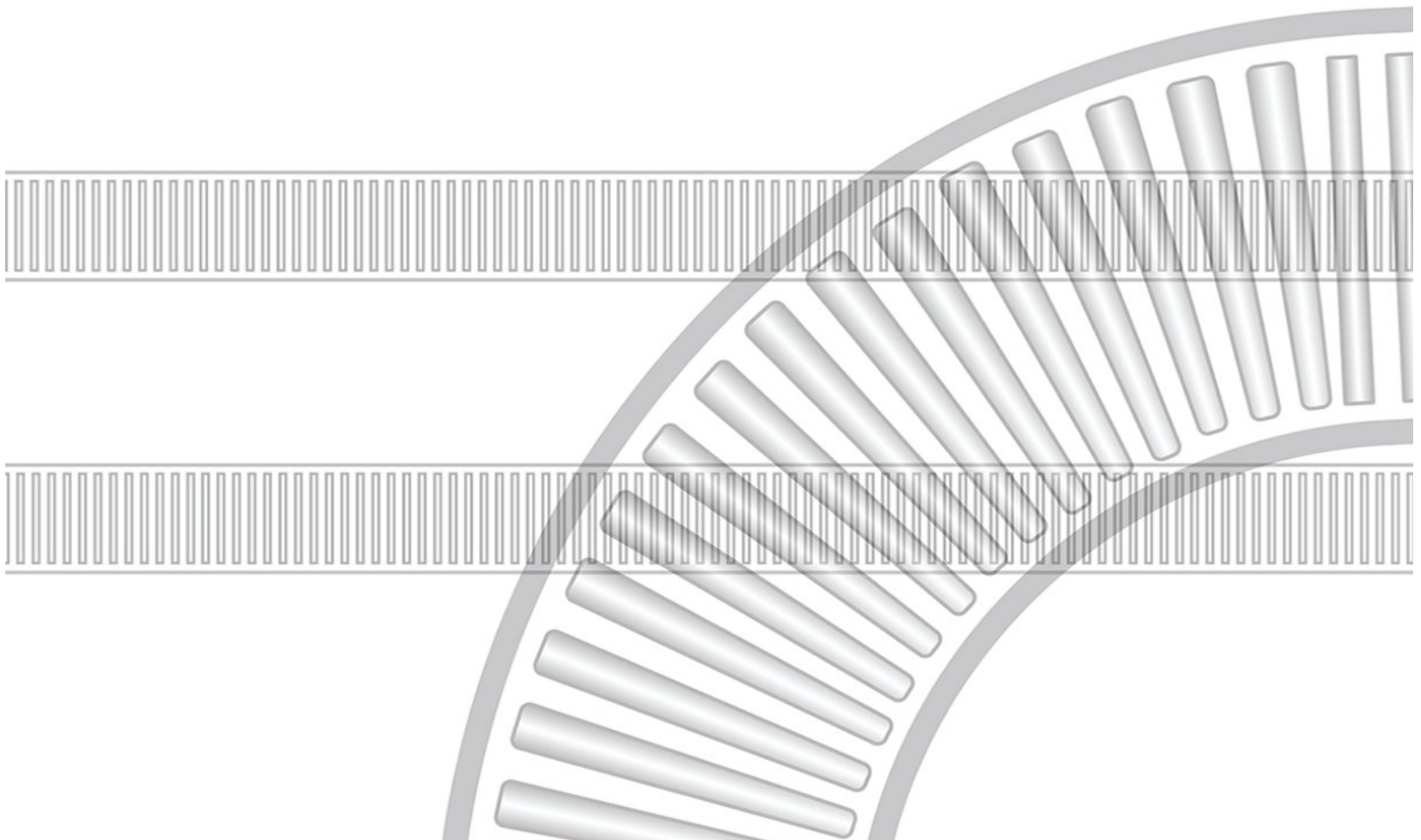




InControlWare® v2.01.22

Administration Guide

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About This Guide

1

1.1 Introduction

This document provides the information that is needed to customize InControlWare® systems. It describes:

- Command line switches that can be used to start InControlWare.
- How to configure security.
- How to configure project views.
- How to configure shifts and breaks.
- How to change component update rates.
- How to configure TraceView.

1.2 Documentation Conventions

Many typographical conventions are used to distinguish between the different kinds of information presented in software documents, as follows:

Convention	Description
Bold	Used to identify menu selections, toolbar selections, and section references.
<i>Italic</i>	In paragraph text, italics identify the titles of documents that are being referenced. When used in conjunction with the Code text described below, italics identify a variable that should be replaced by the user with an actual value.

Convention	Description
<code>monospace text</code>	Text that represents programming code.
<i>monospace italic text</i>	Variables in programming code.
CTRL+X	A combination of keystrokes that are pressed simultaneously.
Function Function	A path to a function or dialog box within an interface. For example, "Select File Open" indicates that you should select the Open function from the File menu.
() and	Parentheses enclose optional items in command syntax. The vertical bar separates syntax items in a list of choices. For example, any of the following four items can be entered in this syntax: persistPolicy (Never OnTimer OnUpdate NoMoreOftenThan)

1.2.1 Notes, Tips, and Important Information

The following callouts and icons are used to highlight information throughout this guide:



Note or Tip

A Note highlights related information or information that is tangential to the topic being discussed. A Tip highlights useful information that can be used to simplify the tasks that are being discussed.



Important

Important callouts are used to highlight information of great significance or value that the reader should be certain to know before proceeding.

Notes, Tips, and Important callouts are used to call attention to useful information and are not safety notices.

Getting Started

2

The InControlWare client is the user interface that runs on workstations throughout a facility. The following files are needed in order for the client to run properly:

File	Description
InControlWareClientInstall.msi	This file is a Windows® installer that places the InControlWareStartup.exe file on the workstation. It also creates a shortcut to the executable file on the desktop.
InControlWareClient.zip	This archive contains the binary files that are required by the InControlWare client. It resides on the IIS server.
ClientVersion.xml	This file identifies the current version of the CommandCenter.dll file. It resides on the IIS server.
InControlWareStartup.exe	This is the executable file that is used to start the InControlWare client.

When the InControlWareClientInstall.msi file is run, it installs the InControlWareStartup.exe file. It also places a shortcut to the executable file on the desktop. The shortcut contains the path to the executable as well as the –updateserver command line switch. The switch tells the executable where to find the InControlWareClient.zip and ClientVersion.xml files.

The first time InControlWare is started using the shortcut, it goes to the location on the IIS server that is identified by the `-updateserver` switch, extracts the binary files from the InControlWareClient.zip file, and places a copy of them in the local installation directory. On subsequent startups using the shortcut, InControlWareStartup.exe checks the ClientVersion.xml file for the version of the CommandCenter.dll file. If the version is the same as the one in the local installation directory, InControlWare starts using the existing binary files. If the version number has changed, InControlWare extracts the new binary files from InControlWareClient.zip and places the files in the local installation directory. It then uses the new binary files when it starts.

