title bar and select **Maximize**. This hides all other open views. To restore the view to its original size and display the other open views, right-click the view's title bar and select **Restore**.

> **NOTE** If a view is maximized and another view is opened, the maximized view is restored.

Closing Views

If a view is no longer needed or you want to make more space available for other views, click X on the title bar of the view you want to close.

If the view you want to close is in a tabbed group and is not currently displayed, click the tab to display it, then click the X on the view you want to close.

You can also close views by right-clicking on a view title bar and selecting one of the close options.

Configuring Dynamic Views

You can update certain views automatically by configuring them as *dynamic* views. If a view is dynamic, it updates its content automatically by listening to the input selection changes in an active view of a similar context. For example, if you configure a **Member History** view as dynamic and you select a member in a **Sandbox** view, the **Member History** view automatically updates its content to reflect the new member selection; or if you configure an Item Detail view as dynamic and you select a different item in an Items view, the Item Detail view automatically updates its content to reflect the new item selection. When a view is configured as dynamic, a  displays on the view title bar. To toggle a view as dynamic, right-click the view title bar and select **Dynamic**.

Refreshing Views

Once you have a view open, you may want to see if any changes have been made to the data. Selecting **View > Refresh** updates the view's information.

Refreshing the Items view re-runs the query. You can also choose to refresh only selected items by selecting **View > Refresh Selected Items**.

Refreshing the **Dashboard** view refreshes both the layout and the contents of the dashboard.

The **Refresh** command is unavailable in views where all information is updated automatically, for example, **My Sandboxes**.

Hiding/Showing View Toolbars

Some view have their own toolbars. You can temporarily hide view toolbars to create more space by right-clicking the view title bar and selecting **Hide Toolbar**.

Printing Views

You can print the information from all views in the MKS Integrity Client.

To print views in the GUI

1. Select the view that contains the information you want to print. What displays in the view on the screen is what prints. The following are some tips on printing views:
   - Resize the window width to fit columns.
   - Resize the column widths to fit cell contents.
2. With the desired information displayed in the view, select **View > Print**. The **Print** dialog box displays.

   NOTE To print information in a floating view, click **Print**.

3. If necessary, modify the general, page setup, and appearance options. The following are some page setup tips for fitting more information on a page:
   - Change the paper orientation to landscape to accommodate larger window widths.
   - Decrease page margins to fit more information on a page.
   - If your printer supports multiple page sizes, select a larger paper size to fit more information on a page.

   NOTE Information from rows is not split across multiple printed pages.

4. Click **OK** to print.

Quick Access Keys

By default, this guide describes how to perform steps using the mouse. For your convenience, an alternate way to perform many of those same steps is available using the keyboard.

Access Keys

Keyboard access keys appear as underlined letters on a menu command or as a dialog box option, allowing you to access most items on the interface. You use the access keys by pressing and holding the ALT key, then the key indicated by the underlined letter.

Shortcut Keys

For some commands, shortcut keys are provided as well as access keys. Shortcuts appear on menus opposite their command names. For example:

- In the **Sandbox** view:
  - INSERT is the same as **Member > Add**.
  - F2 is the same as **Member > Check Out**.
- In the **Items** view:
  - ENTER is the same as **Item > View Item Details**.
  - INSERT is the same as **Item > Create**.
  - CTRL+E is the same as **Item > Edit**.

Customizing Shortcut Menus

You can customize shortcut menus to display only the actions you typically use in a specific view. For example, you can customize a **Sandbox** view shortcut menu to display only the checkin, checkout, resynchronize, and revert commands; you can customize an Items view shortcut menu to display only the edit, view details, copy, and print commands.

> **NOTE** If an action is not already available from the main menu bar, adding the action to a shortcut menu automatically adds it to the menu bar.

You can also define custom actions to appear as menu items in the shortcut menu. For more information, see "Defining Custom Actions" on page 32.

To customize a shortcut menu in the GUI

1. In a view, right-click an object, such as a member, then select **Customize This Menu**. The **Customize <"View"> Popup Menu** dialog box displays.
2. To add an action, click **+**. The **Add to <"View"> Popup Menu** dialog box displays.

3 Select an item to add to the shortcut menu. The available choices are:

- **Separator** adds a line separator after the last action in the shortcut menu.
- **Action** adds an action to the shortcut menu. Choose an action group from the dropdown list, for example, `MKS Integrity/Member`, then select an action from the list.

> **NOTE** Custom actions are also available from the list of available actions. Although you can select custom actions for the shortcut menu, they cannot be defined from this dialog, but must be defined from the ViewSet instead. For more information, see "" on page 34.

4 Click **OK**. The item appears in the **Customize <"View"> Popup Menu** dialog box.

5 To accept the shortcut menu changes, click **OK**.

Configuring Toolbars

Toolbars are fully customizable to suit your individual preferences. Changes made to toolbars are displayed immediately.

You can customize toolbars by:

- displaying only the toolbars and buttons that you normally use
- displaying additional toolbar buttons that have become obscured by too many toolbars in the toolbar area
- moving toolbars around the toolbar area
- temporarily hiding toolbars to create more space
- adding a custom toolbar button to link to frequently performed tasks

Displaying and Hiding Toolbars

To display or hide a toolbar, right-click anywhere in the toolbar area, and select the toolbar you want to display or hide. Displayed toolbars are indicated by a check mark.

> **TIP** You can also display and hide toolbars by customizing the active ViewSet.

Displaying Additional Toolbars

Sometimes all the available buttons on a toolbar may become obscured by too many toolbars in the toolbar area. To display additional buttons in a toolbar, click  . More buttons display in a list.

Moving Toolbars

To move a toolbar to any location in the toolbar or menu bar area, click its handle () and drag it to the specified location. To prevent a row of toolbars from moving, you can lock it in place by right-clicking anywhere in the toolbar area and selecting **Lock Toolbars**. When the row is locked, the handles disappear. To enable the row of toolbars to move, right-click anywhere in the toolbar area and select **Lock Toolbars**. The handles appear.

Defining Custom Actions

You can create your own toolbar buttons and menu items to link to tasks that you perform frequently, for example, buttons that link to build scripts or other programs, such as your favorite IDE.

After you define a custom action, it is available in the ViewSet as a custom menu item and a custom toolbar button.

Key Considerations

- You can create a maximum of 25 custom actions per ViewSet.
- You cannot delete a custom action once has been created. You can only hide the action or redefine it to be another action (or no action).
- Custom actions are available from shortcut menus, even if they are not visible in the ViewSet. For more information, see "Customizing Shortcut Menus" on page 31.
- Keyboard shortcuts are preset for each custom action, and cannot be customized. See the **Action Accelerator** column to determine the keyboard shortcut that corresponds to each custom action.
- The following are required for custom actions to be visible in the MKS Integrity Client:
  - Under the **Action Group Visibility** column, **Custom** must be enabled for any custom actions to be available from the **Custom** menu and the custom toolbar.
  - A custom action must be enabled in the **Action Visibility** column for it to appear in the **Custom** menu.
  - A toolbar button must be enabled in the **Toolbar Visibility** column for it to appear in the custom toolbar.

To define a custom action for a ViewSet in the GUI

1. Select **ViewSet > Customize**. The **Customize <ViewSet> ViewSet** dialog box displays for the **Actions** tab.
2. Under the **Action Group Visibility** column, select the **Custom** action group. The custom action panel displays.
3. Under **Action Visibility**, do one of the following:
   - Enable a custom action, for example `User Action 1.`
   - Corresponding to a custom action, click **Edit**.

   The **Customize User Button** dialog box displays.
4. Enter the following information into the text fields:
   - **Name** is the name of the program as you want it displayed in the **Custom** menu of the MKS Integrity Client.
   - **Program** is the path to the program or script file that you want MKS Integrity to run. To select the program, click **Browse**.
   - **Parameters** are the options or flags the program requires to run. If no parameters are required, leave the field empty.
   - **Description** is the descriptive tooltip text that displays when the mouse pointer is paused over the button. This field is optional.
   - **Icon File** is the path to the icon file that MKS Integrity uses to represent the selected program or script. Note the following about using custom icons:
     - Icon resolution should be 24 by 24 pixels.
     - To select the icon file, click **Browse**.

- If you do not specify an icon, a default one is used by the ViewSet (see the **Toolbar Button Visibility** column).
- This field is optional.

- **Environment File** is a path to a text file that stores environment variables when the custom action is performed. This field is optional. To select the environment file, click **Browse**. For more information on environment variables, see "Defining Custom Actions" on page 32.

5 To accept the changes, click **OK**. The **Customize User Button** dialog box closes and the custom toolbar's **Action Visibility** check box and **Custom** action group check box are enabled.

6 To close the **Customize ViewSet** dialog box and display the new custom action, click **OK**. The new toolbar button displays and the toolbar button name displays in the **Custom** menu.

Environment Variables (GUI)

Environment variables are accessed by external programs configured under the user toolbar buttons. When using these variables, the names must be in uppercase or the MKS Integrity Client cannot recognize them.

Window Type Opened	Associated Environment Variable

All	If a window has a server connection it will set the following variables.
	`MKSSI_WINDOW`
	`MKSSI_HOST`
	`MKSSI_PORT`
	`MKSSI_USER`
	If there is no active window or no view, then:
	`MKSSI_WINDOW=none`
	If there is an active window, then:
	`MKSSI_WINDOW=[archive|document|item|items|project|projecthistory|sandbox]`
	Otherwise, the value is set to a window-specific value:
	`MKSSI_WINDOW=archive`
	If the active window is a different window, then:
	`MKSSI_WINDOW=unknown`
	For example, a **Project Modifications** window that does not produce any specific environment variables:
	`MKSSI_WINDOW=unknown`
	Note: For the values `none` and `unknown`, no other variables are set.
	Because MKS Integrity supports multiple connections to the server, you should specify the following environment variables when running a command line operation from the toolbar:
	`si <command> --host=$MKSSI_HOST --port=$MKSSI_PORT --user=$MKSSI_USER`

Document	Same as **Items** window type.

Item	For an open **Items** window:
	`MKSSI_NISSUE=number of MKSSI_ISSUE objects`
	`MKSSI_ISSUE<x>=ID of selected item (where the value of <x> starts at 0 and increments with each item selected)`
	`MKSSI_QUERY=current query for the Items window`
	`MKSSI_NFIELD=total number of fields in the view`
	`MKSSI_FIELD<x>=display name of each of the fields in the view`

Window Type Opened	Associated Environment Variable

Items	From an open **Items** window:
	`MKSSI_NISSUE=number of MKSSI_ISSUE objects`
	`MKSSI_ISSUE<x>=ID of selected item (where the value of <x> starts at 0 and increments with each item selected)`
	`MKSSI_QUERY=current query for the Items window`
	`or`
	`MKSSI_QUERY=<queryCreatorName>:<queryName>`
	`or`
	`MKSSI_QUERYDEFINITION=<queryDefinition>`
	`MKSSI_NFIELD=total number of columns in the view`
	`MKSSI_FIELD<x>=display name of each of the fields displayed as columns in the view`
	Column configuration for an open **Items** window:
	`MKSSI_NFIELD=number of visible fields`
	`MKSSI_FIELDx=name of each visible field (where x ranges from 1 to MKSSI_NFIELD)`
	`MKSSI_FIELDx_WIDTH=width of each visible field (where x ranges from 1 to MKSSI_NFIELD)`
	`MKSSI_SORTFIELD=name of the field that the view is sorted by`
	`MKSSI_SORTASCENDING="true", if the view is sorted in ascending order; "false", if the view is sorted in descending order`

Member History	For an open **Member History** window:
	`MKSSI_FILE=pathname-relative to project/sandbox of archive`
	If the window was opened from a Sandbox:
	`MKSSI_WORKINGFILE=full-path-to-working-file`
	`MKSSI_SANDBOX=full-path-to-sandbox`
	Note: `MKSSI_WORKINGFILE` is not set if the working file does not exist.
	If the window was opened from a project:
	`MKSSI_PROJECT=server-path-to-project`
	If the project/Sandbox was a variant:
	`MKSSI_VARIANT=variant-name`
	If the project/Sandbox was a build:
	`MKSSI_BUILD=build-number`
	If revisions were selected:
	`MKSSI_REVISION=highest revision in selection`
	`MKSSI_REVISIONxx=1.2`
	That is, there are `n` variables from `MKSSI_REVISION1` to `MKSSI_REVISIONxx`, containing each selected revision number.

Window Type Opened	Associated Environment Variable

Project	For an open **Project** window:
	`MKSSI_FILE=server-side-project-path`
	`MKSSI_NMEMBER=number of MKSSI_MEMBERxx entries`
	`MKSSI_NSUBPROJECT=number of MKSSI_SUBPROJECTyy entries`
	If any members are selected, then the following variables apply:
	`MKSSI_MEMBERxx=path-relative-to-project`
	`MKSSI_MEMBER_PROJECTxx=server-side-project/subproject-path`
	If any subprojects are selected, then the following variables apply:
	`MKSSI_SUBPROJECTyy=path-relative-to-project`
	`MKSSI_SUBPROJECT_PROJECTyy=server-side-project/subproject-path`
	That is, if there are `n` members selected and `m` subprojects selected, then you have `n` occurrences of `MKSSI_MEMBER` numbered from `1` to `n` and the number `n` is also passed in `MKSSI_NMEMBER`. There are also occurrences of `MKSSI_SUBPROJECT` numbered from `1` to `m`, and the number `m` is passed in `MKSSI_NSUBPROJECT`.
	If a subdirectory is selected, then it is as if that subdirectory is recursively expanded (only the directories, not subprojects) and all members are selected.
	Because a given member may not be in the top level project that is open in the view, each variable for `MKSSI_MEMBER` and `MKSS_SUBPROJECT` has a corresponding entry for `MKSSI_MEMBER_PROJECTxx` and `MKSSI_SUBPROJECT_PROJECTxx`. Therefore, each `MEMBER/SUBPROJECT` variable is relative to its corresponding `PROJECT` entry, not to the top level indicated in `MKSSI_FILE`.
	For example:
	`i=1`
	`while [ $i -le $MKSSI_NMEMBER ]`
	`do`
	`  eval si command -P\${MKSSI_MEMBER_PROJECT$i}\${MKSSI_MEMBER$i}`
	`  let i=i+1`
	`done`
	Note: If set, the environment variables `MKSSI_VARIANT` and `MKSSI_BUILD` are also exported when invoking an **`si command`** with the options for **`--devpath`** and **`--projectrevision`**.

Project History	For an open **Project History** window: `MKSSI_FILE=server-side-project-path` **Note**: `MKSSI_REVISIONxx` is set in the same way as a member history.

Relationships	For an open **Relationships** window:
	`MKSSI_NISSUE=number of MKSSI_ISSUE objects`
	`MKSSI_ISSUE<x>=ID of selected item (where the value of <x> starts at 0 and increments with each item selected)`

Sandbox	For an open **Sandbox** window:
	`MKSSI_FILE=full-path-to-sandbox`
	`MKSSI_NMEMBER=number of MKSSI_MEMBER objects`
	`MKSSI_NSUBPROJECT=number of MKSSI_SUBPROJECT objects`
	Note: Variables `MKSSI_MEMBERxx=` and `MKSSI_SUBPROJECTxx=` take the same settings as for a project window. Corresponding variables `MKSSI_MEMBER_SANDBOXxx` and `MKSSI_SUBPROJECT_SANDBOXxx` are also as described for a project. If applicable, `MKSSI_VARIANT` and `MKSSI_BUILD` are also set.

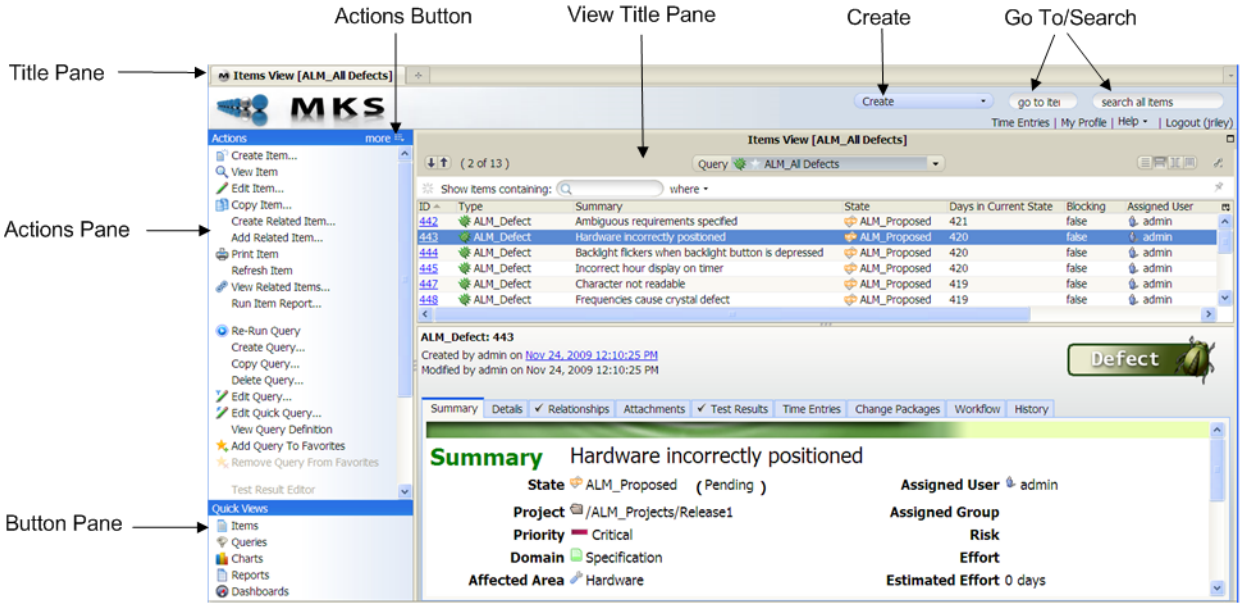
Workflows and Documents Web Interface

Along with the traditional graphical user interface, the MKS Integrity Client provides a *Web interface* that displays in a Web browser, such as Mozilla and Microsoft Internet Explorer. Working in a Web interface offers the familiar functionality of a Web browser with no client installation required.

Check with your administrator for the Uniform Resource Locator (URL) to reach the Web interface on the MKS Integrity Server. To use the Web interface, you must have a supported Web browser.

> **NOTE** The amount of time the Web interface can remain connected when no operations are performed can be set by your administrator, and so it may be limited. If the interface has not been used to perform an operation during that time, you need to log in and start any unfinished tasks again. Contact your MKS Integrity administrator for more information.

The workflows and documents Web interface allows you to access almost all of the same functionality as the graphical user interface.



Workflows and Documents Web Interface

You can use the browser's backward and forward buttons to browse through the pages you have viewed.

> **IMPORTANT** Using the browser's own refresh button does not refresh the view but instead causes a new session to be created and started with the **Items** view displayed (possibly losing unsaved data). Use the Web interface refresh functionality where needed, for example click **Refresh this item**.

You can right-click on a view title pane and select **Add to Favorites** or you can drag the view title to your Favorites.

The workflows and documents Web interface includes the following user interface components:

Component	Description
Title Pane	The title pane is the uppermost component of the application window. It provides access to some of the most commonly used MKS Integrity functions. The contents of the title pane are the same for all views. The first row of the title pane contains the following components. ■ **Create** Enables you to create an MKS Integrity item. The last item type created displays in the field and you can click anywhere in the field to create another item of the same type, or click to open the data filter to select a different type. If the field is empty, clicking anywhere in the field launches the data filter. ■ **Go To Item/Text Search** Enables you to display details for a specific MKS Integrity item or to perform global searches of text in your MKS Integrity database. To DISPLAY the details for an MKS Integrity item, enter the item ID and press ENTER. To perform a global text search, click **search all items**, enter the text you want to search for, and then press ENTER. If you want to refine your search text, click to display the search text used for your last search and then enter additional text. The second row of the title pane contains the following links. ■ **Time Entries** Displays the Time Entries dialog box where you can log time. ■ **My Profile** Displays the Preferences dialog box where you can set up criteria for e-mail notifications and specify what components to print for an item. ■ **Help** Displays options for accessing information about MKS Integrity. ■ **Logout** Logs you out of the MKS Integrity Web application. When the view is maximized, these options are accessed by clicking in the first row of the title pane.
View Title Pane	Immediately below the title pane is the view title pane, which contains a maximize button on the right side. Clicking this button maximizes the view size, while reducing the size of the tool pane, button pane, and title pane. When the view is maximized, the view title pane is becomes a tab with a minimize button for restoring the view to its default configuration.
View Pane	The view pane displays immediately below the view title pane. The view pane lists columns of information for items, queries, charts, reports, or dashboards. Above the list is a filter that enables you to narrow down what is displayed in the list based on specified criteria. **Note:** The Relationships view does not have a filter. The View pane for the Items view, Relationships view, and Test Result Editor contains additional components.
Actions Pane	The actions pane displays a list of the most commonly used commands for the objects displayed in the current view. Commands will be available or unavailable depending on the state of the selection in the current view. This pane also displays a list of up to ten of the most recently viewed items and recently run queries, reports, charts, or dashboards, when in those object views. Recently created, copied, and edited (single edit) items display in this pane as well. In the title bar of the actions panel the actions button provides access to all commands for an object. When the view is maximized, the actions pane only display icons for a subset of the commands for an object.

Component	Description
Button Pane	The button pane provides access to the other views in MKS Integrity except for the Time Entries view, which is accessed off the title pane. When the view is maximized, the button panel displays icons for the view (Items, Queries, Reports, Charts, and Dashboards).
Shortcut Menu	The MKS Integrity Web interface supports standard shortcut menus for most objects. To display the menu of actions you can perform on a selected item, select and right-click an object. Unlike the GUI, actions that appear in a Web interface shortcut menu cannot be customized.

Bookmarking Views

Views can be added to your browser bookmarks (or favorites list) for quick access later. Views that can be bookmarked include Items, Queries, Charts, Reports, and Dashboards.

To bookmark a view, click  and select **Bookmark View**.

If your browser is not supported the bookmarking action, attempting to bookmark displays a dialog box with the URL to the view. Right-click the URL and then add it as a bookmark. Other methods for adding the bookmark may be available, such as manually copying the URL and pasting it as needed to manually create your own link or bookmark, or dragging the URL to the toolbar. Consult the documentation for your browser for information on the available bookmarking methods.

Optimal Browser Settings

To ensure the most effective use of the Web interface, set the cache settings in your Web browser to check for a new version of the page automatically.