2.1 Installing the Client

The InControlWare client installer was provided by the Intelligrated project team. To install the client, complete the following steps:

1. Run InControlWareClientInstall.msi. The installer runs and installs the InControlWareStartup.exe file. A shortcut to that file is also created on the desktop.
2. Start the client by double-clicking on the shortcut. The rest of the InControlWare files will be installed.
3. Work with InControlWare normally or exit InControlWare.

2.2 Starting the Client

The InControlWare client can be started in two ways:

- By double clicking the InControlWare shortcut on the desktop.
- By starting InControlWare at a command prompt.

In either case, you can use command line switches to identify additional actions that should be taken by InControlWare before it starts.



2.2.1 Command Line Switches

The following command line switches can be used when InControlWare is started:

Table 2-1 InControlWare Command Line Switches

Switch	Description
-app XX	This switch is used to load a project view when InControlWare is started. The Default (CC) project view is loaded by default when this switch is not used. XX is the view name of a project view. View names for the standard views provided with InControlWare are CC (Command Center), LC (Launch Center), SC (Support Center), TS (Testing), VC (View Center), and SS (stART System). Additional view names will become available when custom views are created.
-updateserver <updateserver>	This switch is used to indicate that InControlWare should check the ClientVersion.xml file to see if the CommandCenter.dll version number has changed. The <updateserver> parameter identifies the root directory of the IIS server. The ClientVersion.xml file is located in the Intelligent subdirectory of the specified root.
-reload	This switch forces an update of the client.
-paneldump	This switch exports a list of all of the panels in a project view to a text file. The resulting file is named paneldescriptions.txt and can be found in the same directory as the InControlWare executable file.
-multiinstance	This switch starts another instance of the ICW client.

2.2.2 Selecting a Project View at Client Startup

You can specify which project view should be displayed when you start the InControlWare client. To do so, add the `-app` command line switch to either the Target in the shortcut or to the end of the statement in the command line prompt, as follows:

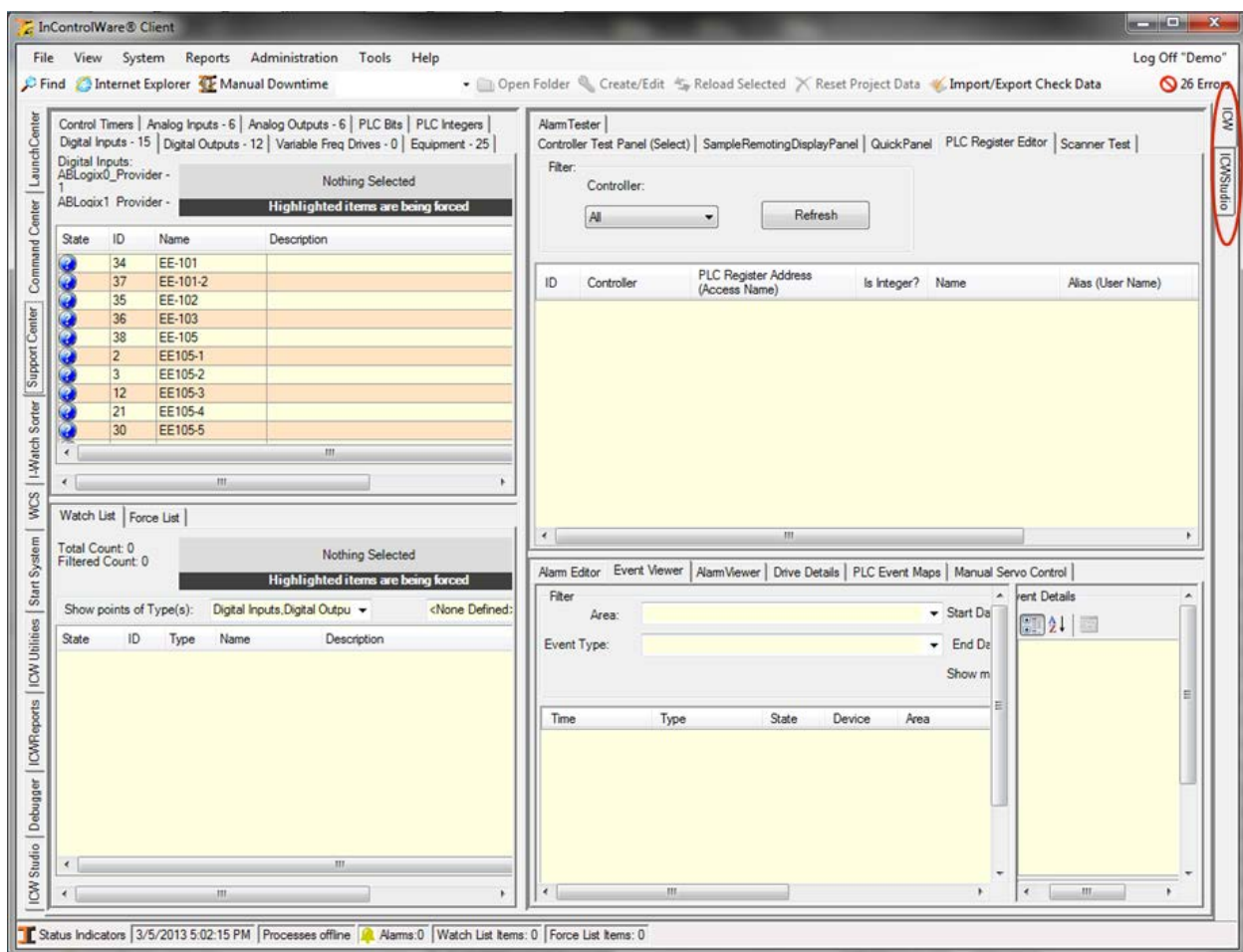
```
<installation path>\InControlWareStartup.exe -updateserver <updateserver> -app XX
```

where, XX is the view name of the project view. All project views with that view name are then evaluated by InControlWare to determine which of them will be loaded when the user logs on, as follows:

1. If a project view exists for the user that is logging in, it will be displayed.

2. If a project view does not exist for the user that is logging in, the project views for all of the groups that the user belongs to will be displayed.
3. If a project view does not exist for the user and there are no views in any of the groups to which the user belongs, the default user view will be displayed.
4. If no project view is found, an error message will appear and the user log on will not be accepted.

In some cases, several project views will be displayed. When this is the case, you can view the names of the project views along the right side of the user interface.



2.3 Logging On to InControlWare

You can log on to InControlWare in two ways:

- Log on using InControlWare's security mechanism.



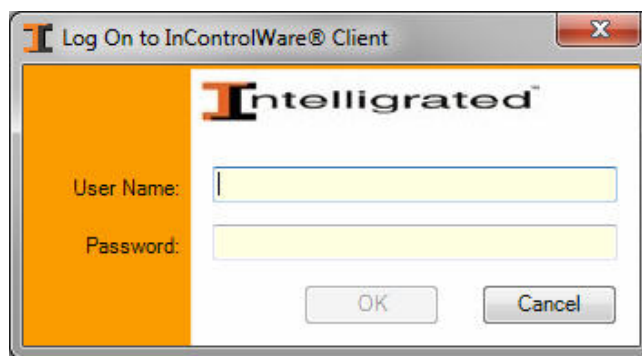
- Log on using enterprise authentication.

The way you choose to log on will depend on how your system is configured. For information about configuring security, refer to Chapter 3.

2.3.1 Logging on Using InControlWare's Security Mechanism

If your system uses InControlWare's security mechanism exclusively, the Log On dialog box will appear as follows:

Figure 2-1 Log On Dialog Box



To log in, enter your user name and password and select **OK**.

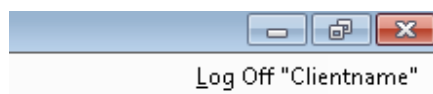


Note

The Log On dialog box might also appear if the security policy requires a log off after a period of inactivity at the station.

If your user name and password are accepted, the name will appear in the menu bar and the display will load. The loading process sets permissions and configures display features based on your user name.

Figure 2-2 User Name in Menu Bar



If the Log On dialog box is not displayed, a connection to the security database could not be established. This could be due to network problems or server error. Contact your supervisor or IT support staff to resolve the issue.

2.3.2 Logging on Using Active Directory Authentication

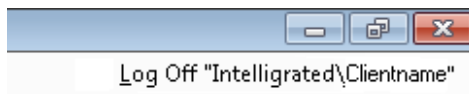
If your system uses Microsoft® Active Directory (AD) security, a Domain dropdown list will also appear in the Log On dialog box.

Figure 2-3 Log On Dialog Box with Domain Field



To log in, enter your user name and password and select a domain from the dropdown list. Select **OK** to enter your information. If the information is accepted, both the domain name and the user name will appear in the menu bar.

Figure 2-4 User Name and Domain Name in Menu Bar



Domains are managed by an authorized administrator at your location. If the Domain field is present but no domains are listed, there could be an issue with the connection to the database. Contact your supervisor or IT support staff to resolve the issue.

Security

3

In a DC or warehouse, many operators can share the same workstation. Each of these operators, however, might need to use the workstation for different tasks. They also might need to have different clearance levels depending on their roles and responsibilities. You can use the Security Administration window to create user accounts, groups, and permissions for all of the operators sharing the workstation. The panels, functions, and features in InControlWare will dynamically adjust based on the permissions that you assign.

The following sections describe how to perform security administration in InControlWare.

3.1 Authentication

InControlWare can be configured to use its own encrypted SQL server database for authentication or to use Windows enterprise authentication (i.e., your corporate network) with Active Directory. If Active Directory is used, operators log on to InControlWare using their Windows user name and password.



Note

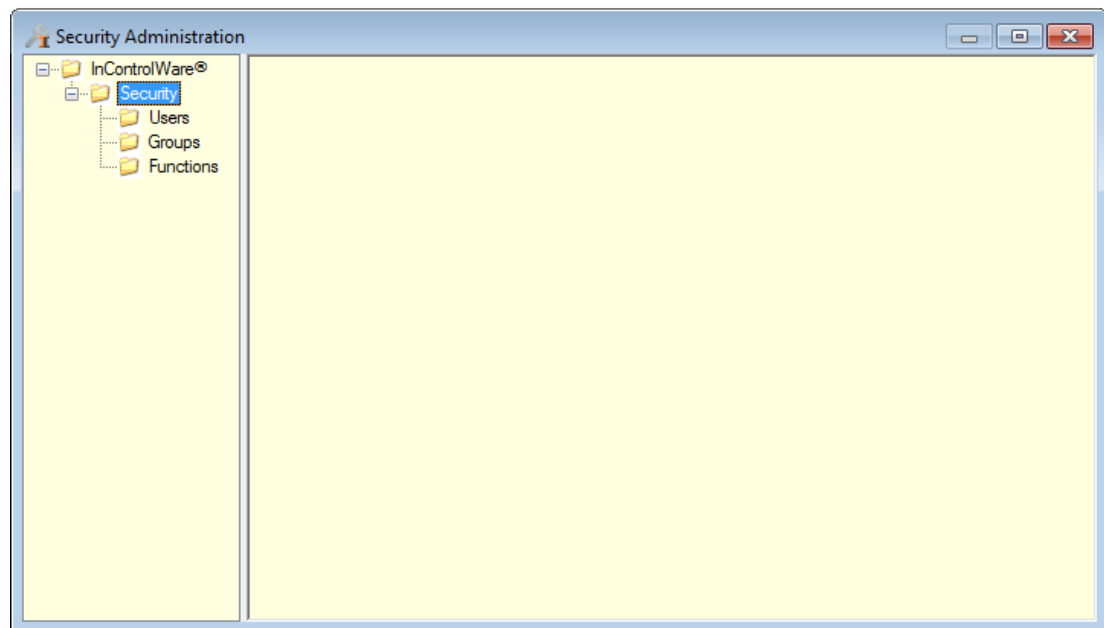
InControlWare can be configured to use both its internal security mechanism and enterprise authentication for commissioning purposes.

The following sections describe how to configure InControlWare's security mechanism. For information about configuring InControlWare for Active Directory, refer to Section 3.5.

1.1 The Security Administration Window

You'll use the Security Administration window to configure users, groups, and permissions for InControlWare. You must have an Operate, Maintenance, or Delete access level for the User Administration permission to perform the tasks described throughout the remainder of this chapter. For information about access levels, refer to Section 3.6.1.

Figure 3-1 Security Administration Window



The Security Administration window contains a tree view and a details panel. The tree view shows the three security elements that can be configured: users, groups, and functions (i.e., permissions). Selecting one of the elements displays a list of defined items of that type in the details pane to the right.

To configure security, you will need to:

1. Create a user for each person that will be accessing InControlWare.
2. Create groups that represent the different roles of the users.



3. Make users members of the appropriate groups.
4. Assign permissions to each group. The users in the group will be able to access the panels, functions, and features that are controlled by the assigned permissions.

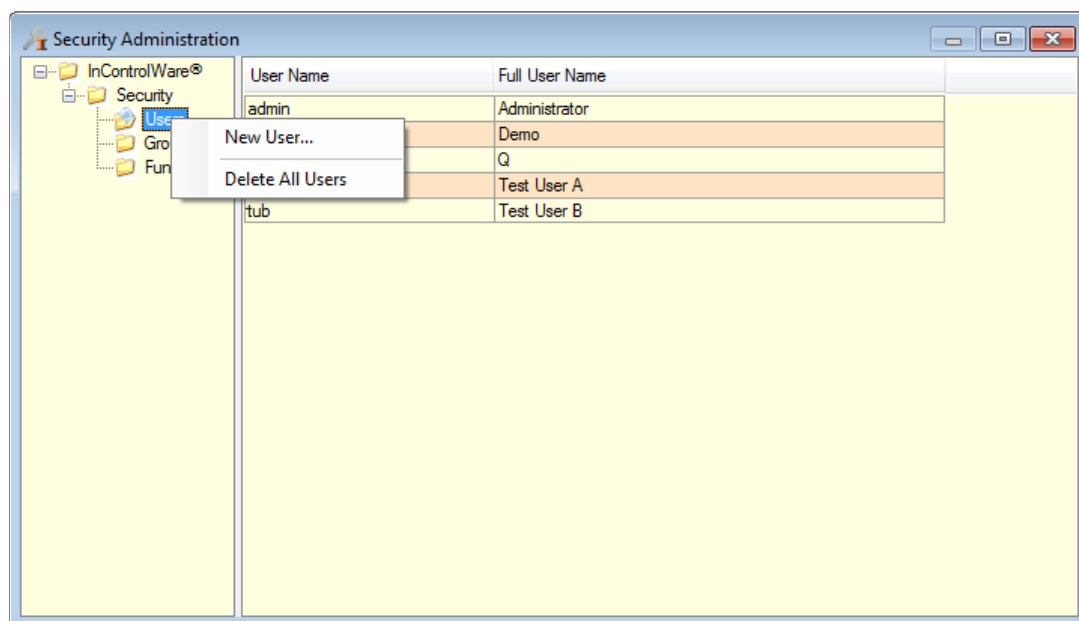
The following sections describe how to complete each of these tasks.