You can prevent the Web interface from opening in an existing browser window when accessing it through a hyperlink. For more information, check your browser preferences.

Configuration Management Web Interface

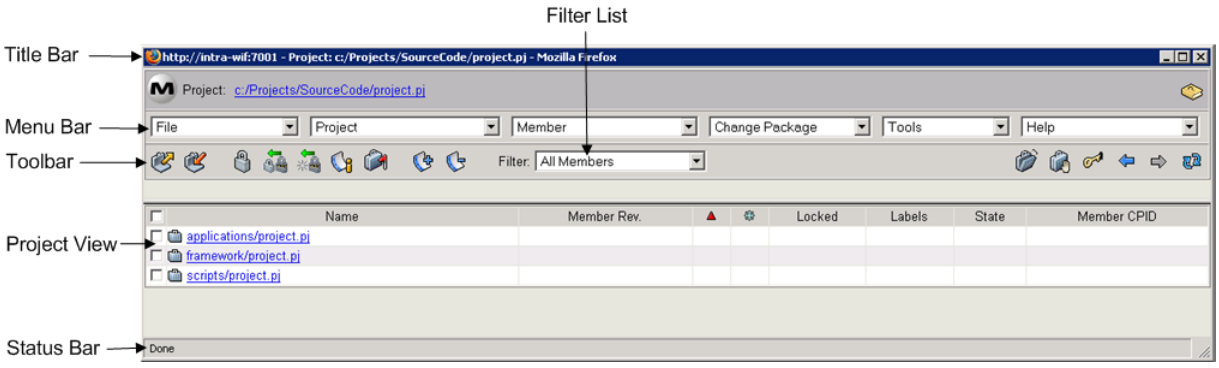
Along with the traditional graphical user interface, the MKS Integrity Client provides a *Web interface* that displays in a Web browser, such as Mozilla and Microsoft Internet Explorer. Working in a Web interface offers the familiar functionality of a Web browser with no client installation required.

Check with your administrator for the Uniform Resource Locator (URL) to reach the Web interface on the MKS Integrity Server. To use the Web interface, you must have a supported Web browser.

> **NOTE** The amount of time the Web interface can remain connected when no operations are performed can be set by your administrator, and so it may be limited. If the interface has not been used to perform an operation during that time, you need to log in and start any unfinished tasks again. Contact your MKS Integrity administrator for more information.

The Web interface for the software configuration management component of MKS Integrity is different from the Web interface for the process and workflow management component.

The configuration management Web interface accesses only the **Project** view and functionality related to managing project members. For example, you can view a member revision, and check out and check in a member. Similarly, you can view differences between revisions, but you cannot merge those revisions. Other functionality related to Sandboxes is available only through the GUI and the command line interface. The MKS Integrity Server welcome page provides a link to the read-only version of the Web interface. You can connect to the read-only Web interface by clicking the **read-only mode** link displayed under **Start Configuration Management Web Interface**.



Configuration Management Web Interface

The configuration management Web interface includes the following user interface components:

Component	Description
Title Bar	The title bar is the uppermost component of the application window. On the left side, the title bar displays the name of the software program. On the right side, the title bar displays the standard Windows buttons for minimizing, resizing, and closing the application window. You can also use the active links in the title bar to navigate within the project. To navigate to a subproject, click the applicable portion of the link.
Menu Bar	The menu bar is located directly below the title bar. Each menu contains available commands. When you first start the Web interface, there are three menus in the menu bar: **File**, **Tools**, and **Help**. **Note:** In the Web interface, application functionality is not available through the shortcut menu. To see the current user and server that the Web interface is connected to, point to the MKS icon. A tooltip appears displaying the user and server, for example, `srobertson@abc_server:7001`.

Component	Description
Toolbar	Immediately below the menu bar is a toolbar that provides easy access to the most commonly used commands. Toolbar functions are carried out by clicking the appropriate toolbar button with the left mouse button. Tooltips, which explain the function of each toolbar button, appear when you hold the mouse pointer over the button.
Status Bar	When you select a command from a menu, a brief explanation of its purpose and status displays in the status bar. The status bar also displays the user, server, and port number currently logged in for the session. In addition, when you point to a toolbar button, you can see an explanation of its function.
Project View	The Web interface provides access to the **Project** view. The **Project** view displays the project members and hierarchy for projects registered with the MKS Integrity Server. The **Project** view also gives you access to project-level functions and a limited number of member-level functions.
Filter List	Beside the toolbar in the Web interface is an optional list of built-in filters that allow you to focus your view on a subset of the project members you are currently interested in. MKS Integrity displays only those members that meet the criteria specified by the filter.
Disabled Browser Features	When working in the Web interface, you cannot use the browser's Back, Forward, History, and Refresh (Reload) features.
Selecting List Items	To select an item in a list in the Web interface, select the check box beside the item. To select all items, select the check box column header row to mark all items automatically.

Optimal Browser Settings

To ensure the most effective use of the Web interface, set the cache settings in your Web browser to check for a new version of the page automatically.

You can prevent the Web interface from opening in an existing browser window when accessing it through a hyperlink. For more information, check your browser preferences.

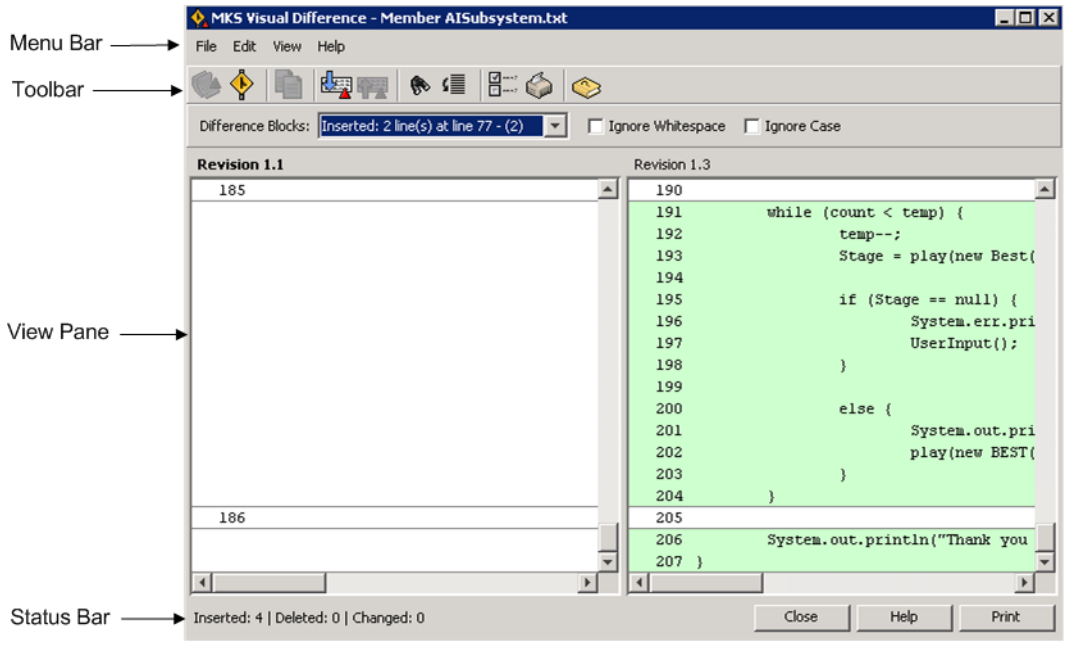
MKS Visual Difference/Visual Merge Interfaces

The MKS Visual Difference tool is a graphical application that allows you to compare a working file and a member revision, or two revisions. It offers two-way differencing of revisions where differences are highlighted for you.

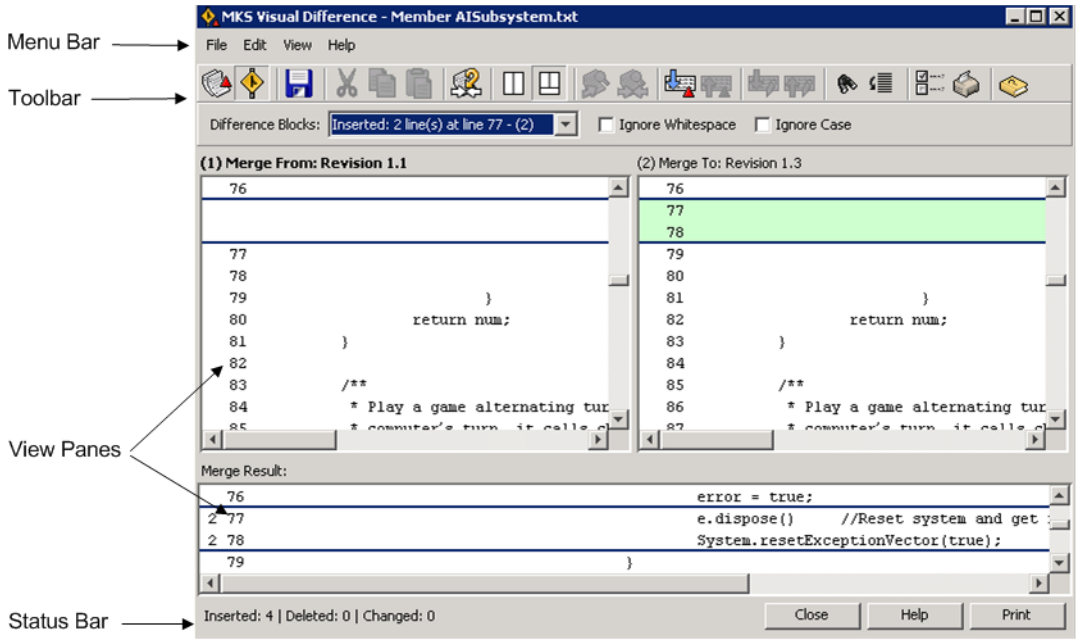
The MKS Visual Merge tool is a graphical application that allows you to compare revisions and perform edits and merges. It offers three-way differencing of revisions and highlights conflicts. It features in-line editing, differencing, and conflict resolution. It is similar to MKS Visual Difference in look and feel, but includes many advanced features used for complicated merging tasks.

The three-way differencing in MKS Visual Merge allows you to compare the two revisions selected for merging, the **Merge From** revision and the **Merge Base** revision, as well as the working file or **Merge To** file for the member. The revisions are highlighted for differences and conflicts allowing you to choose the blocks you want to merge from each revision and save to the **Merge Result** file.

Conflicts, if they exist, are highlighted and appear with a red flag next to the line number. With all three files available for comparison in MKS Visual Merge, you can decide which of the conflicting blocks you want to incorporate into the merge result, or you can use the editing utilities to insert blocks from each revision into the merge result.



MKS Visual Difference Application Window



MKS Visual Merge Application Window

The Visual Difference and Visual Merge interfaces include the following user interface components:

Component	Description
Menu Bar	The menu bar is located directly below the title bar. There are four menus in the menu bar: **File**, **Edit**, **View**, and **Help**. The list of available menu operations varies depending on the function you are performing.
Toolbar	Immediately below the menu bar is a toolbar that provides easy access to the most commonly used operations. Toolbar functions are carried out by clicking the appropriate toolbar button. Point to a button to display a tooltip that contains a description for that button. In MKS Visual Difference, toolbar buttons become available and unavailable for use depending on the mode you are in. For more information, see “Visual Difference Modes” on page 45. Located immediately below the toolbar buttons are display controls that change what displays in the view panes. These controls are also available in the **View** menu. ■ **Difference Blocks** is a list containing all of the difference blocks in the revisions, including the type of difference (change, insertion, deletion, edit, and conflict), and the line numbers. To move to a particular difference block, select the block from the **Difference Blocks** list. The selected difference block displays. ■ **Ignore Whitespace** ignores tab and white space throughout the lines in the revisions. ■ **Ignore Case** ignores the type case when comparing the revisions. Note: Under the **View** menu, the following controls are also available: ■ **Synchronize Scrolling** causes all of the panes to scroll simultaneously. This control is enabled by default. ■ **Ignore Blanks** ignores white space at the end of lines, and changes it to white space elsewhere in the line.

Component	Description
View Panes	The view panes display the revisions you are comparing. Line numbers display for navigation (line numbers can be removed through preferences). Scrolling in the view panes is synchronized. **Merge From** is the revision or working file from which blocks are merged. **Merge To** is the revision or working file that is used as the basis for the Merge Result file. **Merge Base** (MKS Visual Merge only) is the revision you want to use as the base for calculating differences against the Merge From to be applied to the Merge To. **Merge Result** is the file that blocks are merged into, and can be edited and saved to contain the output of the merge. A number immediately to the left of the line numbers displays to indicate which revision the block originated from: **Merge From** (1) or **Merge To** (2), for the Merge mode of MKS Visual difference, or **Merge From** (1), **Merge Base** (2) or **Merge To** (3) for MKS Visual Merge. In the Merge mode for MKS Visual Difference, and in MKS Visual Merge, there are two different layouts for the view panes, vertical layout and split layout. You can change the layout through the **View** menu. In the Merge mode of MKS Visual Difference, the vertical layout displays **Merge From** and **Merge Result** side-by-side. By clicking **View Merge To**, you can view the **Merge From** and the **Merge To** side-by-side. The split layout displays three revisions for comparison: **Merge From** and **Merge To** side-by-side and **Merge Result** in the pane below them. In MKS Visual Merge, the vertical layout displays three revisions side-by-side: **Merge From**, **Merge Base**, and **Merge To.** The split layout displays in four panes for comparison. The **Merge From**, **Merge Base** and **Merge To** revisions are displayed side-by-side, and the **Merge Result** displays below them. In split layout, you can hide the **Merge Base** pane by clicking **View > Merge Base**. You can copy one or more contiguous rows of text from any of the view panes. The title of the active pane is bolded. The active pane contains the file that is used when you request to display a specific line of code or when you search for a specific text string. For more information on these operations, see “Displaying a Specific Line of Code” on page 46 and “Finding Text” on page 46. The currently differenced block of text is indicated by two thick lines, above and below the block. The currently differenced block corresponds to the block selected in the **Difference Blocks** field. Within each block of text, the change within each line of text is highlighted in a different color. The colors used for highlighting the different types of changes are controlled by your preferences. For more information, see “Setting Preferences” on page 47.
Shortcut Menu	MKS Visual Merge and MKS Visual Difference support standard shortcut menus. To display the menu of actions you can perform, select a line in any pane and right-click. The available actions displayed in the shortcut menu depend on whether you right-click within the **Merge From**, **Merge To**, **Merge Base** (MKS Visual Merge only), or **Merge Result** view panes. In MKS Visual Difference, the available actions also depend on whether you right-click within an expanded or collapsed block. For more information on expanded and collapsed blocks, see “Hiding Unchanged Text in MKS Visual Difference” on page 45.
Shortcut Keys	For some operations, shortcut keys are provided. Shortcut keys appear on menus opposite their operation names. **Note:** In MKS Visual Difference, the operations available in a given menu depend on which mode you are working in. For information on modes, see “Visual Difference Modes” on page 45
Status Bar	The status bar provides a short summary of the difference blocks for each revision. It shows conflicts, insertions, deletions, and changes with a number indicating how many of each exist in each file. For example, the summary, `Inserted: 0/2/5`, means that in the **Merge From** there are zero insertions, while in the **Merge Base** there are 2 insertions, and in the **Merge To** there are 5 insertions.

Visual Difference Modes

MKS Visual Difference can operate in two different modes depending on what it is being used for. Since Visual Difference is both a differencing tool and a merging tool, it has a Differences mode and a Merge mode.

The Differences mode is used to compare revisions and display the differences between them. No merging operations are available in the Differences mode.

The Merge mode is used for all merging related operations and editing.

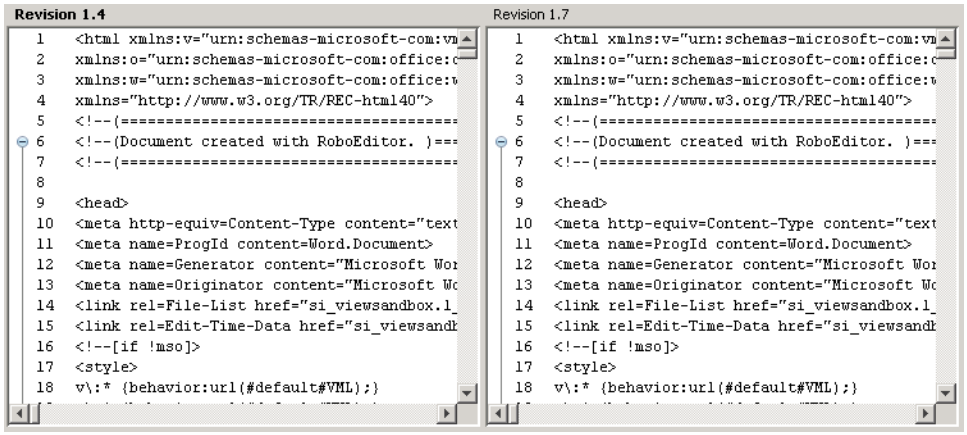
You can toggle between the two modes in Visual Difference by selecting **File > Differences** or **File > Merge**, or you can click **Differences** or **Merge** from the toolbar. A bullet displays next to the mode currently being used.

When you switch from the Differences mode to the Merge mode, the **Reassign Merge Roles** dialog box displays. This dialog box allows you to specify which revision you want as the **Merge From** and **Merge To**.

Hiding Unchanged Text in MKS Visual Difference

From MKS Visual Difference, you can hide the text that has no differences between the two revisions that you are comparing. You can hide all unchanged blocks, or just the block of text that the selected line is in. Depending on your preferences, a specific number of lines are displayed above and below hidden text in order to provide context.

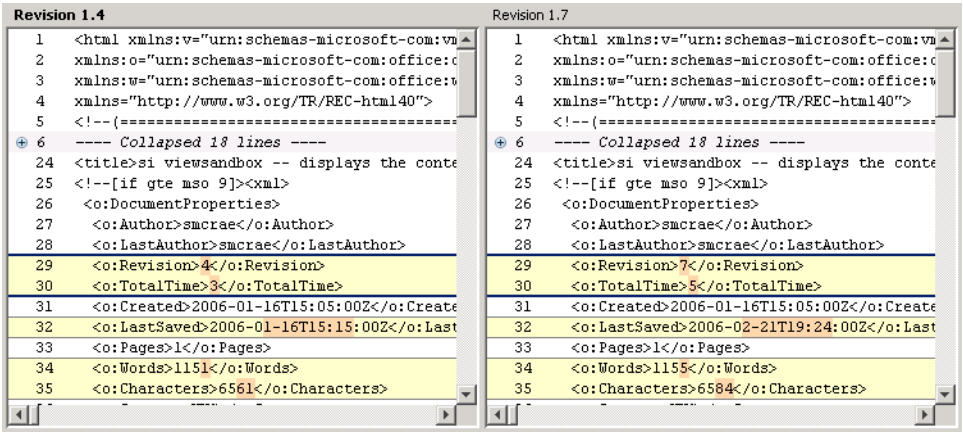
When you first open MKS Visual Difference, a ⊖ button displays beside the first line of any blocks of text that are unchanged, and a line runs from the ⊖ button to the end of the unchanged block. Text that displays above and below hidden text for context is not included in the marked block.



To collapse the block, click ⊖.

> **NOTE** Text searches skip over collapsed text blocks.

A ⊕ button displays beside each collapsed block. The line number of the first line in the collapsed block displays beside the ⊕ button, along with the number of lines in the collapsed block. Depending on your preferences, a specific number of lines are displayed above and below the collapsed block in order to provide context for the collapsed text.



You can click the ⊕ to expand the block and view the text.

If you have a line selected in an expanded or collapsed block, you can also collapse or expand the block of text using the **View** menu or by right-clicking and selecting an option from the shortcut menu. To expand a specific block, you can select either the ⊕ line or one of the context lines around it, or double-click the ⊕ line.

You can also collapse or expand all blocks of unchanged text using the **View** menu or shortcut menu.

Displaying a Specific Line of Code

From MKS Visual Difference or MKS Visual Merge, you can display a specific line of code.

To display a specific line of code in the MKS Visual Difference /Visual Merge interface, select **View > Go to Line** and enter the line number that you want to display in the **Go to Line** field.

If the line of code exists in the file in the active view pane, it displays in the center of the pane.

Finding Text

From MKS Visual Difference or MKS Visual Merge, you can search for the occurrence of a text string in the file contained in the active view pane.

To find text in the MKS Visual Merge interface

1. Click **Find** on the **View** menu. The Find bar displays at the bottom of application window.
2. Enter the text that you want to find in the **Find** field.
3. Select **Case Sensitive** to match the case of the text entered in the **Find** field.
4. Select **Wrap** to continue searching from the top of the file if the end of the file is reached without finding a match (when searching forwards) or from the bottom of the file if the top of the file is reached without finding a match (when searching backwards).

   NOTE If wrapping occurs as a result of the search, a message displays in the bottom right hand side of the window.

5. Select **Whole Word** to match the entire word entered in the **Find** field. If multiple words are entered in the **Find** field, this option is not available.

6 Click **Find Next** to start a forward search or **Find Previous** to start a backward search.

The next matching string, starting from the current search position, is scrolled to and highlighted.

If no matching string is found, a "Match not found" message displays in the bottom right hand side of the window.

> **NOTE** Searches start from the location of the last find result. If there is no find result, searches start from the current selection or (if nothing is selected) from the top or bottom of the document (depending on the search direction).

If you click in any of the view panes, the highlight is cleared and the search position is reset.

To hide the Find bar, click the **X** beside the **Find** field.

Printing Views

You can print the **Merge From**, **Merge To**, and **Merge Base** (Visual Merge only) views as a single printout. Merge results cannot be printed.

To print views in the MKS Visual Difference / Visual Merge interface, select **File > Print**.

The following are some page setup tips for fitting more information on a page:

- Change the paper orientation to landscape to accommodate larger window widths.
- Decrease page margins to fit more information on a page.
- If your printer supports multiple page sizes, select a larger paper size to fit more information on a page.

Setting Preferences

Preferences allow you to customize the appearance of the MKS Visual Difference and MKS Visual Merge interfaces. You can configure general preferences, and font and color preferences.

To set general preferences in the MKS Visual Difference/ Visual Merge interface

1 Select **View > Preferences**. The **Preferences** dialog box displays.

2 To configure your toolbar, click **Toolbar**.

3 Configure the toolbar as desired.

> **NOTE** The toolbar buttons available for configuration vary depending on the mode you are working in.

4 Under **Miscellaneous**, set the following options:

- To display line numbers in the revisions, select **Show Line Numbers**. Clear this option if you want to remove line numbers.
- To set the tab size, in the **Expand tabs to** field enter the number of spaces you want tabs expanded to. Changes to tab size do not take effect until the tool is invoked again.

5 Under **Collapsed sections**, set the following options:

- To automatically hide text with no differences when MKS Visual Difference / Visual Merge is first opened, select **Collapse unchanged blocks on launch.**
- To set the number of lines to display above and below collapsed text in order to provide context, in the **Show lines of context** field enter the number of lines you want displayed.

> **NOTE** If the number of context lines displayed would result in only a single line in the collapsed block, the block is not collapsed.

6 Click **OK** to save your changes.

To set font and color preferences in the MKS Visual Difference /Visual Merge interface

1 Select **View > Preferences**. The **Preferences** dialog box displays.

2 Click the **Fonts & Colors** tab. The **Fonts & Colors** panel displays.

3 To change the background color of a particular block (Unchanged, Collapsed, Edited, Inserted, Deleted, Changed, Conflict, Character Changed), click the corresponding **Background** button. The **Choose Background Color** dialog box displays.

4 Set your preferred color on the **Swatches**, **HSB** or **RGB** tabs. The **Preview** at the bottom of the dialog box displays the selected color for you.

5 Click **OK** to set the background color.

6 To change the foreground color of a particular block (Unchanged, Collapsed, Edited, Inserted, Deleted, Changed, Conflict) click the corresponding **Foreground** button. The **Choose Foreground Color** dialog box displays.

7 Set your preferred color on the **Swatches**, **HSB**, or **RGB** tabs. The **Preview** at the bottom of the dialog box displays the selected color for you.

8 Click **OK** to set the foreground color.

9 To set the display font for a particular block (Unchanged, Collapsed, Edited, Inserted, Deleted, Changed, Conflict), click the corresponding **Font** button. The **Choose Font** dialog box displays.

10 Select the **Font**, **Style** and **Size** from the corresponding list. The **Sample** at the bottom of the dialog box displays the selected font, style and size for you.

11 Click **OK** to set the font.

12 Click **OK** to save your font and color changes. MKS Visual Difference / Visual Merge is updated with your changes.

> **NOTE** To reset the display to the original fonts and colors, click **Reset to Defaults**.

Command Line Interface

The command line interface, or CLI, allows you to enter MKS commands through a text-based interface. The primary use of the CLI is for scripting, and it is recommended for intermediate or advanced users. It is also useful for environments where no GUI is available.

To access the command line interface from a computer running Windows, from the **Start** menu select the MS-DOS Prompt or Command Prompt (depending on the version of Windows).

The *MKS Integrity 2009 CLI Reference Guide for Workflow and Documents*, *MKS Integrity 2009 CLI Reference Guide for Configuration Management* and man pages provide complete information about all CLI commands and their options.

To view available process and workflow commands, type **`im`** in a command window. To view available software configuration management commands, type **`si`** in a command window.

To view a list of a command's options, add **`-?`** or **`--usage`** to the end of the command, for example, **`im connect -?`**.

NOTE If you are using the CLI with a Linux, Solaris, IBM AIX, or HP-UX client, you must manually add `<clientinstalldir>/bin/` to your default PATH located in your home directory startup files.

If you are working within the Sandbox directory where you want to perform commands, you do not need to specify the Sandbox name in the command options.

PART 3

Setting Client Preferences

Command Preferences

The **Commands** pane in the **Preferences** dialog box contains default settings for MKS Integrity Client commands. Default settings can always be overridden for individual commands at the time of their use.

Note the following:

- Your administrator may enforce server-side preferences making them unavailable to you. These server enforced preferences depend on the server you are connected to while viewing the preferences. If you are not connected or logged in to a server, the MKS Integrity Client displays the local defaults for all preferences.

  To set your preferences accurately, log in to the server you want to work from before setting preferences. The **Preferences** dialog box displays the server you are currently connected to in the title bar.
- Options that appear in bold are those that are set locally by you. You can reset to the default settings by clicking the **Clear Local Settings** button (available only on the applicable panels).
- A blank check box (☐) means the option is not enabled, a check mark (☑) means the option is enabled, and a question mark (?) means you will be prompted to confirm or specify the option.

To set command preferences in the GUI

1. Select **File > Edit Preferences.** The **Preferences Configuration** dialog box displays.
2. In the tree pane, click **Workflows and Documents > Commands** or **Configuration Management > Commands.** The commands appear as a list of nodes.
3. From the list of command names in the tree pane, select a command to configure. For detailed information on command options, see "Preferences: Command Options" on page 51.

   NOTE Options that appear in bold indicate local settings configured by you.
4. If necessary, select a command's option.
5. To restore a command's default options, click **Clear Local Settings.**
6. Modify command options as necessary.

Preferences: Command Options

Command	Options
Add Member Attribute	**Recurse Into Subprojects** adds member attributes recursively to selected subproject members.
Add Label	**Move Existing Label** moves the label, if it already exists, to the revision specified. **Recurse Into Subprojects** adds the label recursively to subproject members.

Command	Options
Add Members	**Author** is the author name applied to the new members. Type a name in the **Author** field. If you do not type a name, MKS Integrity uses the current user name. **Data Type** specifies the member's data type. To let MKS Integrity determine the data type automatically, select `Auto` from the **Data Type** list. To specify a text file, select `Text` from the **Data Type** list. To specify a file containing unprintable characters or lines too long to be handled by text editors, select `Binary` from the **Data Type** list. The following **On Existing Archive** options apply in the event that MKS Integrity finds an existing archive for the member you want to add: ■ `Query User` causes MKS Integrity to ask you for confirmation on the action to be taken if an existing archive is found. ■ `Share Archive` causes MKS Integrity to use the existing archive for the new member. ■ `Create New Archive` causes MKS Integrity to create a new archive for the new member. MKS Integrity automatically generates the archive name and leaves the old archive unmodified. ■ `Cancel` causes MKS Integrity to cancel the operation if an existing member archive is found. **Save Working File Timestamp** sets the timestamp of the revision in the history to the timestamp of the working file, rather than to the time of checkin. **Defer Add** delays the add operation in the project until the deferred operation is submitted. The operation in the Sandbox still takes place immediately. **Recurse Into Directories** adds members that exist in directories of the current location. **Create Subprojects** causes MKS Integrity to create subprojects for each subdirectory encountered when adding members. **Close Change Package** causes MKS Integrity to close any change package associated with the Add operation. **Lock Revision** locks the revision using the lock type specified in your locks policy. For information on the locks policy, contact your administrator. **Unexpand Keywords** replaces literal values in the working file with keywords.
Add Members From Archive	**Create Subprojects** causes MKS Integrity to create subprojects for each subdirectory encountered when adding members. **Recurse Into Directories** adds members that exist in directories of the current location. **Close Change Packages** causes MKS Integrity to close any change package associated with the Add Members From Archive operation. **Defer Add From Archive** delays the add operation in the project until the deferred operation is submitted. The operation in the Sandbox still takes place immediately.
Add Project Label	**Move Existing Label** moves the label, if it already exists, to the revision specified.
Add Shared Subproject	Select one of the following options as the preferred type of subproject when adding a subproject to a project: ■ **Normal** adds a subproject based on the current state of the project. ■ **Variant** adds a subproject based upon a specific revision of the master project and is used for branching off the main development path. ■ **Build** adds a static subproject based upon a specific revision of the master project that is used for building or testing the project, but not for further development. ■ **Default** adds a subproject based on the parent project type. For more information on the default type, see your administrator. **Close Change Packages** causes MKS Integrity to close any change package associated with the operation.

Command	Options
Add Subproject	Select one of the following options as the preferred type of subproject when adding a subproject to a project: ■ **Normal** adds a subproject based on the current state of the project. ■ **Variant** adds a subproject based upon a specific revision of the master project and is used for branching off the main development path. ■ **Build** adds a static subproject based upon a specific revision of the master project that is used for building or testing the project, but not for further development. ■ **Default** adds a subproject based on the parent project type. For more information on the default type, see your administrator. **Close Change Packages** causes MKS Integrity to close any change package associated with the operation.
Append Revision Description	**Recurse Into Subprojects** appends the revision description recursively to subproject members.
Apply Change Package General Options	**Confirm Actions** causes MKS Integrity to confirm all operations with you before starting them. **Notify when Complete** displays a notification dialog box when the command is finished. This dialog box provides details on the updates that were performed and the updates that were not performed. **Create Variants** causes MKS Integrity to create variant projects within the new project as required to apply the change package members. **Close Change Package** closes the propagation change package specified for the Apply Change Package operation. **Backfill** determines how dependent change packages are treated. You can select from the following options: ■ `Entire Change Packages` chooses all historic revisions required by the specified change packages and applies them by updating the member revisions, adding files, or dropping files. The user is not prompted to confirm the backfill list. ■ `Back Revisions Only` processes only the specified change package(s) and chooses only directly-associated revisions. It does not process any change packages that are associated with intermediate revisions. ■ `Error` terminates the operation if other change packages are required but are not specified. ■ `Skip Revisions` causes MKS Integrity to merge around specified backfill revisions. Because the **Apply CP** command does not perform merging, this is treated as an error. ■ `Ask to Specify` allows you to select the specific change packages you want to include. For the Apply CP operation, a list of additional change packages displays. The presented list of change packages cannot be manipulated. You must either accept the entire list or the operation fails.

Command	Options
Apply Change Package Advanced Options	**Use Master** causes MKS Integrity to operate on the top-level Sandbox. When the selected change package is associated with a member in a subsandbox, specifying **Use Master** causes the command to operate on the top-level Sandbox for that subsandbox. **Span Projects** applies the command to any member in the specified in the change package, even if this involves a different project than you are starting from. **Warning:** This is the only operation that has the potential to affect other projects. **Already in Project is Error** terminates the command if the member being applied is already in the project. If this setting is negated (as in `noAlreadyInProjectIsError`), the information displays as a warning. **Other Project is Error** terminates the command if the member being applied is in another project. If this setting is negated (as in `noOtherProjectIsError`), the information displays as a warning. **Ignore Server in Change Package** causes MKS Integrity to perform the Apply CP operation even if the change package members reside on different servers. **Ignore Cross-Branch Entries** causes MKS Integrity to use the most recent revision when it encounters two revisions of the same member on different branches. **Ignore Update Revision Entries** ignores update revision entries in a change package. There is no user prompt. **Propagate Subprojects** determines how MKS Integrity treats subproject operations required by the specified change packages. You can select from the following options: ■ `Explicitly` adds, drops, or moves a subproject only if there is a explicit command to do so in the change package. ■ `Implicitly` adds, drops or moves a subproject if the operation is implicitly required based on the change package entries. For example, if you are adding a member that is part of a subproject that does not exist in the larger project being updated, the subproject is added. If you are applying change packages created in an earlier version of MKS Integrity (MKS Source or Source Integrity), it is recommended that you use this option.
Checkpoint	**Apply Label to All Members** applies the checkpoint label to all project members. **Apply State to All Members** applies the checkpoint state to all project members. **Notify when Complete** causes MKS Integrity to confirm that the checkpoint operation has finished. **Author** is the author name applied to the checkpoint. Type a name in the **Author** field. If you do not type a name, MKS Integrity uses the current user name.

Command	Options
Check In	**Move Existing Label** moves the label, if it already exists, to the revision specified. **Lock Revision** causes MKS Integrity to check in the working file, then immediately lock the new revision. This allows you to update the archive while retaining control of the revision. If this option is not set, the new revision is not locked following the checkin. **Close Change Package** causes MKS Integrity to close any change package associated with the Check In operation. **Defer Check In** causes MKS Integrity to delay the checkin of the revision. If you have locked the member, your lock remains on the revision and MKS Integrity displays version information for both the working and member revisions. If a change package is specified, a `Deferred Check In (Lock)` or `Deferred Check In (No Lock)` entry is recorded in the change package. Once you submit the checkin, your lock is removed and the member revision moves to the next number in the sequence, as in the case of a standard checkin operation. **Check In if Unchanged** checks in the working file even if it has not changed since it was checked out. **Update Member Revision** makes the new revision the member revision in the project, replacing the existing member revision. **Author** is the author name applied to the revision. Type a name in the **Author** field. If you do not type a name, MKS Integrity uses the current user name. **Update Member Revision Even on Branch** causes MKS Integrity to update the member revision upon check in, even when the locked revision is on a different branch. **Unexpand Keywords** replaces literal values with keywords in the checked in revision. **On Newer Revision** allows you to determine what happens when the revision being checked in is not the member revision in the development path. You can select one of the following options: ■ To resynchronize the member revision into the working file and move the lock (if any) to the member revision, select `Resynchronize`. The check in operation is not completed. You should perform additional testing on the merged file before checking it in. ■ To resynchronize the member revision into the working file by change package, and move the lock (if any) to the member revision, select `Resynchronize By CP`. The check in operation is not completed. You should perform additional testing on the merged file before checking it in. To use this option, the member revision must be associated with a change package. ■ To be asked to confirm the action to be taken, select `Confirm`. ■ To cancel the check in operation, select `Cancel`. **Force Creation of New Branch** causes MKS Integrity to create a branch off of the revision you are checking in. **Save Working File Timestamp** sets the timestamp of the revision in the history to the timestamp of the working file, rather than the time of checkin. **Create Branch if Variant** causes MKS Integrity to create a branch off the revision you are checking in, if you are working in variant Sandbox and this is the first time the member is checked in. In the Web interface only, select from one of the following options: ■ Select `Yes` to create a branch. ■ Select `No` to not create a branch. ■ Select `Confirm` to be asked for confirmation of the action to be taken.

Command	Options
Check Out	**Lock Revision** allows you to determine whether the member is locked on checkout. You can select from the following options: ■ To obtain a lock on checkout, select `Lock` ■ To checkout without a lock, select `No Lock` ■ To obtain a lock on checkout based on the locks policy, select `Follow Policy`. For information on the locks policy, contact your administrator. **Move My Lock** moves any lock you have on a revision in the same development path to the member revision. Since you can only have one lock per member per development path, if you already have another revision locked, you need to move that lock to the member revision in order for the check in to succeed. See the **Downgrade My Lock on Lock Conflict** conflict option on the **Advanced** tab for information on what occurs if the member revision already has an exclusive lock. **Overwrite if Deferred Operation Exists** overwrites the working file if the file has changed and there is a deferred operation pending on the member. **Overwrite Working File if Changed** overwrites the working file even if the member has changed since it was last checked in. **Lock Type** allows you to determine the type of lock obtained on checkout. Select one of the following options: ■ To obtain an exclusive lock on the member, select `Exclusive`. Exclusive locks enable only one user at a time to lock a specific revision. ■ To obtain a non-exclusive lock on the member, select `Non-Exclusive`. Non-exclusive locks enable multiple users to check out the same revision for editing. ■ To obtain a lock type based on the locks policy, select `Follow Policy`. For information on the locks policy, contact your administrator. If the locks policy is `None` (no lock required), but the **Lock Revision** option is selected, a non-exclusive lock is obtained. **Update Member Revision** causes the revision you check out to become the new member revision of the project. For example, if the current project member is listed as Revision 2.3 and you check out Revision 1.7 with the Update Member option selected, Revision 1.7 replaces Revision 2.3 as the member of the project. **Downgrade My Lock on Lock Conflict** obtains a non-exclusive lock if another user has an exclusive lock on the revision. **Restore Revision Timestamp** sets the timestamp of the working file (that the revision is checked out to) to the date and time of the revision in the history. If this option is cleared, the working file's timestamp is set to the current date and time. **Merge Working File if Changed** automatically merges any changes from the working file into the revision being checked out. **Keywords** allows you to select keyword expansion options when checking out a member. To leave keywords unexpanded, select `Do Not Expand` from the **Keywords** list. To replace keywords in the revision with literal values in the working file, select `Expand` from the **Keywords** list. To replace literal values in the revision with keywords, select `UnExpand` from the **Keywords** list.

Command	Options
	Merge Type specifies the action to be taken when merging revisions. Select one of the following options: ■ `Confirm` causes MKS Integrity to confirm the action to be taken each time you merge upon checkout. ■ `Cancel` causes MKS Integrity to cancel the operation. ■ `Automatic` causes MKS Integrity to perform an automatic merge. ■ `Manual (Launch Tool)` causes MKS Integrity to initiate the MKS Visual Merge tool or a third party merge tool, depending on your preferences (see “Difference and Merge Tool Preferences” on page 72). **On Conflicts** specifies the action to be taken when merge conflicts occur. Select one of the following options: ■ `Confirm` causes MKS Integrity to confirm the action to be taken each time a conflict occurs. ■ `Cancel` causes MKS Integrity to cancel the operation when a conflict occurs. ■ `Mark For Later Merge` causes MKS Integrity to mark the files for merging at another time, allowing you to resolve the conflict first. ■ `Launch Tool` causes MKS Integrity to initiate the MKS Visual Merge tool. ■ `Highlight Output File` causes MKS Integrity to highlight conflicts in the resulting merged revision. ■ `Error` causes MKS Integrity to display an error message prompt. **Ask for change package** causes MKS Integrity to ask for a change package when performing a checkout **Pre-Defined Revision** specifies the revision type to check out: ■ `Member` checks out the member revision, that is, the revision shown in the **Project** view (this is the default). ■ `Working` checks out the working file. ■ `Head` checks out the head revision. ■ `Trunk Tip` checks out the latest revision in the trunk. ■ `Member Branch Tip` checks out the latest revision along the member’s current branch of development.
Close Change Package	**Release Locks** causes MKS Integrity to release all locks on members in the change package. **Allowed Orphaned Deferred Operations** allows the change package to be closed without first submitting its deferred entries. **Note:** Orphaned Deferred operations can never be submitted using the **Submit Change Package** command. **Remove Work In Progress** removes work in progress change package entries before closing the change package. If you do not remove work in progress entries, you cannot close the change package.
Configure Subproject	Select one of the following options as the preferred type of subproject when configuring a subproject: ■ **Normal** configures a subproject based on the current state of the project. ■ **Variant** configures a subproject based upon a specific revision of the master project and is used for branching off the main development path. ■ **Build** configures a static subproject based upon a specific revision of the master project that is used for building or testing the project, but not for further development. ■ **Reset to default value** configures a subproject based on the parent project type. For more information on the default type, see your administrator. **Close Change Packages** causes MKS Integrity to close any change package associated with the operation.

Command	Options
Create Sandboxes	**Populate Sandbox** causes MKS Integrity to add working files to the Sandbox. **Recurse Into Subprojects** creates subsandboxes recursively from subprojects. **Line Terminator** determines the type of line terminator MKS Integrity uses when dealing with Sandbox members: ■ `Native` (or automatic, the default setting) ■ `LF` (or line feed, primarily for UNIX applications) ■ `CR/LF` **Continue After Recoverable Outages** ensures that if a failover of the MKS Integrity Server occurs during creation of the Sandbox, the MKS Integrity Client reconnects after the failover and the command continues. For more information on the MKS Integrity Server failover mechanism, contact MKS services. **Make Sandbox Sparse** creates a Sandbox with no working files and defers the creation of Sandbox directories and subsandboxes until you need to work with them. A sparse Sandbox does not retain working files when a member is checked in, and continues to function this way throughout its use; however, once created, Sandbox directories and subsandboxes remain in the Sandbox. **View Sandbox After Creation** displays the Sandbox after it is created. **Make Sandbox Shared** creates a Sandbox configured as shared.

Command	Options
Create Sandboxes (continued)	**Sandbox Scope** defines what project members are included in the Sandbox, transferring specific members from the MKS Integrity Server to the Sandbox directory when the Sandbox is created and controlling what members display in the Sandbox view. For detailed information, see “Specifying the Sandbox Scope” on page 291. Click **Change Scope** and then click a checkbox to include () or invert () one or more of the following options: ■ **All Members** specifies all project members. This is the default setting. ■ **Members with Attribute** specifies project members with an attribute or an attribute set to a value, for example, `Beta` or `OS=Windows`. This option is case-sensitive. ■ **Members with Path** specifies project members that reside in a directory, relative to the top-level Sandbox, for example, `watch/lib/*`. The specified path does not differentiate between subdirectories and subproject names. This means that you cannot specify individual co-located subprojects. **Note:** If the client OS is a case-sensitive file system and the database repository on the server is case-sensitive, this option is case-sensitive. Otherwise, this option is case-insensitive. ■ **Members with Name** specifies project members with a name or file extension, for example, `Readme.txt` or `*.java`. A name is only valid for a file name, not a leading directory prefix. **Note:** If the client OS is a case-sensitive file system and the database repository on the server is case-sensitive, this option is case-sensitive. Otherwise, this option is case-insensitive. ■ **Member with Label at Member Revision** specifies project members with a label at member revision, for example, `TEST`. This option is case-sensitive and accepts wildcards (* and ?). ■ **Members with Label at Any Revision** specifies project members with a label at any revision, for example, `PROD`. This option is case-sensitive and accepts wildcards (* and ?). ■ **Members with Archive Type** specifies project members that are a `Binary` or `Text` archive type. ■ **Combine Selections Using Logical AND Logical OR** combines multiple Sandbox scope selections using a logical AND or OR operator. For example, to include project members with member attribute `Beta` AND name `*.java`, set **With Attribute** to `Beta`, **Members with Name** to `*.java`, and enable **Logical AND**. **Tip:** Using the **`si createsandbox`** command, you can create and edit more complex Sandbox scope definitions using a combination of logical AND or OR operators; however, these definitions may not always be editable from the GUI. If you attempt to edit a complex scope definition from the GUI, MKS Integrity truncates the definition to what the GUI is capable of displaying. If you attempt to edit a complex scope definition using the **`si configuresandbox -g/gui`** command, MKS Integrity displays a warning message that choosing to edit the scope definition removes the options the GUI is not capable of displaying. **Note:** If the client OS is a case-sensitive file system and the database repository on the server is case-sensitive, the **Members with Path** and **Members with Name** options are case-sensitive. Otherwise, these options are case-insensitive. After the Sandbox is created, the title bar in the Sandbox view displays **Scoped Sandbox** *path and project*. You can view and change the scope definition from the **Sandbox Information** dialog box or **Configure Sandbox** command. Changes to the scope definition are automatically reflected in the Sandbox view. Members with working files in the Sandbox that no longer match the scope definition display deltas, but remain in the Sandbox. Selecting one of the members indicates that a working file exists and the member does not match the Sandbox scope. Performing a **Resynchronize** or **Revert** operation removes the members from the Sandbox.
Create Subproject	**Create one subproject per directory, as required** creates one subproject for each directory encountered when creating the subproject. **If the project already exists, add it** adds an existing subproject to the project. This can be useful if the existing subproject had been dropped from a project. **Close Change Packages** causes MKS Integrity to close any change package associated with the operation.
Delete Label	**Recurse Into Subprojects** deletes the label recursively from members in subprojects.