3.2 Working with Users

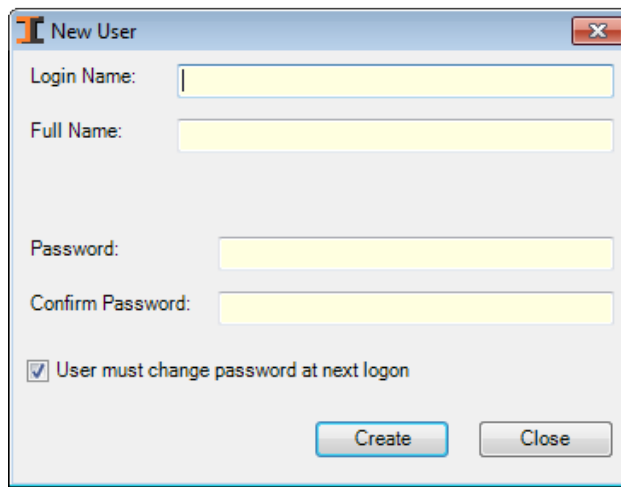
3.2.1 Creating a User

You'll need to create one user for each person that will be accessing InControlWare. To do so, complete the following steps:

1. Left click on **Users** in the tree view to highlight it.
2. Right click on **Users**. A context menu appears.



3. Select **New User** from the context menu. A dialog box is displayed.



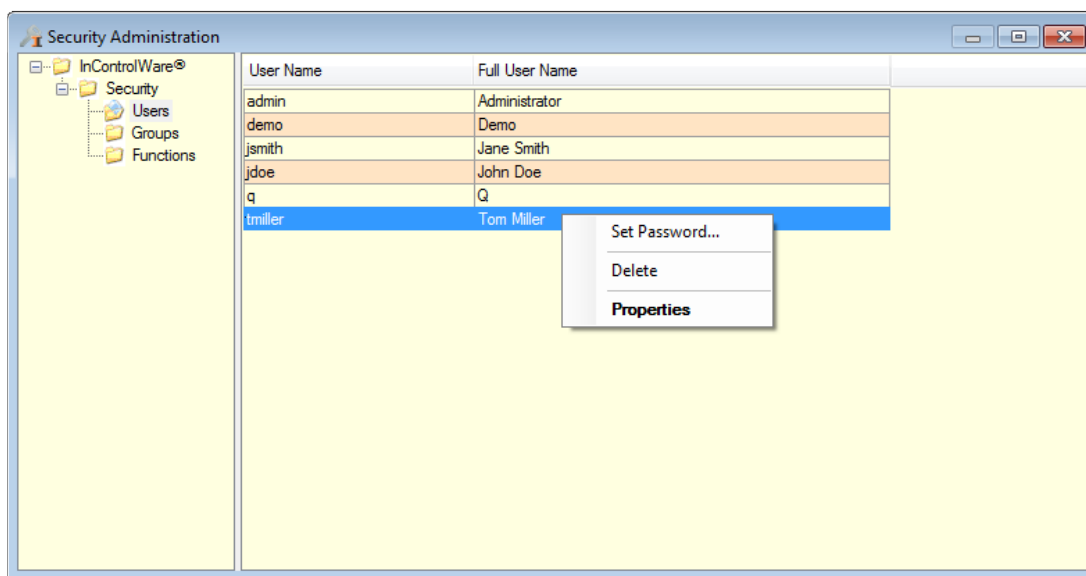
The image shows a 'New User' dialog box with a title bar containing the Intelligrated logo and a close button. The dialog contains four text input fields: 'Login Name:', 'Full Name:', 'Password:', and 'Confirm Password:'. Below these fields is a checkbox labeled 'User must change password at next logon' which is checked. At the bottom right are two buttons: 'Create' and 'Close'.

4. Enter a user name in the **Login Name** field. This is the name that the person will enter when they are logging into InControlWare.
5. Enter the person's entire name in the **Full Name** field. This name will be displayed in the Security Administration window as well as in the title bar of the InControlWare user interface.
6. Enter a password for the user in the **Password** field.
7. Enter the same password in the **Confirm Password** field.
8. If you would like the user to change the password that you entered the next time they log into InControlWare, leave the **User must change password at next logon** checkbox enabled. If you do not want to require them to do so, disable the checkbox.
9. Select **Create** to create the user.
10. Repeat Steps 1 through 9 for each user.

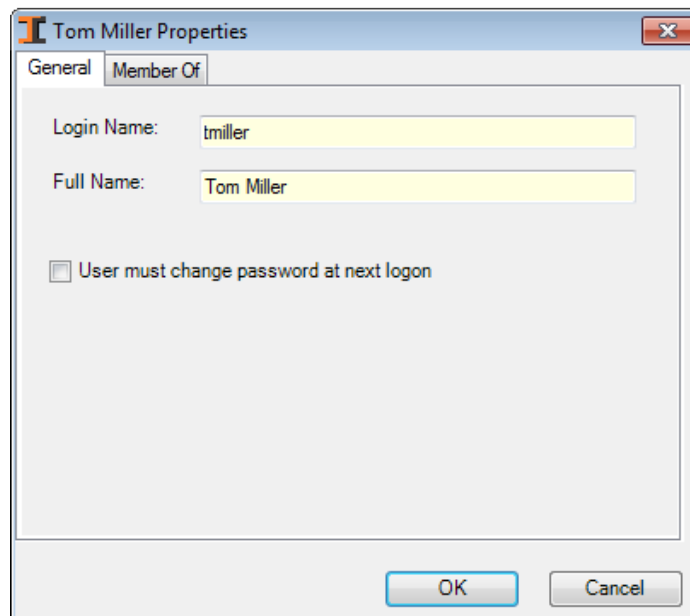
3.2.2 Changing a Login or Full Name

If you would like to make changes to the Login Name or Full Name of a user that has already been created, complete the following steps:

1. Select **Users** in the tree view. All of the current users in the system will be displayed in the details pane.
2. Select the user that you want to change in the details pane.
3. Right click on the selected user. A context menu appears.



4. Select **Properties** from the context menu. A dialog box appears.



5. Enter a new login name, full name, or both.
6. If you would like the user to change their password the next time they log into InControlWare, enable the **User must change password at next logon** checkbox.
7. Select **OK** to save the new user information and close the dialog box.