Command	Options
Delete Revision	**Confirm Delete** causes MKS Integrity to prompt you for confirmation before the revision is deleted from the project. **Recurse Into Subprojects** deletes the revision recursively in members of subprojects. **Confirm in Use Delete** causes MKS Integrity to warn you about deleting the revision if it is used in the current project, other projects, or any checkpoints. This option is valid only with the database repository.
Demote	**Recurse Into Subprojects** recursively demotes subproject members.
Diff	**Ignore Blanks** ignores whitespace at the end of lines when comparing the selected revision and the member's working file or another revision. **Ignore Whitespace** ignores tabs and spaces anywhere in a line when comparing the selected revision and the member's working file or another revision. **Ignore Case** ignores differences between uppercase and lowercase text when comparing the selected revision and the member's working file or another revision. **Character Encoding** specifies the encoding used to display revision contents.
Discard Change Package	**Confirm Discard** confirms the removal of a change package from the repository.
Discard Change Package Entry	**Confirm Discard** confirms the removal of a change package entry from the change package.
Downgrade/Remove Lock	**Break Lock** breaks the lock in order to downgrade/remove it. **Recurse Into Subprojects** recursively downgrades/removes locks on subproject members.
Drop	**Delete Working File** deletes the member working file when dropped from the project. **Confirm Drop** causes MKS Integrity to prompt you for confirmation before the member or subproject is dropped from the project. **Defer Drop Member** delays the drop operation in the project until the deferred operation is submitted. The operation in the Sandbox still takes place immediately. **Close Change Package** causes MKS Integrity to close any change package associated with the operation.
Drop Member Attribute	**Recurse Into Subprojects** recursively drops member attributes from members in subprojects.
Drop Sandboxes	**Delete** allows you to select delete options when dropping a Sandbox: ■ To drop the Sandbox without deleting any members, select `Nothing`. ■ To delete Sandbox members only, select `Sandbox Members Only`. ■ To delete the Sandbox directory and all of its contents, select `Entire Sandbox Directory`. **Confirm Drop** causes MKS Integrity to confirm that the Sandbox will be dropped before it is dropped.
Freeze	**Recurse Into Subprojects** recursively freezes members in subprojects.
Import Members	**Author** allows you to specify the author of the member. **Data Type** specifies the member's data type. ■ To let MKS Integrity determine the data type automatically, select `Auto`. ■ To specify a text file, select `Text`. ■ To specify a file containing unprintable characters, or lines too long to be handled by text editors, select `Binary`. **Create Subprojects** automatically creates a subproject (based on the subdirectories in which members are located), for imported members. **Recurse Into Directories** imports all members in the specified directory location. **Close Change Package** closes the change package upon command completion. **Unexpand Keywords** replaces literal values in the revision with keywords. **Defer Import** defers the operation until it is submitted individually or as part of a change package.

Command	Options
Lock	**Lock Type** allows you to determine the type of lock obtained. Select one of the following options: ■ To obtain an exclusive lock on the member, select `Exclusive`. Exclusive locks enable only one user at a time to lock a specific revision. ■ To obtain a non-exclusive lock on the member, select `Non-Exclusive`. Non-exclusive locks enable multiple users to check out the same revision for editing. ■ To obtain a lock type based on the locks policy, select `Follow Policy`. For information on the locks policy, contact your administrator. **Downgrade My Lock on Lock Conflict** obtains a non-exclusive lock if another user has an exclusive lock on the revision. **Revision Mismatch is Error** causes an error to display if the working revision does not match the member revision. This option only displays if you are performing the Lock operation from a Sandbox. **Recurse Into Subprojects** locks all members in subprojects. **Ask for change package** causes MKS Integrity to ask for a change package when performing a lock.
Merge Branch	**Lock target revision** locks the merged revision when the merge is complete using the lock type specified in your locks policy. For information on the locks policy, contact your administrator. **Merge Type** specifies the action to be taken when merging revisions. Select one of the following options from the list: ■ `Confirm` causes MKS Integrity to confirm the action to be taken each time you merge revisions. ■ `Cancel` causes MKS Integrity to cancel the operation. ■ `Automatic` causes MKS Integrity to perform an automatic merge. ■ `Manual (Launch Tool)` causes MKS Integrity to initiate the MKS Visual Merge tool or a third party merge tool, depending on your preferences (see “Difference and Merge Tool Preferences” on page 72). **On Conflicts** specifies the action to be taken when merge conflicts occur. Select one of the following options from the list: ■ `Confirm` causes MKS Integrity to confirm the action to be taken each time a conflict occurs. ■ `Cancel` causes MKS Integrity to cancel the operation when a conflict occurs. ■ `Mark For Later Merge` causes MKS Integrity to mark the files for merging at another time, allowing you to resolve the conflict first. ■ `Launch Tool` causes MKS Integrity to initiate the MKS Visual Merge tool. ■ `Highlight Output File` causes MKS Integrity to highlight conflicts in the resulting merged revision. ■ `Error` causes MKS Integrity to display an error message prompt.

Command	Options
Merge	**Merge Type** specifies the action to be taken when merging revisions. Select one of the following options from the list: ■ `Confirm` causes MKS Integrity to confirm the action to be taken each time you merge revisions. ■ `Cancel` causes MKS Integrity to cancel the operation. ■ `Automatic` causes MKS Integrity to perform an automatic merge. ■ `Manual (Launch Tool)` causes MKS Integrity to initiate the MKS Visual Merge tool or a third party merge tool, depending on your preferences (see “Difference and Merge Tool Preferences” on page 72). **On Conflicts** specifies the action to be taken when merge conflicts occur. Select one of the following options from the list: ■ `Confirm` causes MKS Integrity to confirm the action to be taken each time a conflict occurs. ■ `Cancel` causes MKS Integrity to cancel the operation when a conflict occurs. ■ `Mark For Later Merge` causes MKS Integrity to mark the files for merging at another time, allowing you to resolve the conflict first. ■ `Launch Tool` causes MKS Integrity to initiate the MKS Visual Merge tool. ■ `Highlight Output File` causes MKS Integrity to highlight conflicts in the resulting merged revision. ■ `Error` causes MKS Integrity to display an error message prompt. **Character Encoding** specifies the encoding used to display revision contents.
Move Change Package Entry	**Confirm Move** confirms the movement of a change package entry from one change package to another change package.
Print Item	**Print fields** enables printing of fields, such as the summary of the item, the item’s state, who the item is assigned to, the group the item is assigned to, the project the item is assigned to, and custom field information. **Print relationships** enables printing of a list of related items. **Print change packages** enables printing of a list of information for change packages associated with the item. **Print label** enables printing of all labels specified on a selected current or historical item. **Print history** enables printing of all changes made to an item. **Print attachments** enables printing of a list of files attached to the item. **Print time entries** enables printing of all time entries logged against the item. **Print test results** enables printing of all test results entered for the item. **History order** displays item history in ascending or descending order. Available options are: `Most recent last` and `Most recent first`.
Move Members	**Move Working File** moves the working file into the Sandbox immediately. **Note:** This option is valid only if you are moving one or more members from a source Sandbox to a target Sandbox **Confirm Move** confirms the move before proceeding. **Create Subprojects** creates a subproject in the directory that the member is moving to (if it does not exist) and adds the member to it. **Overwrite Existing File** overwrites the target (new name) working file if it exists. **Note:** This option is valid only if you are moving one or more members from a source Sandbox to a target Sandbox **Defer Move** delays the move operation in the project until the deferred operation is submitted. **Note:** This option is valid only if you are deferring the move of one or more members from a source Sandbox to a target Sandbox **Close Change Package** closes the associated change package.

Command	Options
Move Subprojects	**Move Working Files** controls whether to move existing working files in the subproject you are moving. ■ **None** does not move any existing working files. ■ **Subsandbox members only** moves only the existing working files in the subsandbox. ■ **Entire Subsandbox Directory** moves the entire subsandbox directory. **Note:** This option is valid only if you are moving one or more subprojects from a source Sandbox to a target Sandbox **Overwrite Existing Files** overwrites working files if they exist in the new location. **Note:** This option is valid only if you are moving one or more subprojects from a source Sandbox to a target Sandbox. **Confirm Move** confirms the move before proceeding. **Create Subprojects** creates subprojects in directories that do not contain subprojects. **Close Change Packages** causes MKS Integrity to close any change package associated with the operation.
Promote	**Recurse Into Subprojects** promotes all members in subprojects.
Rename Member	**Rename Working File** renames the working file in your Sandbox and preserves any changes made to that file. If not set, the working file is not renamed and becomes a former member that will be confirmed for deletion the next time the Sandbox is resynchronized. This setting has no effect if the command is performed directly from a **Project** view. **Confirm Rename** causes MKS Integrity to confirm that you want to rename the selected member. **Close Change Package** closes the specified change package after performing the rename operation. **Overwrite Existing File** replaces the existing working file in the Sandbox. **Defer Rename** delays the rename operation in the project until the deferred operation is submitted.

Command	Options
Resynchronize	**Restore Revision Timestamp** sets the timestamp of the working file (that the revision is checked out to) to the date and time of the revision in the history. If this option is not set, the working file's timestamp is set to the current date and time. **Overwrite Working File if Changed** overwrites the working file even if it has changed. **Force Overwrite Even if Unchanged** overwrites the working file even if it is unchanged. **Overwrite if Deferred Operation Exists** overwrites the working file if the file has changed and there is a deferred operation pending on the member. **Remove Working File if Out of Scope** removes a current member's working file if it does not match the Sandbox scope definition, for example, if the scope definition or member changes (such as modified member attributes). Sandbox Scope defines what project members are included in the Sandbox, transferring specific members from the MKS Integrity Server to the Sandbox directory when the Sandbox is created and controlling what members display in the Sandbox view. **Overwrite if Pending** overwrites the working file even if it is a pending revision. **Merge Working File if Changed** merges the modified working file with the member revision. **Recurse into Subprojects** recursively resynchronizes members in subprojects. **Confirm Populate of a Sparse Sandbox** causes MKS Integrity to prompt you to confirm if you want to populate a sparse Sandbox. **Keywords** allows you to select keyword expansion options when resynchronizing. ■ To replace keywords in the revision with literal values in the working file, select `Expand`. ■ To leave keywords unexpanded, select `Do Not Expand`. ■ To replace literal values in the revision with keywords, select `Unexpand`. **Merge Type** specifies the action to be taken when merging revisions. Select one of the following options from the list: ■ `Confirm` causes MKS Integrity to confirm the action to be taken when merging upon resync. ■ `Cancel` causes MKS Integrity to cancel the operation. ■ `Automatic` causes MKS Integrity to perform an automatic merge. ■ `Manual (Launch Tool)` causes MKS Integrity to initiate the MKS Visual Merge tool or a third party merge tool, depending on your preferences (see "Difference and Merge Tool Preferences" on page 72). **Continue After Recoverable Outages** ensures that if a failover of the MKS Integrity Server occurs when resynchronizing, the MKS Integrity Client reconnects after the failover and the command continues. For more information on the MKS Integrity Server failover mechanism, contact MKS services. **On Conflicts** specifies the action to be taken when merge conflicts occur. Select one of the following options from the list: ■ `Confirm` causes MKS Integrity to confirm the action to be taken each time a conflict occurs. ■ `Cancel` causes MKS Integrity to cancel the operation when a conflict occurs. ■ `Mark For Later Merge` causes MKS Integrity to mark the files for merging at another time, allowing you to resolve the conflict first. ■ `Launch Tool` causes MKS Integrity to initiate the MKS Visual Merge tool. ■ `Highlight Output File` causes MKS Integrity to highlight conflicts in the resulting merged revision. ■ `Error` causes MKS Integrity to display an error message prompt.

Command	Options
Resynchronize Change Package General Options	**Confirm Actions** causes MKS Integrity to confirm all operations with you before starting them. **Notify when Complete** displays a notification dialog box when the command is finished. This dialog box provides details on the updates that were performed and the updates that were not performed. **Create Variants** causes MKS Integrity to create new variant subprojects within the variant project as required to apply the change package members. If the main project contains required files that reside in a subproject, the **Create Variants** option creates variant subprojects for these files to be placed into. **Continue on Errors** causes MKS Integrity to continue to process the change package if errors occur while resynchronizing. If you specify the **Notify When Complete** option, any errors are reported when the command is complete. **Merge on Branch** causes MKS Integrity to perform a merge if the target revision is on a branch. MKS Integrity differences the two file revisions and merges any changes into the working file without modifying its revision number. You must then check in the working file to advance the revision to the next available revision number. **Merge Type** determines what occurs if a merge is required to resynchronize the change package. ■ `Confirm` causes MKS Integrity to confirm the merge. ■ `Cancel` causes MKS Integrity to stop the merge from occurring. ■ `Automatic` causes MKS Integrity to perform the merge without prior confirmation. ■ `Manual (Launch Tool)` causes MKS Integrity to initiate the MKS Visual Merge tool or a third party merge tool, depending on your preferences (see “Difference and Merge Tool Preferences” on page 72). **On Conflicts** determines how conflicting rows are treated. ■ `Confirm` causes MKS Integrity to request input from the user to resolve the conflict. ■ `Cancel` causes MKS Integrity to stop the resynchronize. ■ `Mark For Later Merge` marks the conflicting lines so they can be addressed at a later date. ■ `Launch Tool` causes MKS Integrity to launch the default differencing tool. ■ `Highlight Output File` highlights each line conflict in working file. ■ `Error` causes MKS Integrity to display an error message prompt. **Backfill** determines how dependent change packages are treated. You can select from the following options: ■ `Entire Change Packages` chooses all historic revisions required by the specified change packages and applies them by updating the member revisions, adding files, or dropping files. The user is not prompted to confirm the backfill list. ■ `Back Revisions Only` processes only the specified change package(s) and chooses only directly associated revisions. It does not process any change packages that are associated with intermediate revisions. ■ `Error` terminates the operation if other change packages are required but are not specified. ■ `Skip Revisions` causes MKS Integrity to merge around specified backfill revisions. ■ `Ask to Specify` allows you to select the specific change packages you want to include.

Command	Options
Resynchronize Change Package Advanced Options	**Use Master** causes MKS Integrity to operate on the top-level Sandbox. When the selected change package is associated with a member in a subsandbox, specifying **Use Master** causes the command to operate on the top-level Sandbox for that subsandbox. **Span Projects** applies the command to any member specified in the change package, even if this involves multiple projects. This option allows MKS Integrity to search across local Sandboxes for all entries in the selected change package(s). **Perform Merges** prompts you for confirmation before performing a merge operation. **Allow Open Change Packages** allows MKS Integrity to work with open change packages. This facilitates the application of a resolution change package. **Already in Project is Error** causes MKS Integrity to terminate the operation if the member being applied is already in the project. If this setting is negated (as in `noAlreadyInProjectIsError`), the information displays as a warning. **Other Project is Error** terminates the command if the member is not in the project you are applying to or in its variant. **Ignore Server in Change Package** causes MKS Integrity to perform the Resync CP operation even if the change package members reside on different servers. **Ignore Cross-Branch Entries** causes MKS Integrity to use the most recent revision when it encounters two revisions of the same member on different branches. **Ignore Update Revision Entries** ignores update revision entries in a change package. There is no user prompt. **Propagate Subprojects** determines how MKS Integrity treats subproject operations required by the specified change packages. You can select from the following options: ■ `Explicitly` adds, drops, or moves a subproject only if there is a explicit command to do so in the change package. ■ `Implicitly` adds, drops or moves a subproject if the operation is implicitly required based on the change package entries. For example, if you are adding a member that is part of a subproject that does not exist in the larger project being updated, the subproject is added. If you are resynchronizing change packages created in an earlier version of MKS Integrity (Source Integrity), it is recommended that you use this option
Revert	**Restore Revision Timestamp** sets the timestamp of the working file (that the revision is checked out to) to the date and time of the revision in the history. If this option is not set, the working file's timestamp is set to the current date and time. **Force Overwrite Even if Unchanged** overwrites the working file even if it is unchanged. **Remove Working File if Out of Scope** removes a current member's working file if it does not match the Sandbox scope definition, for example, if the scope definition or member changes (such as modified member attributes). Sandbox Scope defines what project members are included in the Sandbox, transferring specific members from the MKS Integrity Server to the Sandbox directory when the Sandbox is created and controlling what members display in the Sandbox view. **Recurse Into Subprojects** recursively reverts members in selected subprojects. **Overwrite Working File if Changed** overwrites the working file if it has changed. **Overwrite if Deferred Operation Pending** overwrites the working file if the file has changed and there is a deferred operation pending on the member. **Keywords** allows you to select keyword options when reverting a member. ■ To leave keywords unexpanded, select `Do Not Expand`. ■ To replace keywords in the revision with literal values in the working file, select `Expand`. ■ To replace literal values in the revision with keywords, select `Unexpand`.
Set Member Rule	**Store Expanded Revision** sets the rule to the numeric revision number instead of the symbolic revision. For example, if you set the rule according to the `ReadyForQA` label and select the **Store Expanded Revision** option, the revision that currently corresponds to the `ReadyForQA` label is stored and always used when the rule is applied, even if the label later moves to another revision. **Confirm Rule Clearing** causes MKS Integrity to confirm that the rule will be cleared. **Override Rule** overrides the existing member rule.

Command	Options
Snapshot Sandbox	**Apply Label to All Members** applies the snapshot label to all project members. **Notify when Complete** to confirms that the snapshot operation has finished. **Apply State to All Members** applies the snapshot state to all project members. **Author** is the author name applied to the snapshot. Type a name in the **Author** field. If you do not type a name, MKS Integrity uses the current user name.
Submit	**Use the change package provided when the element was deferred** selects the change package that was originally associated with the deferred item. **Override the change package to a specified value** allows you to select a different change package from the one that was originally associated with the deferred item. **Close Change Package** closes the change package after the element is submitted.
Submit Change Package	**Close Change Package** closes the change package after submitting the item and completing the associated deferred operation. **Commit Changes/Submit for Review** (if reviews are mandatory) creates pending entries without submitting the change package for review. **Allow submit to proceed with deferred entries** submits the changes to the repository (or for review) even if there are deferred entries retained through the cancel of an operation during the submit, for example, canceling a checkin of an unchanged file. **Ignore Absence of Deferred/Lock Entries** submits the changes package even if there are no deferred or lock entries. **Show Successful Submit** specifies to display a confirmation dialog box indicating the successful submission of a change package.
Thaw	**Recurse Into Subprojects** recursively thaws members in subprojects.
Unlock	**Remove Lock** breaks non-exclusive locks held by other users. **Downgrade Lock** downgrades an exclusive lock to a non-exclusive lock. **Recurse Into Subprojects** recursively unlocks members in subprojects.
Update Revision	**Defer Update Revision** delays the update operation until the deferred operation is submitted. The operation in the Sandbox takes place immediately. **Close Change Package** closes the associated change package upon command completion.

Connection Preferences

You can configure the default settings for server and proxy connections. You can override the default settings when manually connecting to the MKS Integrity Server.

Note the following:

- Your administrator may enforce server-side preferences making them unavailable to you. These server enforced preferences depend on the server you are connected to while viewing the preferences. If you are not connected or logged in to a server, the MKS Integrity Client displays the local defaults for all preferences.

  To set your preferences accurately, log in to the server you want to work from before setting preferences. The **Preferences** dialog box displays the server you are currently connected to in the title bar.
- Options that appear in bold are those that are set locally by you. You can reset to the default settings by clicking the **Clear Local Settings** button (available only on the applicable panels).
- A blank check box () means the option is not enabled, a check mark () means the option is enabled, and a question mark () means you will be prompted to confirm or specify the option.

To set connection preferences in the GUI

1. Select **File > Edit Preferences.** The **Preferences Configuration** dialog box displays.
2. In the tree pane, click **Workflows and Documents > Connection** or **Configuration Management > Connection**. The **Connection** pane displays.

   For detailed information on the **Default Server Connection** and **User** options, see "Connection Preferences Options (GUI)" on page 69.

NOTE If you specify prompting for the user name or password, keep the following points in mind:

- If the security scheme at your site is Windows Single Signon (NTSS) the **Prompt for: User Name** and **Prompt for: Password** options are ignored unless you specify a user name that is different than the logged in user name. For information about your security scheme, see your administrator.
- If you are connected to multiple MKS Integrity servers, you will be prompted whenever you run a command that requires a server connection.

Connection Preferences Options (GUI)

Option	Description
Host Name	Type the name (for example, `xyz-server`) or numerical IP address (for example, `1.2.34.56`) of the default MKS Integrity Server.
Port	Type the port number, for example, 7001.
Prompt for Host Name and Port	Select this option to be prompted for the MKS Integrity Server name and port number each time you log in.
User Name	Type the user name you want to set as the default user.
Password	Type a password for the user.
Prompt for: User Name	Select this option to be prompted for the default user name each time you log in.
Prompt for: Password	Select this option to be prompted for the default password each time you log in.

Proxy Preferences

You can specify advanced proxy server settings for the MKS Integrity Client for use with MKS Integrity.

Use of a proxy is optional and based on server configuration by your administrator. Detailed information about proxies at your site, including host names, port numbers, and connection types are supplied by your administrator. For more information about using a proxy, contact your administrator.

For a detailed discussion about using a proxy, see "Implementing Federated Server Architecture" in the *MKS Integrity Server 2009 Administration Guide*.

MKS Federated Server Architecture is an implementation of the MKS Integrity Server structured to serve client requests through a proxy. The proxy provides access to project members residing on the MKS Integrity Server by retrieving information from its local cache or, if changes are detected, directly from the server.

To configure proxy preferences in the GUI

1. Select **File > Edit Preferences.** The **Preferences Configuration** dialog box displays.
2. In the tree pane, click **Integrity Client > Servers > Proxies**. The **Proxy** pane displays.

   CAUTION Do not change proxy settings when the client is connected to the MKS Integrity Server.

3. On the **Proxy** pane configure the following options:

   NOTE The names "direct" and "default" in any case or combination of case cannot be used as proxy host names.

   MKS Integrity considers spaces and commas in the **Host Name** field invalid characters.

   Host names and port numbers must match to connect to a proxy successfully. MKS Integrity does not search for the correct port number if you provide an incorrect one.

   - Select **Use same username and password for proxy and server** if you want the same user name and password to be used when connecting to both the proxy and server.

     Selecting this option does not necessarily ensure that MKS Integrity prompts you only once for your user name and password. If the authentication schemes used do not match, MKS Integrity prompts you for your user name and password again.

For information about the authentication schemes used, contact your administrator.

- Select **Always confirm proxy username and password** if you want MKS Integrity to prompt you for the user name and password each time you connect to the proxy.
- Select **Reuse current proxy username and password for all connections** if you want to use the same proxy user name and password when connecting to multiple remote servers.
- Select **Use default proxy for all unlisted connections** if you want to specify the proxy server as the default server for unlisted connections. This option is only enabled when you complete the details for a default proxy described next.
- To specify a default proxy, under **Default proxy** complete the following:
  - In the **Host Name** field, type the name of the server, for example, `proxyhost`, or the numerical IP address, for example, `1.2.34.67`.
  - In the **Port** field, type the port number, for example, `7761`. If you do not specify a port number, MKS Integrity assumes a direct connection.
- To configure multiple servers you want to connect to, under **Server** do the following:
  - Click **Add**. The **Add new server connection** dialog box displays.
  - In the **Server Host Name** field, type the name of the server or the numerical IP address.
  - In the **Port** field, type the port number.
  - Select the type of connection you want by clicking it. **Direct connection** specifies connecting without a proxy. **Use default proxy** specifies connecting using the proxy specified as the default on the **Proxy** pane. To specify a different proxy, select **Proxy** and complete the **Hostname** and **Port** fields.
  - Click **OK** to save the server details and return to the **Proxy** pane. The server displays in the **Server** list (for example, `proxyhost:7761`) with the connection details that you selected displayed below. You can review the server details for each server you configure by selecting it from the list.

TIP To edit a previously configured server, select it from the **Server** list and click **Edit**. The **Edit server connection** dialog box displays. Edit the server details as required, and click **OK** to save your changes.

To delete a previously configured server, select it from the **Server** list and click **Delete**. The server disappears from the **Server** list.

To configure proxy preferences in the CLI

From the CLI, type the following command:

```
im/si diag
[--diag=setproxy]
[--param=serverhostname:serverport]
[--param=proxyhostname:proxyport]
[--target=client]
```

where:

- `--param=`*serverhostname*`:`*serverport* specifies the name and port number of the server used by the proxy server.

- `--param=`*proxyhostname*`:`*proxyport* specifies the name and port number of the proxy server.

> **NOTE** If only one parameter is specified, proxy information for the specified server ID is removed from the preferences.

Difference and Merge Tool Preferences

The **Diff and Merge Tool** pane in the **Preferences Configuration** dialog box contains default settings for the differencing and merging tools used by MKS Integrity.

Note the following:

- Your administrator may enforce server-side preferences making them unavailable to you. These server enforced preferences depend on the server you are connected to while viewing the preferences. If you are not connected or logged in to a server, the MKS Integrity Client displays the local defaults for all preferences.

  To set your preferences accurately, log in to the server you want to work from before setting preferences. The **Preferences** dialog box displays the server you are currently connected to in the title bar.
- Options that appear in bold are those that are set locally by you. You can reset to the default settings by clicking the **Clear Local Settings** button (available only on the applicable panels).
- A blank check box (☐) means the option is not enabled, a check mark (☑) means the option is enabled, and a question mark (?) means you will be prompted to confirm or specify the option.

To set difference and merge tool preferences in the GUI

1. Select **File > Edit Preferences.** The **Preferences Configuration** dialog box displays.
2. Click **Configuration Management > Diff and Merge Tools**. The **Diff and Merge Tools** pane displays.
3. Under **Diff Tool Options**, select one of the following options:
   - Select the **MKS Visual Difference Tool** option to use the MKS Visual Difference tool to view differences between revisions.
   - Select the **Third Party Difference Tool** option if you want to use one of the following tools to view differences:
     - `Araxis Merge, Araxis Ltd.`
     - `Beyond Compare 1.x, Scooter Software`
     - `Beyond Compare 2.x, Scooter Software`
     - `MKS Visual Difference (Classic), MKS Inc.` (for MKS Toolkit users only)
     - `Windiff, Microsoft`
   - Select **Custom Command** to specify a particular program to view differences.

     In the field, type the location and executable file name for the program you want to use, or click the **Browse** button to browse to the executable file.

     You can supply the following arguments for the command to control how the third party tool operates:
     - `{1}` to display the title of the first file being compared (Araxis Merge only).
     - `{2}` to display the title of the file being compared to the first file (Araxis Merge only).
     - `{3}` the path to the first file being compared.
     - `{4}` the path to the file being compared to the first file.

Each argument must be quoted. For example, the command line for the ABC Difference tool could be:

```
abcdiff.exe "{3}" "{4}"
```

4 Under **Merge Tool Options**, select one of the following options:

- Select the **MKS Merge Tool** option to use the MKS Visual Merge tool to merge revisions.
- Select the **Third Party Merge Tool** option if you want to use one of the following tools to perform manual merges:
  - `Araxis Merge, Araxis Ltd.`
  - `Beyond Compare 2.x, Scooter Software`

NOTE

You should use a third party merge tool when merging files that MKS Visual Merge cannot merge, for example, binary files or MS Word files.

You cannot suspend a merge operation and mark the working files for merging at a later time when using a third party merge tool.

- Select **Custom Command** if you want to use a custom third party merge tool.

  In the field, type the location and executable file name for the custom third party merge tool, or click the **Browse** button to browse to the executable file.

  You can supply the following arguments for the command to control how the third party tool operates:

  - `{0}` to display the title of the common ancestor object of the files being merged.
  - `{1}` to display the title of the file being merged from.
  - `{2}` to display the title of the file being merged to.
  - `{3}` to display the title of the working file.
  - `{4}` the path to the common ancestor object of the files being merged.
  - `{5}` the path to the file being merged from.
  - `{6}` the path to the file being merged to.
  - `{7}` the path to the working file.
  - `{8}` the path to the output file. You can use this argument to save the merge results in a file other than the working file.

  Each argument must be quoted. For example, the command line for the ABC Merge tool could be:

  ```
  abcmerge.exe "{4}" "{7}" "{5}"
  ```

  The order of these arguments depends on the third party tool you are using.

NOTE Third party merge tools are only used for manual merges. Automatic merges are always performed using MKS Visual Merge.

---

5 Click **OK** to save your preferences.

Editor Preferences

The **Editor** pane in the **Preferences Configuration** dialog box contains default settings for the file editor tool used by MKS Integrity when editing members.

Note the following:

- Your administrator may enforce server-side preferences making them unavailable to you. These server enforced preferences depend on the server you are connected to while viewing the preferences. If you are not connected or logged in to a server, the MKS Integrity Client displays the local defaults for all preferences.

  To set your preferences accurately, log in to the server you want to work from before setting preferences. The **Preferences** dialog box displays the server you are currently connected to in the title bar.
- Options that appear in bold are those that are set locally by you. You can reset to the default settings by clicking the **Clear Local Settings** button (available only on the applicable panels).
- A blank check box (☐) means the option is not enabled, a check mark (☑) means the option is enabled, and a question mark (?) means you will be prompted to confirm or specify the option.

To set editor preferences in the GUI

1. Select **File > Edit Preferences.** The **Preferences Configuration** dialog box displays.
1. Click **Configuration Management > Editor**. The **Editor** pane displays.
2. Select one of the following options:
   - **Use System Editor** uses the system's default editor for the type of file being edited, for example, Notepad, to edit text files.
   - **Editor** allows you to choose the editor. Click **Browse**, then select an editor, such as vi.
   - The **Warn when trying to edit more than __ file(s)** option prompts you with a warning when you attempt to edit more than the specified number of files.
3. Click **OK** to save your preferences.

General Preferences

You can set general preferences for MKS Integrity and the MKS Integrity Client.

Note the following:

- Your administrator may enforce server-side preferences making them unavailable to you. These server enforced preferences depend on the server you are connected to while viewing the preferences. If you are not connected or logged in to a server, the MKS Integrity Client displays the local defaults for all preferences.

  To set your preferences accurately, log in to the server you want to work from before setting preferences. The **Preferences** dialog box displays the server you are currently connected to in the title bar.
- Options that appear in bold are those that are set locally by you. You can reset to the default settings by clicking the **Clear Local Settings** button (available only on the applicable panels).
- A blank check box (☐) means the option is not enabled, a check mark (☑) means the option is enabled, and a question mark (?) means you will be prompted to confirm or specify the option.

To set general preferences in the GUI

1. Select **File > Edit Preferences.** The **Preferences Configuration** dialog box displays.
2. In the tree pane, click **Integrity Client > General**. The **General** pane displays.
3. To set the appearance of the GUI, select an option from the **Look and Feel** list. The available choices are `System`, `Windows` (Windows clients only), `Motif`, and `Metal`.

   NOTE You must restart the Integrity Client for the new look and feel changes to take effect.

4. To set the time in milliseconds before a command's status displays in the GUI, type a numeric value in the **GUI** field under **Popup Status Delay** or use the up and down arrows to select a value. The default value is `2500`.

   To set the time in milliseconds (ms) that a command's status displays in the command line interface, type a numeric value in the **CLI** field under **Popup Status Delay** or use the up and down arrows to select a value. The default value is `0`.
5. To close and shutdown the Integrity Client when using the **Close Window** command or clicking the **X** button at the top right-hand corner of the Integrity Client window, enable the option for **Exit on Close**. This option is disabled by default.
6. To set the maximum amount of memory reserved for the Integrity Client at runtime, under **Miscellaneous** in the **Maximum heap size field**, enter a value in megabytes (MB), or use the up and down arrows to select a value. The minimum value is `5`, and the maximum value depends on your available system memory. The default value is `96`.

   CAUTION Changing the heap size setting may unfavorably affect the performance of the Integrity Client and your system. Consult your administrator before making changes.

   For the heap size change to take effect, restart the Integrity Client.
7. On Windows, you can enable or disable an Integrity Client system tray icon that indicates the Integrity Client is running by toggling the **Enable System Tray Icon** option. When enabled, you can

also perform some basic Integrity Client commands by right-clicking the Integrity Client icon. The Integrity Client system tray icon is enabled by default.

8 To set disconnect and exit command preferences, click to expand the **Commands** node in the tree pane, and select the command you want to set preferences for. The command preferences display in the display panel.

9 To be asked for confirmation when using the **Disconnect from Server** command, enable the option for **Confirm Disconnect.**

10 To shut down *all* clients when using the **Exit** command, enable the option for **Shutdown All Integrity Clients**.

To set general workflow and document preferences in the GUI

1 Select **File > Edit Preferences.** The **Preferences Configuration** dialog box displays.

2 In the tree pane, click **Workflows and Documents > General.** The **General** pane displays.

3 To set the **Caching** preference, specify the amount of disk space in megabytes (MB) used by the MKS Integrity Client per connection of MKS Integrity. By default, the 100 MB of disk space is used for each connection's cache.

> **NOTE** At this time MKS Integrity Client only caches inline rich-text attachments.

4 To set the **Spell Checking** preferences, enter or browse to the **External dictionary URL** to specify the dictionary file that you want to use for spell checking the content of rich text fields in the GUI. By default, no URL is specified and spell checking uses the standard client dictionary supplied by MKS Integrity. The standard dictionary is English only. You can use this preference to direct the MKS Integrity Client to use a custom spell checking dictionary on your intranet. Custom dictionaries can be for any European language; dictionaries for double byte languages (Japanese, Chinese, Korean) are not supported.

The **User dictionary filename** field displays the location of the user dictionary. This location cannot be changed. When you add new words or choose to ignore certain words during spell checking, these changes are stored in the user dictionary. You can **Clear user dictionary** to remove all your changes and restore the user dictionary to the standard dictionary. If you only want to remove some of your changes, edit the dictionary file. Custom words are listed in the dictionary under the date when they were added.

> **NOTE** For the Web UI, your browser's spell checking feature is used.

Shutdown Preferences

You can specify shutdown preferences for all clients globally from one location.

Note the following:

- Your administrator may enforce server-side preferences making them unavailable to you. These server enforced preferences depend on the server you are connected to while viewing the preferences. If you are not connected or logged in to a server, the MKS Integrity Client displays the local defaults for all preferences.

  To set your preferences accurately, log in to the server you want to work from before setting preferences. The **Preferences** dialog box displays the server you are currently connected to in the title bar.
- Options that appear in bold are those that are set locally by you. You can reset to the default settings by clicking the **Clear Local Settings** button (available only on the applicable panels).
- A blank check box (☐) means the option is not enabled, a check mark (☑) means the option is enabled, and a question mark (?) means you will be prompted to confirm or specify the option.

Disconnection Preferences

When disconnecting from an MKS Integrity Server, you can specify client preferences.

Select **File > Edit Preferences.** The **Preferences Configuration** dialog box displays.

Click **Integrity Client > Commands > Disconnect From Server**. The **Disconnect From Server** pane displays.

Confirm Disconnect specifies if to confirm disconnecting from the server when using the **File > Server Connection > Disconnect** command.

Exit Preferences

When shutting down the client, you can specify preferences.

Select **File > Edit Preferences.** The **Preferences Configuration** dialog box displays.

Click **Integrity Client > Commands > Exit**. The **Exit** pane displays.

Shutdown all Integrity Clients specifies if to shut down all clients when shutting down a client using the **File > Shutdown** command.

View Preferences

The Views pane in the **Preferences Configuration** dialog box contains default option settings for MKS Integrity views. At any time, you can reset the default settings for a view by clicking **Clear Local Settings**.

You can also configure toolbars for views. To configure, select the view and click **Toolbar** at the bottom left of the Views pane.

Note the following:

- Your administrator may enforce server-side preferences making them unavailable to you. These server enforced preferences depend on the server you are connected to while viewing the preferences. If you are not connected or logged in to a server, the MKS Integrity Client displays the local defaults for all preferences.

  To set your preferences accurately, log in to the server you want to work from before setting preferences. The **Preferences** dialog box displays the server you are currently connected to in the title bar.
- Options that appear in bold are those that are set locally by you. You can reset to the default settings by clicking the **Clear Local Settings** button (available only on the applicable panels).
- A blank check box () means the option is not enabled, a check mark () means the option is enabled, and a question mark () means you will be prompted to confirm or specify the option.

To set view preferences in the GUI

1. Select **File > Edit Preferences.** The **Preferences Configuration** dialog box displays.
2. Click **Workflows and Documents > Views** or **Configuration Management > Views**. The views display as a list of nodes.
3. Select a view node to configure. The settings for that view appear in the Views pane.

   If necessary, select a view's option check box. To restore a view's default options, click **Clear Local Settings**.
4. Modify view options as necessary. For detailed information on view options, see "Preferences: View Options" on page 79.
5. If the view allows you to set toolbar preferences, click **Toolbar** on the display pane for the appropriate view. The **Configure toolbar for** dialog box displays, showing the current toolbar configuration for the view.

   NOTE You can set toolbar preferences for the other views as part of your ViewSet.
6. Add or remove toolbar buttons and separators for the view.

   NOTE To add a separator, under **Toolbar Contents**, select the button you want the separator to appear below, then under **Available Buttons**, select a separator and click **Add**. On the main toolbar, the separator is positioned to the right of the existing button or separator.

   NOTE To change the sequence of a button or separator, remove it from the **Toolbar Contents** list and then add it to the desired location.
7. To accept the changes, click **OK**. The **Configure toolbar for** dialog box closes.

8 To save your preferences, click **OK**.

Preferences: View Options

View	Options
Annotated Revision View	Under **Options**, you can select the default options available in the **Annotated Revision** view: ■ **Character Encoding** specifies the encoding used to display revision contents. Under **Columns**, you can select which columns you want displayed in the **Annotated Revision** view: ■ **Author** displays the author of the revision. ■ **Labels** displays revision labels. ■ **Revision Contents** displays the text contained in a revision. ■ **C.P. ID** displays the revision's associated change package ID. ■ **Line** displays the line number for each line of text in the revision (for use when **Revision Contents** is selected). ■ **Date** displays the date each revision in the history was created. ■ **Revision** displays the member's revision number.
Archive Information View	**Show Labels** displays archive labels. **Show Locks** displays locks.

View	Options
Change Package View	**Show Uncommitted Entries** displays deferred entries that have not been submitted and therefore committed to the repository. Also displays lock entries. **Show Pending Entries** displays pending entries that are not committed to the repository. **Show Propagation Information** displays a list of the change packages that have been propagated by the change package and a list of the change packages that propagated the change package. **Show Committed Entries** displays entries that have been committed to the repository. **Show Review Information** displays the **Review Log** panel containing review information. Under **Columns**, you can select which columns you want displayed in the **Entries** panel of the **Change Package** view: ■ **Bytes Added** displays the number of bytes added to the revision by the operation. This column displays `0` for text files. ■ **Bytes Deleted** displays the number of bytes deleted from the revision by the operation. This column displays `0` for text files. ■ **Date Changed** displays the date the entry was made. ■ **Lines Added** displays the number of lines added to the revision by the operation. This column displays `0` for binary files. ■ **Lines Deleted** displays the number of lines deleted from the revision by the operation. This column displays `0` for binary files. ■ **Location** displays the archive location for members or the location for subprojects. ■ **Member** displays the name of the member or subproject affected by the operation. ■ **Member Type** displays the type of project element affected by the operation (member or subproject). ■ **Project** displays the name and path of the project where the operation was performed. If the operation occurred in a shared subproject, the project where the subproject is shared from is displayed. If the operation involved two different projects (for example, moving a member from one project to another), the source project is displayed for non-committed entries, and the target project is displayed for committed entries. ■ **Revision** displays the number of the revision in the change package entry. ■ **Sandbox** displays the name of the Sandbox where the deferred operation or checkout took place. ■ **Server** displays the host name of the server the entry was made on. ■ **Type** is the entry type of the change package entry. ■ **Variant** displays the name of the variant development path (if a variant was used) the change package entry occurred on.

View	Options
Change Packages View	Under **Columns**, you can select which columns you want displayed in the **Change Packages** view: ■ **Closed Date** displays the date the change package was closed. ■ **Created Date** displays the date the change package was created. ■ **Creator** displays the username who created the change package. ■ **Deploy Request ID** displays the ID of the deploy request for the change package. For more information, see the *MKS Deploy 2009 Administration Guide*. ■ **Deploy Request State** displays the state of the deploy request for the change package. For more information, see the *MKS Deploy 2009 Administration Guide*. ■ **Deploy Target** displays the deploy target for the change package. For more information, see the *MKS Deploy 2009 Administration Guide*. ■ **Description** displays the description provided for the change package. ■ **ID** displays the change package ID. ■ **Is Resolution** displays `yes` if the change package is a resolution change package, and `no` if it is not. You cannot create resolution change packages as of MKS Integrity 2006. ■ **Item** displays the item ID if the MKS Integrity integration is enabled. ■ **Propagated** displays a list of the change packages that have been propagated by the change package. ■ **Propagated By** displays a list of the change packages that propagated the change package. ■ **Reason** is only relevant when applying change packages, and is not used in the standalone **Change Packages** view. ■ **Resolutions** represent the list of change packages that the target change package addresses. You cannot create resolution change packages as of MKS Integrity 2006. ■ **Server** displays the server the change package was created on. ■ **Text** specifies whether the change package entry has a text archive. ■ **Stage** displays the stage of the change package in the staging system. For more information, see the *MKS Deploy 2009 Administration Guide*. ■ **Staging System** displays the staging system that the change package is being deployed in. For more information, see the *MKS Deploy 2009 Administration Guide*. ■ **State** displays current state of the change package, which can be `Open`, `Closed`, `Submitted`, `Rejected`, `Discarded`, `Accepted`, or `CommitFailed`. ■ **Summary** displays the summary statement for the change package. ■ **Type** displays the type of change package: `Development`, `Propagation`, `Staging`, `Deployment`, or `Resolution`. For more information on staging and deployment change packages, see the *MKS Deploy 2009 Administration Guide*. `Resolution` is still a valid change package type, although you cannot create new resolution change packages as of MKS Integrity 2006.

View	Options
Member History View	**Initial Revision Filter** allows you to set the default filter for the view by selecting **Change Filter**. **Initial View** allows you to set the default view for the window, either the `Graphical View` or the `List View`. **Show Beside Each Node in Graphical View** allows you to determine the information displayed beside each revision node in the graphical view. **Maximum Number of Trunk Revisions** allows you to set the default maximum number of revisions displayed in this view. **Show Legend** displays the legend for the graphical history view. **Show Details** displays detailed information in a separate panel for the selected revision. Under **Columns**, you can select which columns you want displayed in the **Member History** List View: ■ **Author** displays the author of the member. ■ **C.P. ID** displays the change package ID associated with the revision number. ■ **Date** displays the date each revision in the history was created. ■ **Revision Labels** displays member labels. ■ **Lock Timestamp** displays the date and time a member is locked. ■ **Locked Icon** displays the padlock icon to indicate a file is locked. ■ **Locker** displays who has a member locked. ■ **Locker C.P. ID** displays the change package ID for the associated lock entry. ■ **Locker Development Path** displays the name of the development path where the lock on the revision was made from. This information is relevant when the locking policy is set to `devpath`, allowing a single user to have a single lock on an archive per development path. Contact your administrator for more information. ■ **Locker Host** displays the host name of the computer that locked the member. ■ **Locker Project** displays the name and path of the project where the member revision was locked from. If the member revision was locked from a shared subproject, it is the subproject name and path that are displayed. ■ **Locker Sandbox** displays the name of the Sandbox where the lock on the revision was made, and is relevant when viewing the information from the Locker Host. ■ **Revision** displays the member's revision number. ■ **Revision Description** displays the revision description assigned to the project member. ■ **State** displays the state of the member revision.
Member Information View	**Show Attributes** displays member attributes. **Show Labels** displays member labels. **Show Member Revision Information** displays the active projects and development paths that the member is the member revision in. **Show Change Package Information** displays change package information (only if change packages are enabled). **Show Rule** displays member rule information.
Member Labels View	**Recurse Into Subprojects** displays the hierarchy of subprojects.