3.2.3 Changing a Password

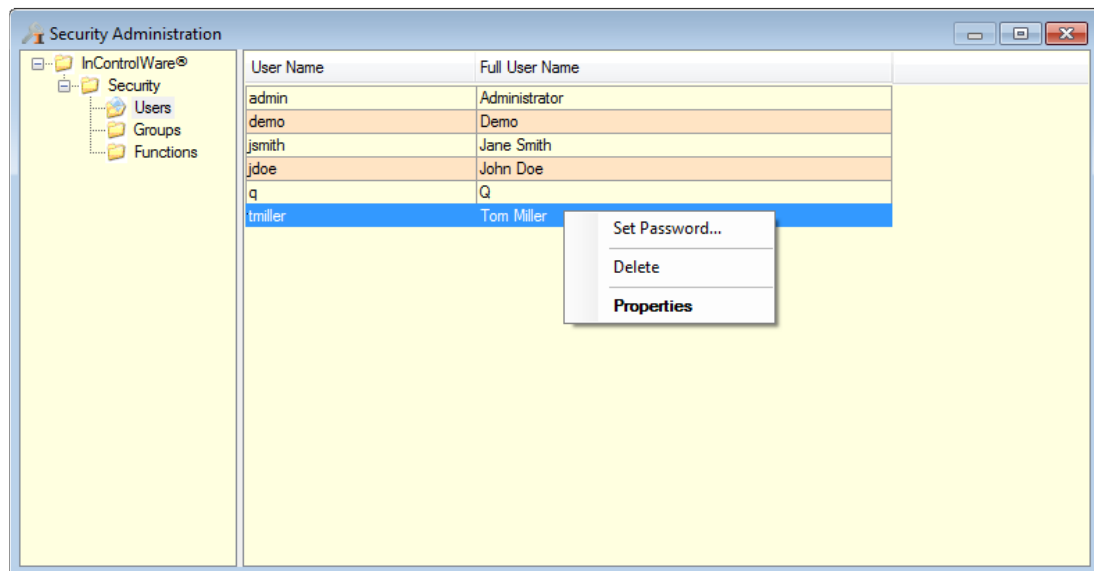
Authorized administrators can change a user's password. InControlWare's authentication system does not automatically force changes to passwords on a scheduled basis.

To change a user's password, complete the following steps:

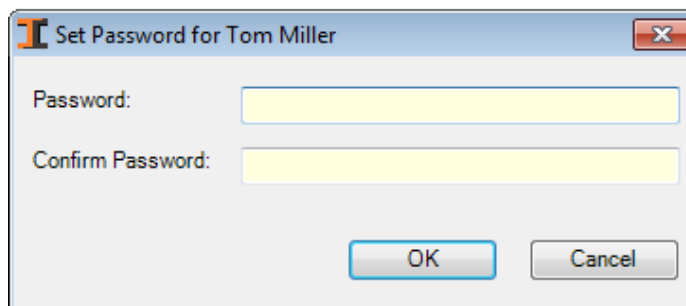
1. Select **Users** in the tree view. All of the current users in the system will be displayed in the details pane.
2. Select the user whose password you want to change in the details pane.



3. Right click on the selected user. A context menu appears.



4. Select **Set Password** from the menu. A dialog box is displayed.

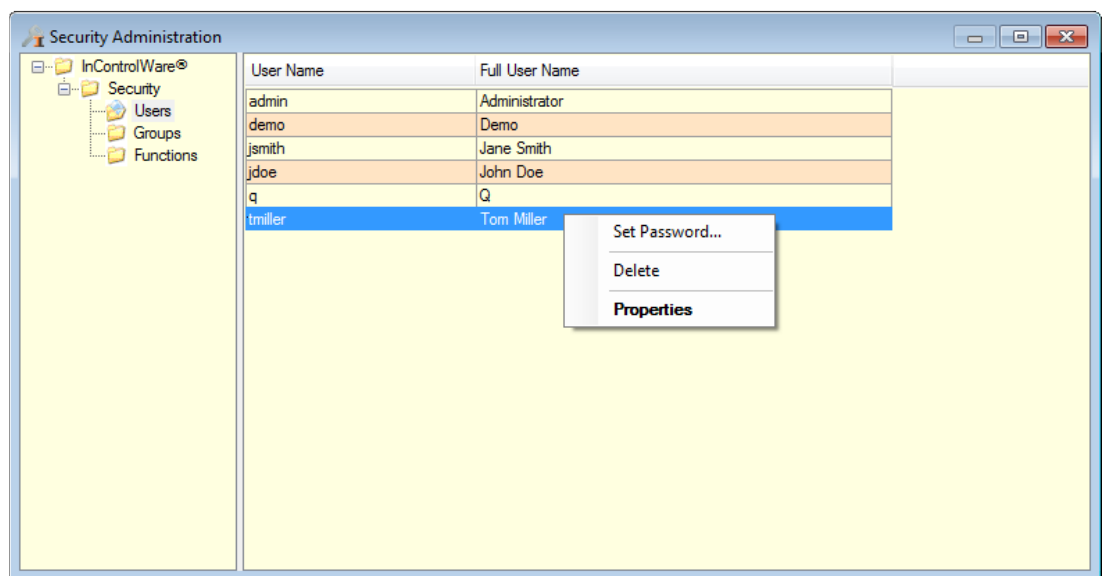


5. Enter a new password in the **Password** field.
6. Enter the same password in the **Confirm Password** field.
7. Select **OK** to save the new password and close the dialog box.

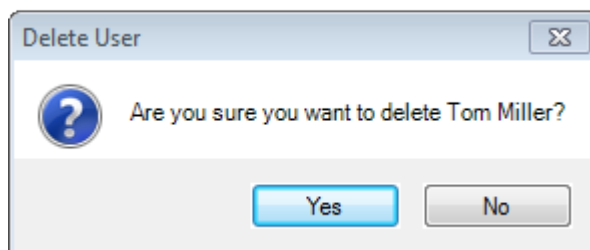
3.2.4 Deleting a User

If you would like to delete a user that has already been created, complete the following steps:

1. Select **Users** in the tree view. All of the current users in the system will be displayed in the details pane.
2. Select the user that you want to delete in the details pane.
3. Right click on the selected user. A context menu appears.