View	Options
Non-Members View	**Include** specifies file types to include in the **Non-Members** view. Click **Change** to modify the settings. **Exclude** specified files types to exclude from the **Non-Members** view. Click **Change** to modify the settings. **Recurse Into Subprojects** specifies if to apply the **Non-Member Filter** recursively to subprojects. **Include Former Members** specifies if to include members that have been dropped from the project, but where there still exists a working file in the Sandbox directory. Under **Columns**, you can select which columns you want displayed in the **Non-Members** view: ■ **Absolute Path** displays the absolute file path of the file. ■ **Last Modified** displays the date that the file was last modified. ■ **Closest Project** displays the project associated with the Sandbox that is closest to the directory containing the file. ■ **Member ID** displays the default member name for the file as it would appear if it was added to the nearest project. In the case where the nearest project is subproject, the relative path displays with the member name. ■ **Closest Sandbox** displays the Sandbox that is closest to the directory containing the file. ■ **Size** displays the size of the file in bytes.

View	Options
Locate View	**Depth for lookup** specifies the depth of the search. Select one of the following options: ■ **Current items** searches current project configurations (normal and variant projects). ■ **Current and Checkpointed** searches current project configurations and checkpoints. ■ **All items** searches current project configurations, checkpoints, and in between checkpoints. **Project Scope** specifies which projects to search. Select one of the following options: ■ **This Project** searches the current project and its subprojects. ■ **Other Projects** searches all projects and subprojects, except the current project. ■ **All Projects** searches all projects and subprojects. **Devpath Scope** specifies which development paths to search. Select one of the following options: ■ **This Devpath** searches the current development path. ■ **Other Devpaths** searches all development paths, except the current development path. ■ **All Devpaths** searches all development paths. **Default Mode** specifies the default mode that you want to display the search results in. Select one of the following options: ■ **Distinct Mode** displays only the projects and development paths containing the object you are searching. From the **Default Distinct** list, choose the information you want to display in **Distinct Mode**. ■ **List Mode** displays detailed information about all occurrences of the object in the projects and development paths containing the object. **Default Distinct** specifies the information to display in **Distinct Mode**. Select one of the following options: ■ **Projects** lists only project names. ■ **Development paths** lists only development path names. ■ **Registered Projects** lists only registered top-level project names. **Limit Search to Active Projects** searches projects that are accessible from head revision and are registered projects. Under **Columns**, you can select which columns you want displayed in the **Locate** view: ■ **Checkpoints** displays the checkpoints containing the object. ■ **Name** displays the name of the object. ■ **Top-level Projects** displays the top-level projects containing the object. ■ **Dates** displays the date ranges in which the object exists. ■ **Project** displays the projects containing the object. ■ **Development Path** displays the development paths containing the object. ■ **Revisions** displays the member's revisions.

View	Options
Locks View	Under **Columns**, you can select which columns you want displayed in the **Locks** view: ■ **Archive Name** displays the name of the locked archive. ■ **Host** displays the hostname of the computer which the lock was performed on. ■ **Revision** displays the locked revision number. ■ **User** displays the user holding the lock. ■ **C.P. ID** displays the change package ID associated with the lock. ■ **Member Name** displays the name of the locked member. ■ **Sandbox** displays the name of the Sandbox where the lock on the revision was made, and is relevant when viewing the information from the locker host. ■ **Development Path** displays the name of the development path where the lock on the revision was made from. This information is relevant when the locking policy is set to `devpath`, allowing a single user to have a single lock on an archive per development path. ■ **Project** displays the name and path of the project where the member revision is locked from. If the member revision is locked from a shared subproject, it is the subproject name and path that are displayed. ■ **Time** displays the time the archive was locked.
Project View	**Recurse Into Subprojects** displays the hierarchy of subprojects.
Project Differences View	**Show Applied Change Packages** displays all the change packages applied between two project revisions. **Show Member Changes** displays all modifications to each member. **Show Change Packages** displays a list of revision modifications that can be associated with change packages and a list of those that cannot. **Member Attribute Changes** displays all modifications of member attributes between two project revisions. **Show Revision Description** displays the content of the revision description. **Recurse into Subprojects** displays the hierarchy of subprojects.
Project History View	**Initial Revision Filter** allows you to set the default filter for the view by selecting **Change Filter**. **Initial View** allows you to set the default view for the window, either the `Graphical View` or the `List View`. **Show Beside Each Node in Graphical View** allows you to determine the information displayed beside each checkpoint node in the graphical view. **Maximum Number of Trunk Revisions** allows you to set the default maximum number of checkpoints displayed in this view. **Show Legend** displays the legend for the graphical history view. **Show Details** displays detailed information in a separate panel for the selected checkpoint. Under **Columns**, you can select which columns you want displayed in the **Project History** list view: ■ **Associated Items** displays any MKS Integrity items associated with the checkpoint. ■ **Author** displays the author of the project. ■ **Date** displays the date each checkpoint in the history was created. ■ **Labels** displays project labels. ■ **Revision** displays the checkpoint number. ■ **State** displays the state of the checkpoint.
Project Information View	**Show Attributes** displays project attributes. **Show Development Paths** displays development paths for creating variant Sandboxes. **Show Associated Items** displays any MKS Integrity items associated with the project.
Projects View	**Show Subprojects** displays registered subprojects.
My Sandboxes View	**Show Subsandboxes** displays registered subsandboxes.

View	Options
Revision Information View	**Show Labels** displays labels on the revision. **Show Member Revision Information** displays the active projects and development paths that the revision is the member revision in. **Show Change Package Information** displays change package information (only if change packages are enabled).
Sandbox View	**Recurse Into Subprojects** displays the hierarchy of subprojects. Under **Columns**, you can select which columns you want displayed in the **Sandbox** view. ■ **Archive Shared** indicates with a blue striped document and hand icon which project members share another member's archive. This column is valid only if you are using the database repository. ■ **Deferred** displays  to indicate that an operation on a member is deferred. ■ **Lock Timestamp** displays the date and time a member is locked. ■ **Locker CPID** displays the change package associated with the lock on the member revision. ■ **Locker Project** displays the name and path of the project where the member revision was locked from. If the member revision was locked from a shared subproject, it is the subproject name and path that are displayed. ■ **Member CPID** displays the change package associated with the operation that set the member revision. ■ **Member Rev. Timestamp** displays the date and time the member revision is set. ■ **Pending CPID** displays the change package associated with a pending operation. ■ **Type** displays the type of each project, and project member. ■ **Working File Delta** displays a delta icon to indicate that your working file has changed. ■ **Attributes** displays project attributes. ■ **Frozen** indicates with a snowflake icon which members are frozen. ■ **Locked Icon** displays the padlock icon to indicate a revision is locked. ■ **Locker Development Path** displays the name of the development path where the lock on the revision is made from. ■ **Locker Sandbox** displays the name of the Sandbox where the lock on the revision was made, and is relevant when viewing the information from the **Locker Host**. ■ **Member Rev.** displays the member's revision number. ■ **Name** displays the project, subproject, and the project members by file name. ■ **Revision Sync Delta** displays a delta icon to indicate that your working revision does not match the member revision (usually due to branching). ■ **Working Archive** displays the name of the archive the working file is derived from. **Note:** In the case where the working file is derived from an archive that was based on a server-side system setup (i.e. based on some default RCSPath or WorkToArch setting, as opposed to an explicit archive= reference), the **Working Archive** field displays the value "`(default:<server directory>)`". The actual name of the archive the working file was derived from can then be determined from the value for the **Member Archive** field. ■ **Working Rev.** displays the checked out revision number that corresponds to the member's working file.

View	Options
	■ **Creation CPID** displays the change package that created the revision that is currently the member revision. This revision may be different from the **Member CPID** if an import, add member from archive, or set member revision operation was used. ■ **Labels** displays member labels. ■ **Locker** displays who has a member locked. ■ **Locker Host** displays the host name of the computer that locked the member. ■ **Member Archive** display the name of the archive the member refers to. ■ **Member Rev. Description** displays the revision description assigned to the Sandbox member. ■ **New Revision Delta** displays a delta icon to indicate that a new revision for the member is available. ■ **State** displays the state of the member revision. ■ **Working CPID** displays the change package associated with a work in progress, deferred, or lock operation performed by the current user from the current Sandbox.
Sandbox Information View	**Show Attributes** displays the **Project Attributes** and **Sandbox Attributes** tabs. **Show Associated Items** displays any MKS Integrity items associated with the project.
View Item	**Display history** shows the item history when viewing a single item. **Display relationships** shows the relationships when viewing a single item. **Display change packages** shows associated change packages when viewing a single item. **Display workflow** shows the item type workflow when viewing a single item. **Display attachments** shows attachments when viewing a single item. **Display time entries** shows time entries when viewing a single item. **History Order** shows item history in ascending or descending order. Available options are: `Most recent last` and `Most recent first`.
View Queries	**Created By** shows the name of the user who created the query. **Image** shows any image, whether default or custom, associated with a query. **Name** shows the name of the query. **Sort Field** shows the field the query is sorted by. **Description** shows any information entered for the query description. **Is Admin Provided** shows whether or not the query is a shared administrative object. **Shared With** shows which groups the query is shared to. **Visible** shows whether or not the query is visible in the pulldown list of queries. **Fields** shows the visible fields in the query. **Last Modified** shows the date the query was last modified. **Sort Direction** shows the direction the query is sorted by.
View Reports	**Created By** shows the name of the user who created the report. **Last Modified** shows the date the report was last modified. **Shared With** shows which groups the report is shared to. **Description** shows any information entered for the report description. **Name** shows the name of the report. **Is Admin Provided** shows whether or not the report is a shared administrative object. **Query** shows the query the report is based on.

View	Options
View Charts	**Chart Type** shows the type of chart (distribution, item fields, trend, or item fields trend). **Graph Style** shows the type of graph used to display the chart data. **Name** shows the name of the chart. **Created By** shows the name of the user who created the chart. **ID** shows the database ID of the chart. **Query** shows the query the chart is based on. **Description** shows any information entered for the chart description. **Last Modified** shows the date the chart was last modified. **Shared With** shows which groups the chart is shared to.
View Dashboards	**Created By** shows the name of the user who created the dashboard. **Last Modified** shows the date the dashboard was last modified. **Description** shows any information entered for the dashboard description. **Name** shows the name of the dashboard. **Is Admin Provided** shows whether or not the dashboard is a shared administrative object. **Shared With** shows which groups the dashboard is shared to.
View Users	View used only by the MKS Integrity administrator.
View Groups	View used only by the MKS Integrity administrator.
View Dynamic Groups	View used only by the MKS Integrity administrator.
View Projects	View used only by the MKS Integrity administrator.
View Item States	View used only by the MKS Integrity administrator.
View Item Types	View used only by the MKS Integrity administrator.
View Fields	View used only by the MKS Integrity administrator.
View Server Triggers	View used only by the MKS Integrity administrator.

Part 4

Grouping Tasks by Role in Viewsets

Understanding ViewSets (GUI)

A *ViewSet* is a collection of views in a specific configuration that persists each time you open and close the MKS Integrity Client. Each ViewSet can be designed around one or more tasks, often corresponding to a specific role, such as a developer or project manager.

Your administrator may configure some ViewSets to be mandatory. Mandatory ViewSets automatically install on your MKS Integrity Client at the time you connect to the MKS Integrity Server. Mandatory ViewSets are automatically opened for you. You cannot close mandatory ViewSets; and if you delete them, they are automatically imported and opened the next time you start the MKS Integrity Client.

If your administrator configures a ViewSet so that it is no longer mandatory, you must first delete the mandatory ViewSet before you are able to import the new non-mandatory version.

Creating a ViewSet

You can create your own ViewSet that is independent of restrictions by your administrator. Optionally, you can add a description to the new ViewSet and copy an existing ViewSet's actions, toolbars, and views. Once you create a ViewSet, you can customize it by configuring actions, toolbars, and views.

To create a ViewSet in the GUI

1. Select **ViewSet > New**. The **New ViewSet** dialog box displays.
2. In the **Name** field, type a name for the ViewSet. A name is mandatory.
3. In the **Description** field, type a description of the ViewSet. A description is optional.
4. To copy the actions, toolbars, and arrangement of views in an existing ViewSet, enable **Copy Existing ViewSet**, then select a ViewSet from the list.

   To copy the views currently open in the selected ViewSet, enable **Copy Open Views**.
5. To create the ViewSet, click **OK**.

   If you copied an existing ViewSet, the ViewSet displays.

   If you did not copy an existing ViewSet, the **Customize <Name> ViewSet** dialog box displays.

Customizing the MKS Integrity Client

The MKS Integrity Client contains several commands that are related to managing the application as a whole. These commands appear in the **File**, **ViewSet**, and **Help** menus and allow you to set preferences, disconnect server connections, exit and shut down the application, manage your ViewSets, and get help. The commands you choose to make visible in the MKS Integrity Client appear in all ViewSets.

To customize the MKS Integrity Client in the GUI

1. Select **File > Customize Client**. The **Customize Client** dialog box appears, with the **Actions** tab displayed.
2. In the **Action Group** pane, select an action group to customize. An action group typically displays as a menu in the main menu bar, for example, **File**.
3. In the adjacent pane under **Action Availability**, specify the actions you want visible in the selected action group. Actions appear as menu items in a menu, for example, **Shutdown**.

   To apply your changes, click **OK**. The changes display in the MKS Window.

Customizing a ViewSet

To perform MKS Integrity operations, you must add action groups and actions to the active ViewSet. Action groups are typically menus that appear in the menu bar and actions are commands grouped under an action group that you invoke using a menu item, toolbar button, shortcut key; or mouse gesture such as right-clicking or the drag-and-drop method. If you enable an action, you must display its action group; the corresponding toolbar button is optional.

IMPORTANT Because ViewSets are highly customizable, all GUI procedures in this guide assume all views are docked and all actions are enabled.

Key Considerations

When customizing an imported ViewSet (one you did not create) some actions or action groups may not be available to you in the ViewSet. The administrator who created the ViewSet has the ability to make actions (commands, views, and other ViewSet elements) unavailable to that ViewSet. Those actions do not appear as options when customizing the ViewSet.

To customize a ViewSet in the GUI

1. Open or switch to the ViewSet you want to customize.
2. Select **ViewSet > Customize**. The **Customize <name> ViewSet** dialog box displays, where <*name*> is the name of the ViewSet you are customizing. By default, the **Actions** tab displays.
3. Customize the ViewSet using the available tabs. These tabs are documented in the following sections:
   - "ViewSet Actions (Menus)" on page 93
   - "ViewSet Toolbars" on page 95
   - "ViewSet Views (Docking Location)" on page 95
   - "ViewSet Attributes" on page 96

   To save your changes and return to using the ViewSet, click **OK**.

ViewSet Actions (Menus)

You can customize the menus (actions) and toolbars that are available in the ViewSet, as well as their contents.

To customize ViewSet actions in the GUI

1. From the **Customize <name> ViewSet** dialog box, click the **Actions** tab.

2 In the **Action Group** pane, select an action group to customize. An action group typically displays as a menu in the main menu bar, for example, **Item** or **Change Package**.

Action groups are organized by component and then by their objects (such as items or members).

From the Action Group Availability list, specify how the action group (menu) appears in the ViewSet. Select one of the following:

- `Not Visible` specifies that the menu (action group) is not displayed in the ViewSet and so does not appear on the menu bar. Consequently, none of the commands (actions) in the menu appear in the ViewSet. However, you can customize the ViewSet later to include the menu.
- `Visible` specifies that the menu (action group) is in the ViewSet, and appears on the menu bar. The commands (actions) for that menu must also be specified to appear (see next step).

  For the menu bar to be displayed, at least one action in the action group must be configured to be visible (see next step).

If you are an administrator using the MKS Integrity Administration Client, the following additional selections are available:

- `Not Available` specifies that the menu (action group) is not in the ViewSet, and cannot be added to the ViewSet by the user. Users customizing the ViewSet do not see the action group at all. Consequently, none of the commands (actions) in the menu appear in the ViewSet.
- `Visible, Locked` specifies that the menu (action group) is in the ViewSet, and its availability cannot be customized by the user. This selection also changes the action availability of visible actions to match it (see the next step).

3 Enable the actions you want visible in the selected action group. By default, the following columns are displayed:

- **Action** displays the actions (menu items) that appear in a menu on the ViewSet.
- **Action Availability** specifies if and how the action (menu item) appears in the ViewSet. Select one of the following:
  - `Not Visible` specifies that the action is not in the ViewSet and so does not appear anywhere in the interface.
  - `Visible` specifies that the action is in the ViewSet, and appears in the menu. The action (if desired) also appears in the shortcut menu.
  - `Visible, On Toolbar` specified in addition to visible, the action also appears on the toolbar as a button represented by the icon in the **Toolbar Button** column.

TIP Right-click the dialog box to specify the same selection for all actions.

If you are an administrator using the MKS Integrity Administration Client, the following additional selections are available:

- `Not Available` specifies that the action is not in the ViewSet, and cannot be added to the ViewSet by the user. Users customizing the ViewSet do not see the action at all.
- `Visible, Locked` specifies that the action is in the ViewSet, and its availability cannot be customized by the user.

- `Visible, Locked, On Toolbar` specifies that the action is in the ViewSet and on the toolbar, and that its availability cannot be customized by the user.

IMPORTANT Setting action availability causes the action group availability to change to accommodate the new setting. The effect propagates all of the way up the action tree. For example, if a parent is `Not Available`, and a child is made `Visible`, then the parent is system set to `Visible` to accommodate the change. However, if a parent is `Visible` and a child is changed to `Not Visible`, then the parent is not modified since its current state already accommodates the setting for the child.

- **Toolbar Button** displays the toolbar button icon that represents the action.
- **Toolbar Group** displays the name of the toolbar that the button appears on. For information on enabling toolbars, see "ViewSet Toolbars" on page 95.
- **Action Accelerator** displays the accelerator keystrokes that perform the action. For more information on using accelerator keys, see "Quick Access Keys" on page 31.
- **Action Menu Location** displays the command path for the action as it appears in the menu bar.

TIP You can reorder, sort, and show and hide columns in the **Customize <Name> ViewSet** dialog box.

ViewSet Toolbars

You can configure if toolbars are visible or hidden in the ViewSet.

TIP You can also configure the location of toolbars in the ViewSet.

To customize ViewSet toolbars in the GUI

1. From the **Customize <name> ViewSet** dialog box, click the **Toolbars** tab. The **Toolbars** panel displays.
2. Make your selection to determine if a toolbar appears in the ViewSet. The following columns are available:
   - **Toolbar Group** displays the name of the toolbar in the ViewSet.
   - **Visible** specifies if the toolbar appears in the ViewSet. To display the toolbar in the ViewSet, enable the option. To ensure the toolbar is not in the ViewSet, clear the selection.

     To appear in the ViewSet, a toolbar must contain at least one button. For information on including actions and their buttons, see "ViewSet Actions (Menus)" on page 93.

     TIP To include all toolbars in the ViewSet, right-click and then select **Enable All Toolbars**. If you do not want any toolbars to appear in the ViewSet, right-click and then select **Clear All Toolbars**.

   - **Preview** displays a visual preview of exactly how the toolbar appears in the ViewSet, including the icons for its buttons.

ViewSet Views (Docking Location)

You can configure where a view appears (its docking location) in the ViewSet.

NOTE

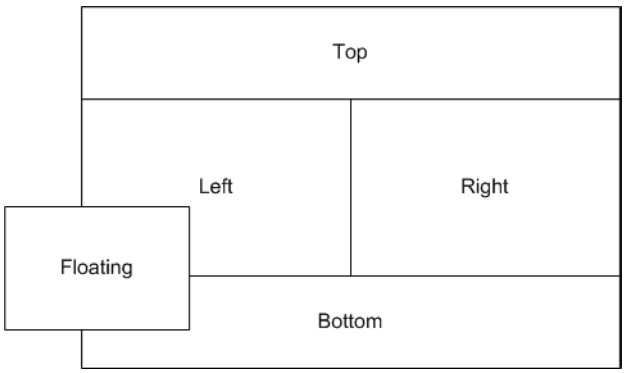
- After you choose a location for the view, it displays in that location the next time you display the view.
- All views launched from a floating view display as floating views.
- The **My Change Packages**, **My Reviews**, and **Change Packages** views are included in the **Change Packages** view.

To configure the docking location of a ViewSet view

1 From the **Customize <name> ViewSet** dialog box, click the **Views** tab. The **Views** panel displays.

2 Make your selection to determine the docking location of each view in the ViewSet. The following columns are available:

- **View** displays the name of the view. Views are grouped by component. For information on the views, consult the documentation for the relevant component.
- **Docking Location** specifies where the view appears in the ViewSet. The available options are:
  - `Left` displays the view in the left location.
  - `Right` displays the view in the right location.
  - `Top` displays the view in the top location.
  - `Bottom` displays the view in the bottom location.
  - `Floating` displays the view as a floating window.



Because views are tabbed, you can specify the same location for several views.

If no views are specified to appear in a particular location, the other views expand to fill the space in that location of the client window. For example, if no views are specified for the bottom location, views in the left and right locations expand down to fill that space.

ViewSet Attributes

Depending on settings configured by your administrator, you can edit the attributes of a ViewSet.

To configure attributes of a ViewSet

1 From the **Customize <name> ViewSet** dialog box, click the **Attributes** tab. The **Attributes** panel displays.

2 Modify the following attributes as desired:

- **Name** specifies a name for the ViewSet. ViewSet names are not required to be unique. MKS Integrity tracks the ViewSet independently of the name you assign it.
- **Description** specifies an optional description of the ViewSet. If the ViewSet is intended for other users, enter a description for the ViewSet to inform users why and how they should use the ViewSet.
- **File** displays the location and name of the ViewSet source file.

If you are an administrator using the MKS Integrity Administration Client, the following additional selections are available:

- **Usage**
  - **Optional** specifies that the ViewSet is optional to users. Users who have permission to import the ViewSet may do so at their discretion, but are not required to do so. When importing ViewSets, users can see if a change to this ViewSet is made and then can choose to import the updated ViewSet.
  - **Mandatory** specifies that the ViewSet is mandatory to users. Users do not have a choice on if the ViewSet is imported. Instead, the ViewSet is automatically downloaded and installed for the user when the MKS Integrity Client connects to the MKS Integrity Administration Client. For more information, see the *MKS Integrity Server 2009 Administration Guide*.

Importing a ViewSet

Depending on your work environment, your administrator may be responsible for creating ViewSets for specific roles in your organization. You can import existing ViewSets that reside on the MKS Integrity Server you are currently connected to.