4. Select **Delete** from the context menu. A prompt appears.



5. Select **Yes** to delete the user from the system.

3.3 Working with Groups

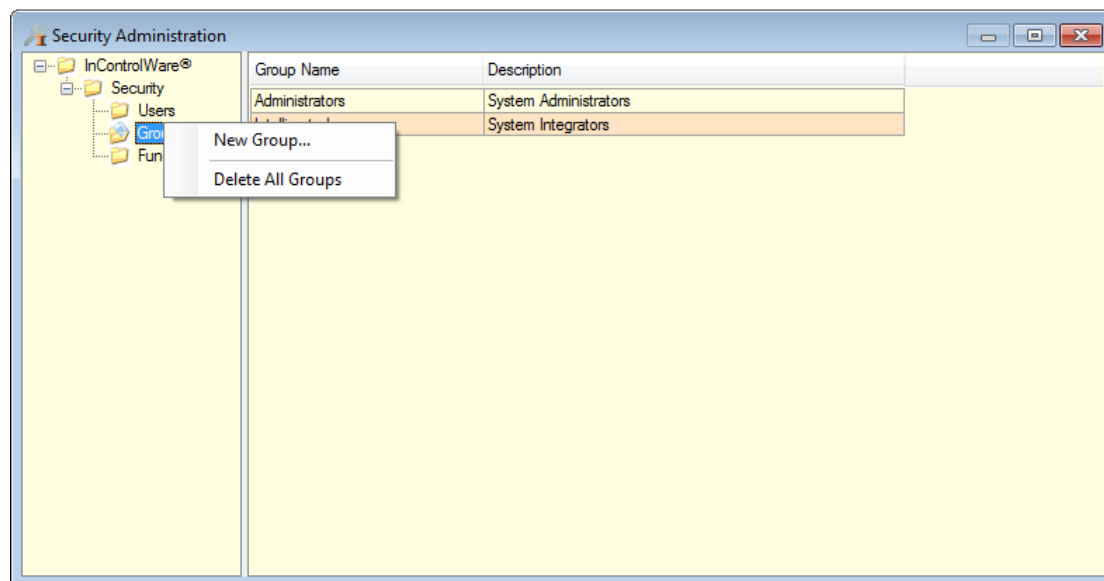
A group is a collection of users who share a common role and, therefore, common access privileges. Some groups contain super users who require access to most, if not all, of InControlWare's functionality. Other groups contain users who do not require such broad access.

Once you have created the users who will be using InControlWare, you can create the groups to which the users will belong. You can then assign permissions to the groups to determine the types and levels of access for each.

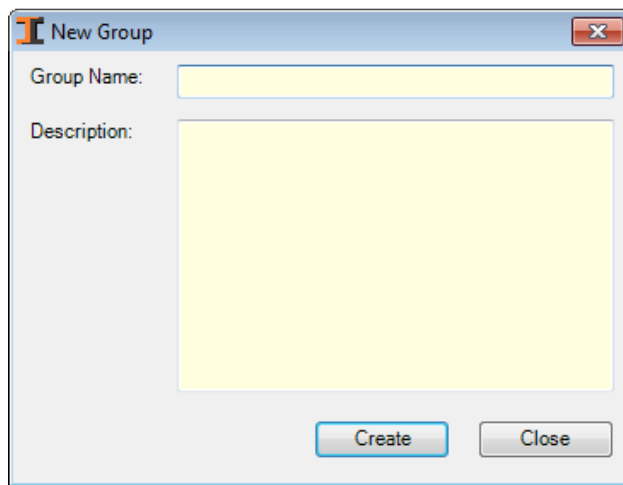
3.3.1 Creating a Group

You'll need to create one group for each type of user (e.g., administrators, supervisors) that will be accessing InControlWare. To do so, complete the following steps:

1. Left click on **Groups** in the tree view to highlight it. Notice that the currently defined groups appear in the details pane.
2. Right click on **Groups**. A context menu appears.



3. Select **New Group** from the menu. A dialog box is displayed.



4. Enter the name of the group in the **Group Name** field.
5. Enter a description of the group in the **Description** field.
6. Select **Create** to create the group and close the dialog box. Notice that the new group is now listed in the details pane.

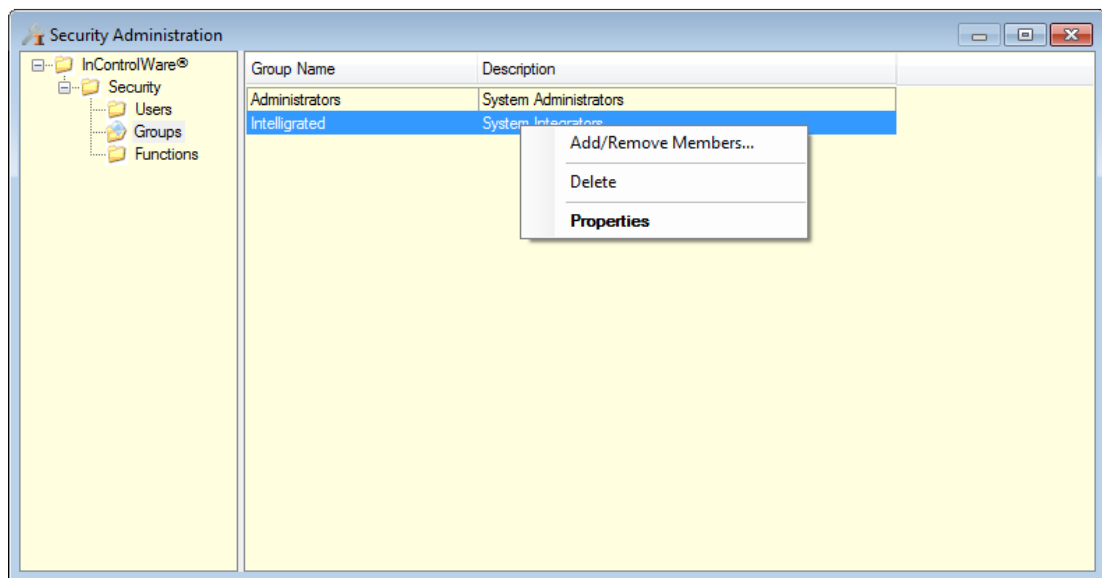
3.3.2 Editing a Group

If you would like to make changes to the information that you entered for a group, complete the following steps:

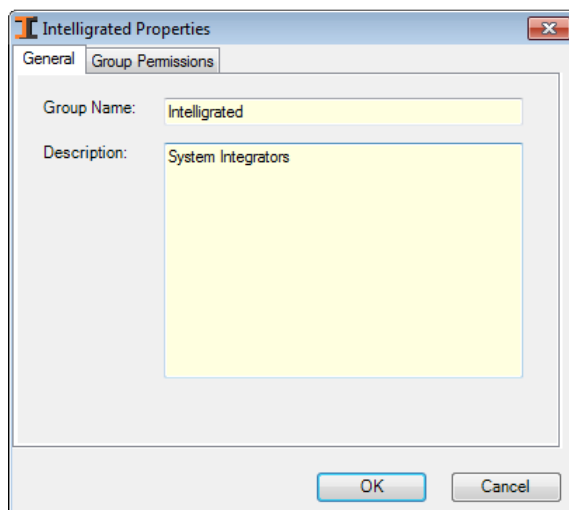
1. Select **Groups** in the tree view. All of the current groups in the system will be displayed in the details pane.
2. Select the group that you want to change in the details pane.