> **NOTE** If your administrator configures a ViewSet so that it is no longer mandatory, you must first delete the mandatory ViewSet before you are able to import the new non-mandatory version.

By default, the MKS Integrity Server includes the following role-based ViewSets that may be useful in your organization:

- **Configuration Manager**

  ViewSet for performing advanced software configuration functions. This ViewSet includes views and actions for projects, Sandboxes, members, change packages, items, queries, and time entries.

- **Release Manager**

  ViewSet for managing deployment. This ViewSet includes views and actions for change packages, items, queries, and staging and deploy.

- **Deploy Administrator**

  ViewSet for staging and deploy administrators. This ViewSet includes views and actions for projects, and for staging and deploy.

- **Developer**

  ViewSet for software developers. This ViewSet includes views and actions for projects, Sandboxes, members, change packages, items, queries, and time entries.

- **Integrity User**

  ViewSet for creating, updating, and monitoring items. This ViewSet includes views and actions for change packages, items, queries, charts, reports, and dashboards.

- **IBM i Developer**

  ViewSet for reviewing System i source changes. This ViewSet includes views and limited actions for projects, members, change packages, items, and queries. For more information on working with Implementer and source management, see the *MKS Implementer 2010 User Guide*.

To import a ViewSet in the GUI

3 Select **ViewSet > Import**. The **Select ViewSets to Import** dialog box displays.

The **Select ViewSets to Import** dialog box displays the following information:

- **Imported** displays the following information the ViewSet:
  - `Out of Date` indicates that the version of the ViewSet in your MKS Integrity Client is older than the one available on the MKS Integrity Server. This indicates that you need to import the ViewSet again to use the updated functionality.
  - a check mark icon indicates that the ViewSet has been imported by your MKS Integrity Client and that the version in your client is the same or newer than the one available on the MKS Integrity Server.
  - **Name** displays the ViewSet name.
  - **Description** displays a description of the ViewSet, if one was provided.

- **Creator** displays the name of the user who created the ViewSet.
- **Modified Date** displays the date the ViewSet was last modified on the MKS Integrity Server. That means that the ViewSet may a modified date on the server newer than the date you last imported it. Furthermore, this date is not affected by customizations you make to the ViewSet.

4 Select the ViewSets you want to import. You can use SHIFT+click or CTRL+click to select multiple ViewSets.

> **NOTE** You cannot import the selected ViewSet if it is already open. In addition, if a definition for the ViewSet you are importing already exists, you are prompted to overwrite the existing ViewSet.

5 To perform the import, click **OK**. The ViewSets are imported and then opened for you in the MKS Integrity Client.

Opening a ViewSet

Opening a ViewSet allows you to work with a saved configuration of views and actions. When you open a ViewSet, it displays the same state and configuration from when it was previously closed or backed up.

NOTE

- Opening the same ViewSet twice does not display another instance of the ViewSet. Instead, the focus shifts to the open ViewSet.
- Be aware of how many ViewSets you have open. Too many open ViewSets may affect the MKS Integrity Client's performance.

To open a ViewSet in the GUI

1. Select **ViewSet > Open**. The **Open ViewSet** dialog box displays.
2. Select the ViewSet you want to open. If one was provided, a description of the ViewSet displays under the **Description** column.

TIP You can also open a single ViewSet by double-clicking it.

3. Click **OK**. The ViewSet displays in the MKS Window.

NOTE The active ViewSet is identified by a check mark in the **ViewSet > Switch to ViewSet** menu and as the depressed toolbar button in the ViewSet toolbar.

Closing a ViewSet

If you no longer need to work with an open ViewSet, you can close it at any time. The state and configuration of the ViewSet is automatically saved when you close it.

NOTE If you close all ViewSets and shut down the MKS Integrity Client, you are prompted to open a ViewSet the next time you launch the MKS Integrity Client.

IMPORTANT ViewSets your administrator has configured as mandatory cannot be closed. If your administrator configures a ViewSet so that it is no longer mandatory, you must first delete the mandatory ViewSet before you are able to import the new non-mandatory version.

To close a ViewSet in the GUI

1. If necessary, switch to the ViewSet you want to close.
2. Select **ViewSet > Close**. The ViewSet closes.

TIP You can also close a ViewSet by right-clicking the ViewSet in the ViewSet toolbar and selecting **Close ViewSet**.

Deleting a ViewSet

You can delete ViewSets that you no longer use, to reduce the available ViewSets to a manageable number.

NOTE

- Deleting a ViewSet is irreversible.
- You can only delete one ViewSet at a time.
- ViewSets your administrator has configured as mandatory can be deleted, but are automatically imported the next time you start the MKS Integrity Client.
- If your administrator configures a ViewSet so that it is no longer mandatory, you must first delete the mandatory ViewSet before you are able to import the new non-mandatory version.

To delete a ViewSet in the GUI

1. Open or switch to the ViewSet you want to delete.
2. Select **ViewSet > Delete**. The **Delete ViewSet** confirmation dialog box displays.

   CAUTION You cannot undo a ViewSet deletion.

3. To confirm deletion, click **Yes**. The ViewSet is deleted and no longer appears in the ViewSets view.

Switching to a ViewSet

When you have multiple ViewSets open and need to perform tasks specific to one of the ViewSets, you can easily switch to the specified ViewSet.

> **NOTE** When you switch to another ViewSet, the state and configuration of the previous ViewSet is automatically saved.

To switch to a ViewSet in the GUI

Do one of the following:

- To switch to a specific ViewSet, select **ViewSet > Switch To > <ViewSet>**.
- To switch to the next open ViewSet, select **ViewSet > Next**.
- To switch to the previously active ViewSet, select **ViewSet > Previous**.
- Click a ViewSet in the ViewSet toolbar, if the toolbar displays.

The ViewSet displays in the MKS Window.

A check mark identifies the active ViewSet in the **ViewSet > Switch To** menu.

Restoring a ViewSet

You can undo any changes made to a ViewSet since the last backup by restoring it to a previously backed up version.

To restore a ViewSet in the GUI

1. Select **ViewSet > Restore**. A dialog box prompts you to restore the active ViewSet to the backup date displayed. If the ViewSet you are restoring is one that was imported, an additional option displays that allows you to restore the ViewSet to its original configuration.
2. If necessary, select the configuration that you want to restore the ViewSet to.
3. Click **OK**. The ViewSet restores itself to the backup copy.

Backing Up a ViewSet

Although the current state of a ViewSet is automatically saved when you switch or close ViewSets, or shut down the MKS Integrity Client, you can manually save the current state of a ViewSet by using the **Backup** command.

To back up a ViewSet in the GUI

1. Select **ViewSet > Backup**. If a backup of the ViewSet already exists, you are prompted to overwrite the backup.
2. Click **Yes**. A dialog box displays, informing you that the current state of the ViewSet is saved. If you make any changes to the ViewSet without saving it again, you can restore the ViewSet to this saved configuration using the **Restore ViewSet** command.
3. Click **OK**. The current state of the ViewSet is saved.

> **NOTE** Saving a ViewSet does not save the current selection in a view.

PART 5

Common MKS Integrity Operations

Filtering Data

To quickly find data whenever a selection is required, such as assigning a user to a user field or selecting a Sandbox to view, MKS Integrity provides a data filter for fields, lists, and views in the GUI and Web interface.

All instances of the data filter include a text filter that allows you to type a text string, becoming more specific as you type, for example: `Show users containing "james"`.

In some instances, the data filter includes attribute filters that allow you to narrow your search results by searching for specific attributes, for example, users that belong to a specific group.

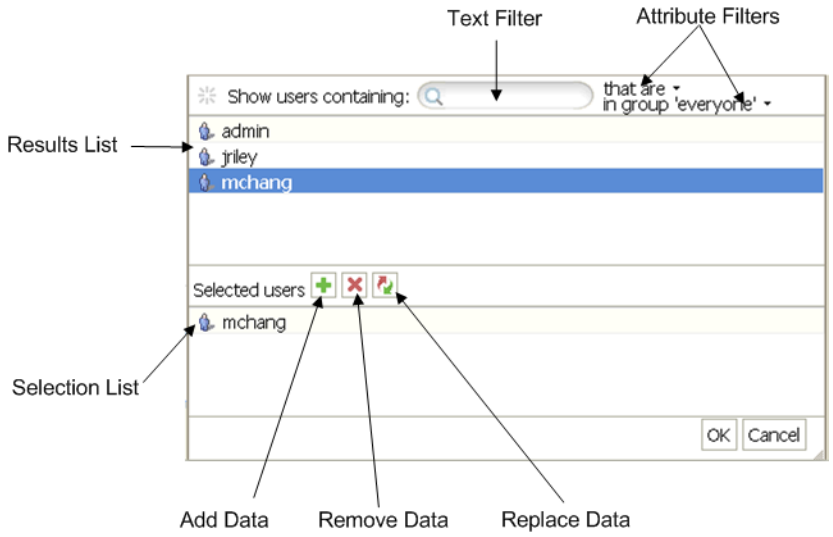
Using the data filter is analogous to constructing a sentence that tells MKS Integrity what you are looking for, for example: `Show projects containing "patch" that are active`.

In certain views, you can create your own filters. You can also pin filters so that they are always applied to the view.

Selected data and active filters persist each time you open and close the GUI or Web interface. For fields and lists, previously selected active data is bold in the results list and displays in the selection list. For views, selected data (active and inactive) displays in the results list.

Data Filter: User Interface Components

The following is an example of a data filter for a field in an item:



The data filter contains the following user interface components that allow you to filter data:

Component	Description
Text Filter	Searches for data by text.
Attribute Filters	Searches for data by attributes. The data filter includes common attribute filters, for example, `active`, `created by me`, and `modified on`.
Results List	The data returned by default or from a text search and/or attribute filters.
Add Data	adds the selected data in the Results List to the Selection List,
Remove Data	removes the selected data in the Selection List.

Component	Description
Replace Data	replaces the selected data in the Selection List with selected data in the Results List. **Note:** This option displays for multi-valued selections only.
Selection List	The data selected from the Results List for the field, list, or view.

Filtering Text

- Typically, results are sorted alphabetically regardless of case, for example, all results starting with e and E are grouped together. Exceptions to the rule include data that have a sort order specified by your administrator, for example, states or pick list items.
- The order that strings are typed is irrelevant. For example, typing `james riley` or `riley james` both return `James Riley`.
- When using the text filter in a view, such as the **Manage Queries** view, the text filter searches visible columns only. For example, if you search for queries created by `jriley` in the **Manage Queries** view and the **Created By** column is hidden, no results are returned.
- When the data filter appears, typing immediately shifts the focus to the text filter, returning results.

Filtering By Favorites

Process and workflow objects (queries, charts, reports, and dashboards) can be marked as *favorites*, allowing you to find them more easily in the data filter. You can search for favorites or non-favorites using the `my favorites` or `not my favorites` attribute filters.

Active and Inactive Values in Filters

- By default, the data filter displays active and previously selected inactive values; however, inactive values may not display in the results list. Active values are users, groups, workflow projects, and pick list items that are currently active in MKS Integrity. Inactive values represent obsolete values in MKS Integrity.
- If a multi-valued field contains one or more inactive values and you attempt to change any values in the field, you are prompted to leave the field unchanged or clear the field of all inactive values.

Blank Values in Filters

- In rules and multi-value fields, you can choose an unspecified or blank value by selecting `Unspecified` from the results list.
- In single-value fields where a value is already selected, choose an unspecified or blank value by selecting the current value and clicking ✖.

Users and Groups in Filters

- To choose your name for a user value, select your name or `Me` (the currently logged in user) from the results list.

> **TIP** Specifying `Me` can be useful in queries, charts, reports, and dashboards you intend to share with other users. For example, if you specify `Me` in a query that shows all Defects assigned to you, other users can use the same query to show their assigned Defects without modifying or copying the query.

- To choose MKS Integrity as a user value, select `System` from the results list. Specifying `System` is useful when you want to view or be notified about items that MKS Integrity has created or

modified, such as computed fields. For example, if you create an e-mail notification rule to send an e-mail when an item containing a computed field is updated, MKS Integrity sends an e-mail each time the computed field is calculated. Depending on how often the field is calculated, this can result in several e-mails. If you do not want to receive e-mails about items that have changed only because MKS Integrity re-calculated a computed field, you set the rule to not send e-mails when the item is modified by `System`.

- If your system is using LDAP authentication, all MKS Integrity user lists display full user names. If the attribute for full user names is missing on the LDAP server or if a user's full name entry is blank, the MKS Integrity Client interface displays only the user ID.
- Typing a user's full name or user name returns the same results, for example, `James Riley` and `jriley`.

Filter Shortcut Keys

The following shortcut keys perform data filter operations:

Shortcut Key(s)	Operation
ESC	Close the data filter and cancel any changes.
ENTER	Apply the selected data and close the data filter. For multi-value selection, the selected data is applied; however, the data filter remains open, allowing you to select additional values.
Up arrow	Move up in the results list.
down arrow	Move down in the results list.
CTRL +	Add the selected data to the results list.
CTRL -	Remove the selected data from the results list.
F12	Replace the selected data in the selection list with the selected data in the results list. **Note:** This applies to multi-value selection only.
CTRL A	Select all data in the results list.

To filter data

1 To filter data using a text search, type a string in the **Show <data name> containing** text filter. Data containing the string displays in the results list, becoming more specific as you type.

To filter data using attribute filters (if available) or to further restrict your text filter with attribute filters, click the **that are** attribute filter and select an attribute filter from the list.

To clear the text and attribute filters, restoring them to the default setting, select **that are > Reset**.

To remove an attribute filter, select **<filter name> > Remove**. For example, if the **active** attribute filter is enabled, select **active > Remove**.

To select multiple groups or to search for one or more groups using a text filter in the GUI, select **that are > in group > Other**.

- Type a name in the text filter. A list of groups displays in the results list, becoming more specific as you type.
- From the results list, select the group(s) you want to add to the selection list and click ✚.

  To remove groups from the selection list, select the groups and click ✖.

To replace all groups in the selection list with selected groups in the results list, click  .

- To add the group(s) in the selection list to the list of groups, click **OK**. To cancel the group selection and close the data filter, click **Cancel**. The group(s) display as an active attribute filter, for example, **in group 'Development'**.

To select multiple groups in the Web interface, select **that are > in group > ...**

Select multiple groups and click **OK**. The groups display as an active attribute filter, for example, **in group Development**.

2 If you are filtering view or selection dialog data, select the data in the results list and perform an operation specific to the view or dialog box, such as **Query > Edit** or **OK**.

If you are filtering list data, select the desired data in the results list and click **Add**.

If you are filtering field data, select the desired data in the results list and click .

NOTE

- If you are selecting data for a single-value field, selecting the data from the results list automatically adds the data to the selection list, closes the data filter, and adds the data as the field value.
- If the search returns one result in the results list for a single value selection, the data is automatically added to the selection list, requiring you to confirm the selection by clicking **OK** or **Add**.

To remove selected data in the selection list, click  .

If you are selecting data for multi-value field, you can replace all data in the selection list with selected data in the results list by clicking  .

3 To apply the data in the selection list as the field value(s), click **OK** or **Add**. To cancel the selection and close the data filter, click **Cancel**.

Working With Favorites

To easily find MKS Integrity objects, such as queries, that you created and frequently use, you configure these objects as *favorites*. In the relevant view, favorites are displayed with the `my favorites` filter. In the GUI and Web interface, favorites are annotated by  and non-favorite objects are annotated by  . By default, all objects created by you are configured as favorites.

Key Considerations

- Favorites cannot be shared between users or groups.
- To configure an object as a favorite, it does not have to be shared or an Admin object.
- A Quick Query is a non-configurable favorite.
- In the GUI, you can run favorite and non-favorite queries because the data filter allows you to select both types. In the Web interface, you can only run favorite queries because the data filter is not available for selecting queries. If you attempt to run a non-favorite query, you are prompted to configure the selected query as a favorite. Clicking **Yes** configures the query as a favorite and runs it.

To configure an object as a favorite or non-favorite

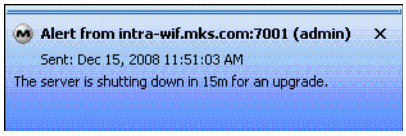
Interface	Procedure
GUI	With the object selected or active in the view, select **Add To Favorites** or **Remove From Favorites**.
Web	Do one of the following: ■ With the object selected or active in the view, select **Actions > Add** *Object Name* **To Favorites** or **Remove** *Object Name* **From Favorites**. ■ To make the object a non-favorite, click , or to make the object a favorite, click  .

Viewing MKS Integrity Server Alert Messages

CLI EQUIVALENT `im/si viewserveralert, im/si serveralerts`

Your administrator can send alert messages to all users currently logged in to the MKS Integrity Server. Alert messages allow your administrator to notify users about important information, such as an impending server upgrade in which the server will be shut down.

If you are working in the MKS Integrity Client GUI with the MKS system tray or Web interface for workflows and documents, alert messages appear in a window at the bottom of the interface.



The alert message displays who sent the message, the server it came from, when it was sent, and the message. Alert messages are plain text only and do not support rich content. If there is more than one message, the top of the alert message window indicates message **# of #**, with previous and next arrow buttons that cycle through the messages. To close the alert message window, click **X** or press ESC.

Users working in the CLI, Web interface for configuration management, and MKS Integrity Client GUI without the MKS system tray must manually check for alert messages from the CLI. For more information, see the *MKS Integrity 2009 CLI Reference Guide for Workflow and Documents* or *MKS Integrity 2009 CLI Reference Guide for Configuration Management*.

Key Considerations

- In the Web interface, the date displayed for an alert message is the server's date, time, and time zone. In the GUI and CLI, the date displayed for an alert message is the client's date, time, and time zone.
- In the MKS Integrity Client GUI with system tray, you can view alert messages for all of the servers you are currently connected to by right-clicking the system tray icon and selecting **Server Alerts**.
- To avoid manually checking alert messages from the command line, launch the alert messages dialog box from the command line by specifying `-g` or `--gui` and keep the dialog box open. The dialog box automatically refreshes to display new alert messages.

Operator Fields

You use operators when you create query filters or define e-mail notification rules in the GUI. The meaning of the operator depends on whether the field you are using in the filter or rule is single-valued (**Assigned User**) or multi-valued (**Stakeholders**).

Operator	Description
=	■ Equals (single-valued fields) ■ Contains (multi-valued fields) **Note:** This does not apply to text fields, where = mean exact match.
<>	■ Does not equal (single-valued fields) ■ Does not contain (multi-valued fields)
>	■ Greater than (single-valued fields) ■ Contains at least one element greater than (multi-valued fields)
>=	■ Greater than or equal (single-valued fields) ■ Contains at least one element greater than or equal to (multi-valued fields)
<	■ Less than (single-valued fields) ■ Contains at least one element less than (multi-valued fields)
<=	■ Less than or equal to (single-valued fields) ■ Contains at least one element less than or equal to (multi-valued fields)
!=	■ Does not equal (single-valued fields) ■ Not all elements are identical (multi-valued fields)
==	■ Equals (single-valued fields) ■ All elements match (multi-valued fields)

Filtering Members

For large software projects, use filters to display only the relevant members for your task. Filters allow you to view and manipulate a predefined subset of project members that are grouped according to their properties.

In the GUI, filters appear in the **Filter** list located on the local toolbar in the **Project** and **Sandbox** views. The software configuration management Web interface provides a reduced set of filters related to managing project members. The Web filters appear in the **Filter** list located on the toolbar.

You can select from the following filters:

Filter	Description
All Members	Shows all members of the current project or Sandbox.
Sparse Sandbox Contents (GUI only)	Shows only existing working files and deferred operations in a sparse Sandbox. This filter displays only if you have a sparse Sandbox open. A sparse Sandbox is a Sandbox that does not retain working files when a member is checked in.
Any Member Deltas (GUI only)	Shows only members that have working file changes or are out of sync with the member revisions in the project.
Modified Working Files (GUI only)	Shows only members with a working file that has been modified.
Out of Sync Members (GUI only)	Shows only members where the Sandbox revision is not the same as the member revision in the corresponding project.
Out of Scope Members (GUI only)	Shows only members that are outside of the scope definition of the Sandbox (if the Sandbox is a Scoped Sandbox). Specifying a Sandbox scope allows you to define what project members are included in a Sandbox, transferring specific members from the MKS Integrity Server to the Sandbox directory when the Sandbox is created and controlling what members display in the Sandbox view.
New Revision Available (GUI only)	Shows only those members where a new revision is available. If you apply the **New Revision Available** filter in a variant Sandbox, the filter returns only new revisions available in the variant Sandbox. It does not return new revisions from the master project.
Working File Size Deltas (GUI only)	Shows only members with changes in the size (bytes) of the working file.
Missing Working Files (GUI only)	Shows only those members with missing working files.
Existing Working Files (GUI only)	Shows only members with existing working files.
New Members (GUI only)	Shows only members that are newly added to the project and that have not yet been modified.
Working File on Branch (GUI only)	Shows only members where the working file is on a branch from a given development path that is not the main development path.
Unresolved Merges (GUI only)	Shows only members affected by unresolved merges.
Work in Progress (GUI only)	Shows only members that are considered work in progress. Combines the **Deferred Items**, **Members Locked By Me**, and **Modified Working Files** filters.
Locked Members	Shows only members locked by any user.
Members Locked By Me	Shows only members locked by you.
Frozen Members	Shows only frozen members. Changes to frozen members are not included as part of the member information in the project.
Members with Attribute	Shows only members with a particular attribute. If you choose this filter, MKS Integrity prompts you for the target attribute and value. In the GUI, enter the target attribute name in the **Attribute** field and the value for that attribute in the **Value** field, then click **OK**. In the Web interface, under **Specify a Member Attribute**, enter the attribute name in the field, then click **OK**. Enter the target attribute name in the **Attribute** field and the value for that attribute in the **Value** field, then click **OK**.
Members at Label	Shows only members that have the specified label assigned at the member revision. If you choose this filter, MKS Integrity prompts you for the target label. Enter the label name, then click **OK**.