3. Right click on the selected group. A context menu appears.



4. Select **Properties** from the context menu. A dialog box is displayed.

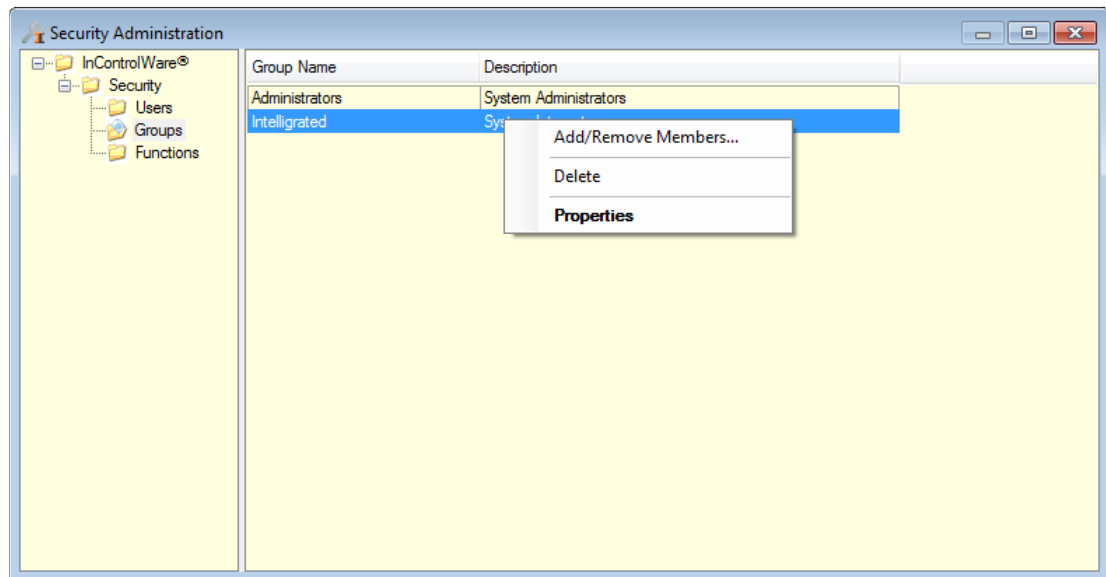


5. Make changes to the **Group Name** and **Description**.
6. Select **OK** to save your changes and close the dialog box.

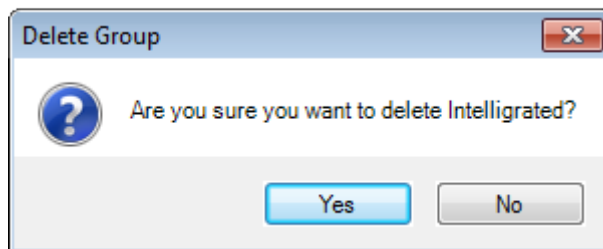
3.3.3 Deleting a Group

If you would like to delete a group, complete the following steps:

1. Select **Groups** in the tree view. All of the groups that are currently defined in the system will be displayed in the details pane.
2. Select the group that you want to delete in the details pane.
3. Right click on the selected group. A context menu appears.



4. Select **Delete** from the menu. A prompt is displayed.





5. Select **Yes** to delete the group. When a group is deleted, the following processing occurs:
 - a. All of the permissions for the group are removed.
 - b. All of the users in the group are removed from the group but are not deleted from the system.
 - c. The group is deleted.

Deleting All Groups

If you would like to delete all of the groups from the system, right click on Groups in the tree view and select **Delete All Groups**. You will be prompted to confirm the action before the groups are deleted.

3.3.4 Assigning Users to Groups

Once you have created the groups that are needed you can assign users to them. Users can be members of as many groups as is necessary. You can assign a user to a group in two ways:

- From within a group's Add/Remove Members dialog box. This method is useful if you are assigning several users to a group at one time.
- From within a user's Properties dialog box. This method is useful if you are assigning a user to several groups at one time.

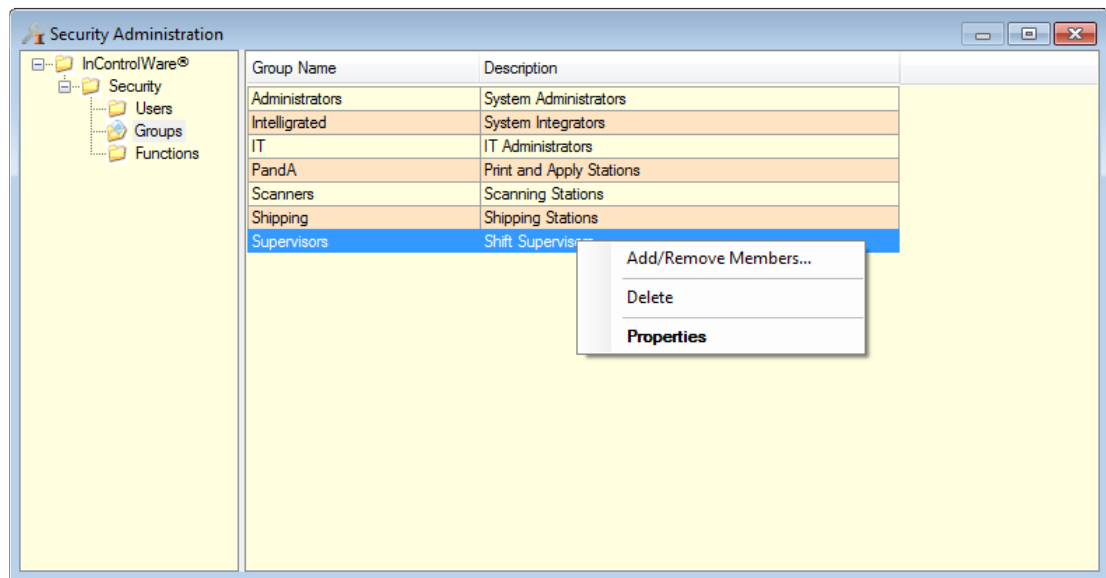
These assignment methods are described in the following sections.

Assigning Several Users to a Group

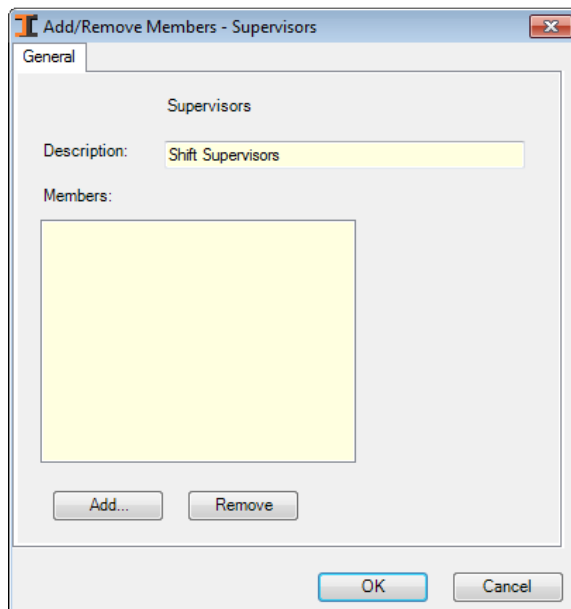
To assign several users to the same group at one time, complete the following steps:

1. Select **Groups** in the tree view. All of the current groups in the system will be displayed in the details pane.
2. Select the group to which you want to add users.