Filter	Description
Members with Label	Shows only members with the specified label somewhere in their member history. If you choose this filter, MKS Integrity prompts you for the target label. Enter the label name, then click **OK**.
Members at State	Shows only member revisions that have been assigned a specific promotion state. If you choose this filter, MKS Integrity prompts you to identify the target state. For more information on promotion states, contact your administrator. Enter a state, then click **OK**.
Members with Name (GUI only)	Shows only members with the specified name. If you choose this filter, MKS Integrity prompts you to identify the target name. Enter a name, including the file extension, in the **Name** field (for example, `utility.dll`), then click **OK**.
Members on Branch	Shows only members that are off the main line of development.
Pending Operations (GUI only)	Shows any members in your Sandbox that are associated with a pending operation.
Members With Rule (GUI only)	Shows any members that have a member rule.
Member Archive Shared	Shows any members that share another member's archive. This filter displays only if you are using the database repository.
Deferred Operations (GUI only)	Shows any members in your Sandbox that are associated with a deferred operation, such as a deferred add, drop, checkin, move, or rename.

NOTE The list of built-in filters only displays if a **Project** or **Sandbox** view is active. You must expand your project (including subprojects) or your Sandbox (including sub Sandboxes) to view the filtered members.

By selecting the option for **Hide Empty Sandboxes** or **Hide Empty Projects**, you can remove any Sandboxes or projects that do not contain members matching the current filter. Directories that do not contain members are also removed. Selecting the **Hide Empty Sandboxes** or **Hide Empty Projects** filters causes MKS Integrity to search each subproject recursively for members matching the current filter and is therefore a client resource intensive operation. If you have a complex project with numerous members, you may want to limit your use of this filtering option.

Once a filter is applied to a project, operations performed on all project members apply only to those members shown as a result of the filter. For example, if you apply the filter for **Members at State** and then perform a **Member > Lock** operation for that project, the lock operation applies only to those members shown by the **Members at State** filter.

Filters for the **Project History** and **Member History** views are also available.

Error Codes

Errors displayed in the GUI, Web, CLI, API, and logs may contain an error code. The error code is of the form MKS000000, for example MKS004364. Use the error code to obtain more information on the error from the MKS Customer Community (or contact MKS Customer Care). Information may include the cause of the error, its resolution, or a workaround. If multiple errors occurred from the action, then multiple error codes are displayed.

Entering Project Paths

When you enter an MKS Integrity configuration management project in a **Project** field, you can specify the project path and name using a flat string or a keyword-based string.

When you specify a project path and name using a flat string, there are limitations and potential ambiguities. When you specify a project path and name using a keyword-based string, you can clearly specify the correct project, even it exists in more than one configuration. Using a keyword-string enables you to navigate into the configuration tree, starting with a registered project, following the project hierarchy into subprojects, and optionally jumping into the desired variant or build hierarchy as soon as it is available in the configuration path.

> **NOTE** There are limitations to the types of jumps you can make to subprojects with different configurations. For more information, see "Rules for Jumps" on page 119.

You can use the following keywords to specify a project path and name:

- `#` to specify a project or subproject in a well-formed project tree
- `#n` to specify a normal project
- `#p` to specify a top-level project that does not end with `project.pj`
- `#s` to specify a subproject that does not end with `project.pj`
- `#d` to specify the development path name
- `#b` to specify the number, label, or symbolic of the project revision

> **NOTE**
> - The order of the keywords is important. Keywords are processed from left to right to build the project specification.
> - If you need to specify a `#` or `=` symbol in a keyword value, specify the symbol twice (`##` or `==`).
> - If you are specifying a variant subproject, you must specify its path starting at the root of the variant project (the project through which the development path was created).

For example, if you had the following project setup:

```
/projects/aurora/project.pj  (project)
          shared_code/project.pj  (shared subproject)
                    source_code/project.pj  (subproject)
                              colocated.pj  (co-located project)

/projects/libra/project.pj  (project)
          source_code/project.pj  (subproject)
                    colocated.pj  (co-located project)

/project/libra/project.pj  (shared subproject)
          source_code/project2.pj  (subproject)
                    colocated.pj  (co-located project)
```

where subproject `shared_code/project.pj` is shared with `/projects/libra/project.pj`, and where subproject `source_code/project.pj` contains co-located subprojects `project.pj` and `project2.pj`, which both share subproject `colocated.pj`.

You could use a keyword-based string to point to the three different configurations of the same project:

```
#/projects/aurora#shared_code/source_code/project.pj#s=colocated.pj
```

```
#/projects/libra#source_code/project.pj#s=colocated.pj
#/projects/libra#s=source_code/project2.pj#s=colocated.pj
```

For more details on using a keyword-based string, see the options page of the *MKS Integrity 2009 CLI Reference Guide for Configuration Management*.

Rules for Jumps

When jumping to a specific configuration in a project path, the following rules apply:

- You cannot jump anywhere from a build project.
- You can jump from a normal project to a variant only if it is the root of the variant (the project through which the development path was created).
- You cannot jump to a variant if it differs from the closest variant higher in the project hierarchy (if there is a higher variant). When no subprojects are configured as variants in the hierarchy, the closest variant is the variant of the top-level project. When at least one subproject in the hierarchy is configured as a variant, the closest variant is the variant of the lowest configured subproject. This does not include the variant of the subproject on which the jump is specified, if it is currently configured as a variant.

The last two rules are verified based on the type of the parent project.

> **NOTE** You can always jump to the current configuration of a subproject, even if it violates the rules listed above.

Example: Jumping to Variants

If you had the following project setup:

```
/projects/aurora/source_code/savings_tool/project.pj
```

where `source_code` is a subproject currently configured as `beta_variant` and `savings_tool` is a shared subproject currently configured as normal. The following jump would be allowed:

```
#/projects/aurora#source_code/savings_tool#d=beta_variant
```

The following jump would not be allowed:

```
#/projects/aurora#source_code/savings_tool#d=prod_variant
```

You can specify a jump to `beta_variant` from the subproject `savings_tool` because it is the same as the variant for `source_code`, and because as a shared subproject it is accepted as the local variant root (the configuration management project through which the development path was created). You cannot jump to `prod_variant` because it is different than the variant of `source_code`.

Display Patterns

A *display pattern* allows you to assign a format to numeric values, for example, to a computed expression used in a chart. Display patterns quantify numeric values, for example, a display pattern for currency may display as `$#,###`. The MKS Integrity Client automatically detects your locale displaying the relevant symbol, decimal, and grouping separator in the **Display Pattern** list in addition to other sample display patterns.

Key Considerations

- For items, MKS Integrity stores the integer field as an unformatted numeric value in the database. Query filters, rules, and trigger assignments display the unformatted, localized version of the numeric field value.
- If the display pattern is invalid, an error message displays. If no display pattern is specified, the field displays the value in a localized form.

To specify a display pattern

Where applicable to a numeric field, select a display pattern from the **Display Pattern** list and modify it, or create one by combining a currency symbol, text that represents a measurement, and/or one or more of the following characters:

Symbol	Description
0	Displays as zero in output. For example, display pattern `000.00` displays input value `12.14` as `012.14` in numeric field.
#	Displays as digit in output. If digit is zero and it is leading or trailing input value, it is left out of value displayed in numeric field. For example, display pattern `#0.00` displays input value `0.126` as `0.13` in numeric field.
.	Locale specific decimal separator. For example, display pattern `#,###.00` displays input value `12345.123` as `12,345.12` in numeric field.
-	Minus sign. For example, display pattern `-####` displays input value `1234` as `-1234` in numeric field.
,	Locale specific grouping separator. For example, display pattern `$#,###` displays input value `12345.123` as `$12,345` in numeric field of U.S. locale and `$12.345` in numeric field of German locale.
E	Scientific notation. For example, display pattern `0.###E0` displays input value `123456` as `1.235E5` in numeric field.
;	Separates positive and negative patterns. For example, display pattern `#,###;(#,###)` displays input value `-12345` as `(12,345)` in numeric field.
%	Multiplies by 100 and displays as percentage. For example, display pattern `"#.#'%'"` displays input value `0.06` as `6%` in numeric field.
'	Escapes special characters. To create a single quote, use two single quotes together (').

Defining Rules

As administrator, you construct and manage rules that govern how items move through your development cycle. The logic that governs these rules is defined in a number of places within MKS Integrity:

- user notification rules
- group notification rules
- field editability and relevance
- rule-based event triggers
- rule-based field relationships.

Rule Format

A *rule* is a statement that sets a specified outcome when certain conditions are met. In the GUI, rules are composed of nodes and conditions. *Nodes* are the logical connectors that describe the relationship between two statements (or conditions). *Conditions* are a statement of the requirements that must be satisfied, and can involve either user or field values.

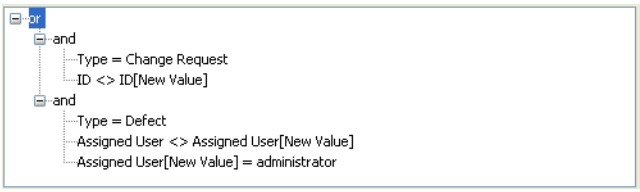
The logical **`and`** node indicates that all of the specified conditions must be true to meet the requirements of the rule.

The logical **`or`** node indicates that one or more of the specified conditions must be true to meet the requirements of the rule.

The specific placement of the logical node is important to determining how it affects the meaning of the rule.

Example

The following example shows an e-mail notification rule that asks MKS Integrity to notify the user (`administrator`) each time a new change request is created or whenever a defect is assigned to the user. With the `or` node, the notification occurs whenever *either* of the events occurs.



The use of `[New Value]` in a rule condition indicates a change in a field value. One part of the condition indicates the field value before the change, and the other part indicates the value after the change. For example, in the rule above, `Assigned User <> Assigned User[New Value]` indicates that the new value of the Assigned User field is not equal to what it was before the item was saved. In other words, the value of the Assigned User field was changed during the item edit.

Working With Conditions

When working with conditions, the meaning of the operator depends on whether the field you are using in the rule is single or multi valued.

Valid Operators

Operator	Description
=	■ Equals (single-valued fields) ■ Contains (multi-valued fields)
<>	■ Does not equal (single-valued fields) ■ Does not contain (multi-valued fields)
>	■ Greater than (single-valued fields) ■ Contains at least one element greater than (multi-valued fields)
>=	■ Greater than or equal (single-valued fields) ■ Contains at least one element greater than or equal to (multi-valued fields)
<	■ Less than (single-valued fields) ■ Contains at least one element less than (multi-valued fields)
<=	■ Less than or equal to (single-valued fields) ■ Contains at least one element less than or equal to (multi-valued fields)
!=	■ Does not equal (single-valued fields) ■ Not all elements are identical (multi-valued fields)
==	■ Equals (single-valued fields) ■ All elements match (multi-valued fields)

To create a condition involving field values

1 Open the dialog box or panel where you are defining the rule.

2 Select **And** or **Or**, depending on the type of logical connector you want to use between conditions.

> **NOTE** If you are creating a rule with only one condition, you do not need to select **And** or **Or**.

Swap replaces the selected node with the opposite node. For example, swapping an `Or` node replaces it with an `And` node.

Remove deletes the selected node.

3 Under **Condition**, select one of the following:

- `Compare the value of a field with a constant`
- `Compare the value of a field with the value of another field`

4 Select the operator from the list.

5 Specify fields and field values for the condition.

> **NOTE** You cannot specify MKS Integrity project and attachment fields in conditions.

a) To choose a value for a date field, click **Change**. The **Specify Date or Time** dialog box displays.

b) Do one of the following:

- Select a date from the calendar. If the date field is configured to display the time and you want to include it, select the **Show time** option (if not already enabled) and include a time from the calendar. The **Show time** option is enabled by default.
- Select **now** to specify the current date and time. This option displays only if the date field is configured to display the date and time.

- Select **today** to specify the current date and a time of 00:00:00 (midnight). This option can be specified for a date field or a date field configured to display the date and time.
- Select **none** to specify an empty value for the date field.

6 For each field, specify an **Existing Value** or a **New Value**.

7 When you are finished constructing the condition, click **Add**. The condition displays under the selected node.

> **NOTE** You cannot specify configuration management project and attachment fields in conditions.

To create a condition involving user groups

8 Under **Condition**, select `Check the group membership of the user performing the action.`

9 Select **is** or **is not** from the list.

10 Select a group name from the **a member of** list.

11 When you are finished constructing the condition, click **Add**. The condition displays under the selected node.

To create a condition involving type properties

> **NOTE** This condition is commonly defined to view solution-specific item types. It can also be used in rules (except query rules) and expanded in report templates. To learn more about solution options and licensing, refer to the applicable solution guide.

1 Under **Condition**, select `Check a property associated with the item's type.`

2 Select a type property name from the filtered list.

3 Select the operator from the list.

4 Enter a value for the property in the subsequent field.

5 When you are finished constructing the condition, click **Add**. The condition displays under the selected node.

To create a pre-condition associated with a document

1 Under **Condition**, select `Check a pre-condition associated with a document.`

2 Select an item type from the filtered list of document item types.

3 When you are finished constructing the condition, click **Add**. The document model condition displays in the text box.

There is a full set of use cases associated with the creation of pre-conditions, rules, and triggers available in the ALM section of the MKS Customer Community Knowledge Base found at `http://www.mks.com/community`.

To replace an existing condition with a new one

1 Select the existing condition.

2 Construct the condition as described earlier.

3 Click **Replace**. A confirmation dialog box displays.

4 To confirm the replacement, click **Yes**.

Selecting Rules

When working with rules, you can copy them from other existing items, such as users, groups, fields, or triggers.

The **Rule Selection** dialog box allows you to select an item to copy an existing rule from.

To select a rule in the GUI

> **NOTE** The **Rule Selection** dialog box for **Users** and **Groups** includes options that change the item type that rules are copied for. This allows you to copy group rules to a user or copy user rules to a group.

1. In the **Objects with Rules** list of the **Rule Selection** dialog box, select the item you want to copy conditions from. If the user has conditions, that user displays in the **Preview** area.
2. Click **OK**. The rule displays in the panel.
3. Repeat as necessary to add more rules.

Customizing Columns

Default columns are shipped with MKS Integrity. You can customize columns in views, in relationship fields, and in the Propagate Traces wizard. You customize columns by doing the following: adding, removing, repositioning, changing the sort order, and resizing.

For the Items view, Relationships view, Document view (GUI only), and relationship fields in the Item Details view, any changes you make to columns are saved with the current ViewSet or web application.

For the Items view, Relationships view, Document view (GUI only), and Test Result Editor, you can save your changes to columns as the new default. If a new default is saved for the Items view, the changes are saved as part of the query definition.

In the GUI, the default is used for all Items views in the current ViewSet that use the same query. If a new default is saved for the Document view, the default is used for all Document views in the current ViewSet that use the same root item type.

You can only save changes to the Items view as the new default if you have write access to the query. If you do not have write access to the query, you can copy the query to save your column configuration as the default.

NOTE If another user changes the default columns in the query definition, the changes will show up in your Items view if you haven't customized your columns.

Operation	Procedure
To add a column	In the GUI, right-click a column heading and select **Configure Columns**. In the Web interface, click the columns button on the upper right corner of the view pane and select **Configure Columns**. In the **Columns** dialog box, click the add button and select the column to add.
To remove a column	In the GUI, right-click a column heading and select **Configure Columns**. In the Web interface, click the columns button on the upper right corner of the view pane and select **Configure Columns**. In the **Columns** dialog box, select the column you want to remove and click the remove button. **Note:** In the GUI, you can also right-click the column you want to remove and select **Hide**. In the Web interface, you can also deselect the column(s) you want to remove.
To reposition a column	In the GUI, right-click a column heading and select **Configure Columns**. In the Web interface, click the columns button on the upper right corner of the view pane and select **Configure Columns**. In the **Columns** dialog box, select the column you want to reposition and click the up or down button. **Note:** You can also click the heading of the column you want to reposition and drag it to its new location.
To change the sort order of a column	Click the column heading to invert the sort order. Up arrow indicates that the column is sorted in descending order. Down arrow indicates that the column is sorted in ascending order. **Note:** In the GUI, you can also right-click the column heading and select **Sort > Ascending** or **Sort > Descending**.
To change the size of a column	Drag the right edge of the column heading.

Operation	Procedure
To save your changes as the default columns in the Items view, Relationships view, Document view, or Test Result Editor.	In the GUI, right-click a column heading. In the Web UI, click the Columns button on the upper right corner of the view pane. Select **Save As Default**.
To discard your changes and use the previous column configuration	In the GUI, right-click a column heading. In the Web UI, click the Columns button on the upper right corner of the view pane. Select **Reset To Default**.

Sorting Columns

Columns such as **Name**, **Type**, and **State** are sorted alphabetically, while columns such as **ID** are sorted numerically. The **Locked** column first sorts alphabetically by the locker's name (the user that has a lock on the member) and then it sorts numerically by the date of the lock timestamp. The delta column is sorted by the delta types.

Part 6

For Your Reference

MKS Integrity Icons

This is a reference for all the icons that appear in the MKS Integrity Client and MKS Integrity Administration Client. For information of how each icon relates to procedures, objects, and views, refer to the relevant guide.

> **NOTE** This does not describe toolbar buttons. For toolbar button descriptions, hold your cursor over a toolbar button to display a tooltip or view the toolbar button description in the **Customize ViewSet** dialog box.

Icons are organized as follows:

Common Icons

Icon	Description
	Object(s) loading. For example, members loading in a Project/Sandbox view, or items loading in an Items view.
	Unknown object. The object cannot be identified.
	Missing or unspecified image. This icon may display when an image is missing in an item presentation template or toolbar button.

MKS Integrity Server Icons

Icon	Description
	Connected to the MKS Integrity Server. You are logged in and have an active client session.
	Disconnected from the MKS Integrity Server. You have logged out and closed your client session.
	Offline from the MKS Integrity Server. The connection to the MKS Integrity Server has been dropped or the network connection is down.

MKS Integrity Administration Client Icons

Icon	Description
	Permission allowed.
	Permission denied.

Deploy Icons

Icon	Description
	Target accepting.
	Target disabled.
	Target not accepting.
	Target offline.
	Target online.
	Target out of sync.
	Target uninitialized.
	Unknown target status.

Workflow and Document Icons

Icon	Description
	Active user.
	Inactive or out of realm user.
	Active group.
	Inactive or out of realm group.
	Dynamic group.
	Project.
	Quick query.
	Named query.
	Time entry containing a note. Hold your cursor over the note icon to display contents of the note in a tooltip.
	Pending attachment to an item.
	Item containing relationships, attachments, time entries, or change packages in the GUI. For more information, click a tab containing this icon.

Icon	Description
	Forward relationship.
	Suspect forward relationship.
	Backward relationship.
	Suspect backward relationship.
	Cyclical relationship.
	Content is in the process of being saved. After content is saved, a new row displays after it. Rows are saved when a modification is made and you select a different context within the view. Blank rows are not saved.
	Active, editable content.
	No pinned filters in the view. Pinning a filter to a view allows you to save one or more defined filters as a query for easy re-use, or as filters that are applied to all queries or documents.
	Pinned filter in the view. The value indicates the number of filters pinned in the view.
	Disabled filter in the view. The value indicates the number of filters disabled in the view.
	During an item edit, a value you edited was overwritten by another user. To display options for changing the value, click the icon.
	During an item edit, a value was changed by another user. To view the change, click the icon.
	During an item edit, a value was changed by you. If the icon displays as a result of resolving a conflict, clicking the icon allows you to select a different value or displays detailed information about the changes made by the other user.
	A *favorite* MKS Integrity object (query, chart, report, or dashboard). Favorites are frequently used shared objects that can quickly be selected using the `my favorites` filter in the data filter. Clicking the icon in a **Manage** view configures it as a non-favorite object.
	A non-favorite MKS Integrity object (query, chart, report, or dashboard). Clicking the icon in a **Manage** view configures it as a favorite object.
	Deleted item. Refreshing the Items view removes this icon from the list of items.

Configuration Management Project Icons

For the purpose of brevity, only closed project icons () are described. Open project icons () are almost identical to closed icons.

Icon	Description
	Normal project or subproject.
	Former normal project.
	Shared normal project.

Icon	Description
	Pending add of normal subproject.
	Pending drop of a normal subproject.
	Pending configure of a normal subproject.
	Pending subproject due to a pending operation on a parent subproject.
	Variant project.
	Former variant project.
	Shared variant project.
	Build project.
	Former build project.
	Shared build project.
	Directory (not a subproject).

Sandbox Icons

For the purpose of brevity, only closed Sandbox icons () are described. Open Sandbox icons () are almost identical to closed icons.

Icon	Description
	Normal Sandbox or subsandbox.
	Former normal Sandbox.
	Shared normal Sandbox.
	Pending add of a normal subsandbox.
	Pending drop of a normal subsandbox.
	Pending configure of a normal subsandbox.
	Pending subsandbox due to pending operations on parent subsandbox.
	Variant Sandbox.
	Former variant Sandbox.

Icon	Description
	Shared variant Sandbox.
	Build Sandbox.
	Former build Sandbox.
	Shared build Sandbox.
	Directory (not a subsandbox).

Sandbox Member Icons

NOTE To display some of the following icons in a Sandbox, you may need to refresh the **Sandbox** view.

Icon	Description
	Member.
	Former member.
	Pending member.
	Shared member. Member shares another member's archive.
	Non-member.
	Member delta. Working revision does not match the member revision. Typically, this means a new revision is available.
	Working file.
	Working file delta. Working file has changed or no working file exists for the member.
	Writable working file. **Note:** This icon displays in the **Member History** view only.
	Read-only working file. **Note:** This icon displays in the **Member History** view only.
	Member archive.
	Exclusively locked member/revision. Current user has an exclusive lock, or current user has no lock and another user has an exclusive lock.
	Current user has a non-exclusive lock on the member and no other user has a lock of any sort.
	Current user has a non-exclusive lock on the member and another user has an additional non-exclusive lock on the member, but no user has an exclusive lock on the member revision (a check in will succeed if the user is the first to attempt it, otherwise a resync will be required first).

Icon	Description
	Current user has a non-exclusive lock on the member, but another user holds an exclusive lock (or this user holds an exclusive lock in a different context). A check in along the current member branch cannot succeed until the exclusive lock is released.
	Frozen member.
	Delta.
	Deferred member.
	Deferred add from archive member.
	Deferred checkin.
	Deferred move.
	Deferred rename.
	Deferred update revision.
	Member is a symbolic link file.
	Diff conflict.
	Diff file 1 conflict.
	Diff file 2 conflict.
	Diff file 3 conflict.
	Unresolved merge.

Test Management Icons

Icon	Description
	Test Verdicts.
	Passed Verdict.
	Failed Verdict.
	Other Verdict.
	Skipped Verdict.
	Has Attachments.

Icon	Description
	Has Related Items.
	Has Test Step Results.
	Verdict Type.

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