3. Right click on the selected group. A context menu appears.

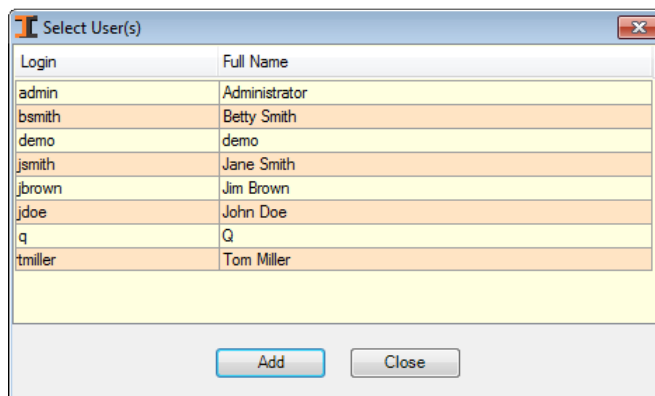


4. Select **Add/Remove Members** from the menu. A dialog box is displayed.

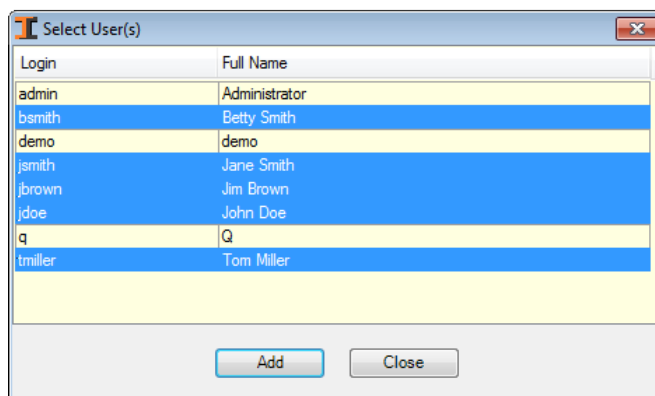




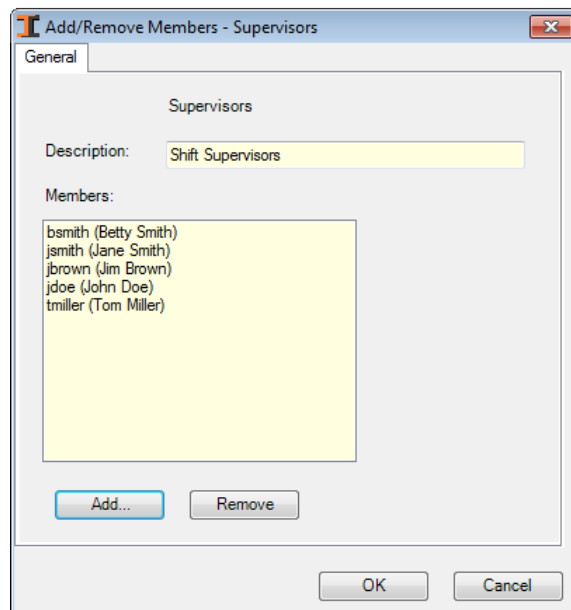
5. Select **Add**. A dialog box is displayed.



6. Select the user(s) that you would like to add to the group. To select users that appear consecutively in the list, hold down the SHIFT key and click on the first and last user that you want to include. To select multiple users that are not listed consecutively, hold down the CTRL key as you click on the users.



7. Select **Add** to add the users to the group and close the Select User(s) dialog box. Notice that the selected users now appear in the Members list.



8. Select **OK** to save your changes and close the Add/Remove Members dialog box.

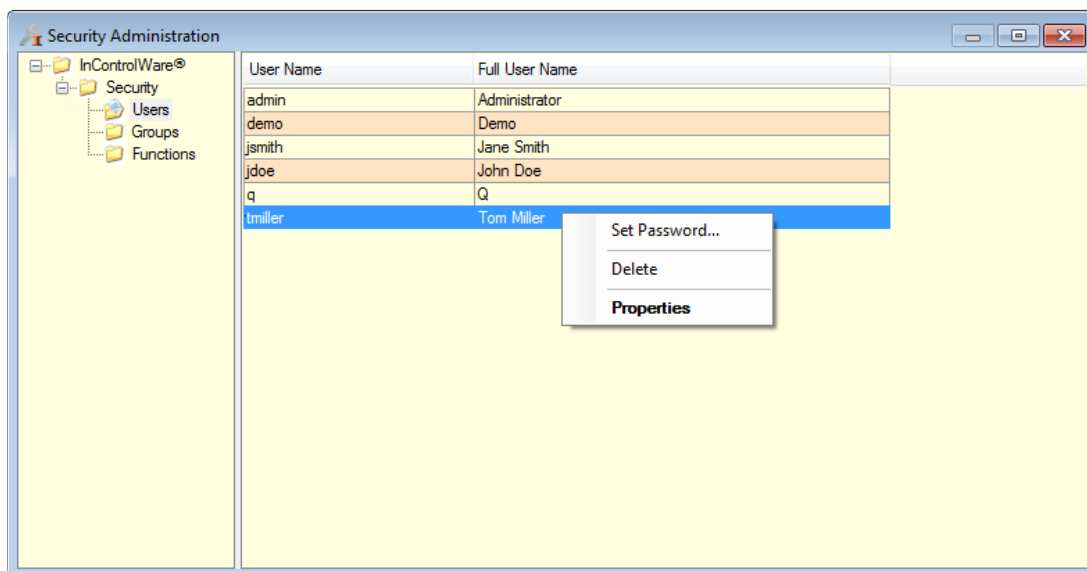
Assigning a User to Several Groups

To assign one user to several groups at one time, complete the following steps:

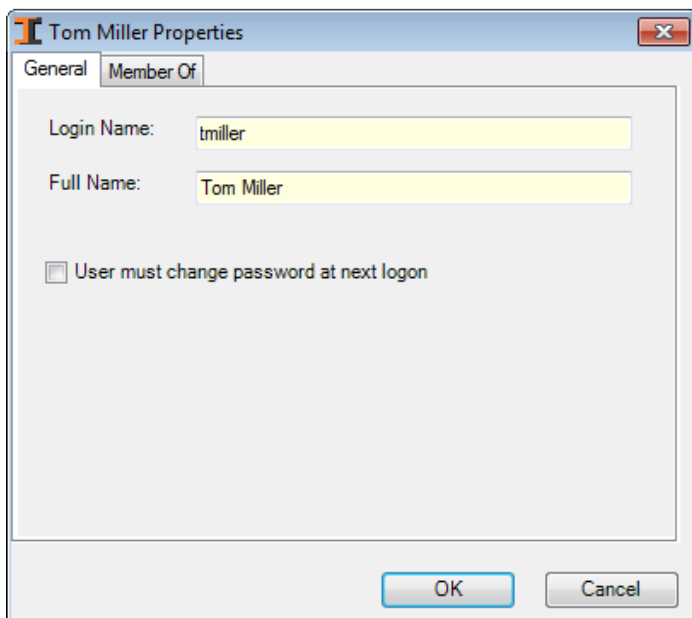
1. Select **Users** in the tree view. All of the current users in the system will be displayed in the details pane.
2. Select the user that you want to assign to groups in the details pane.



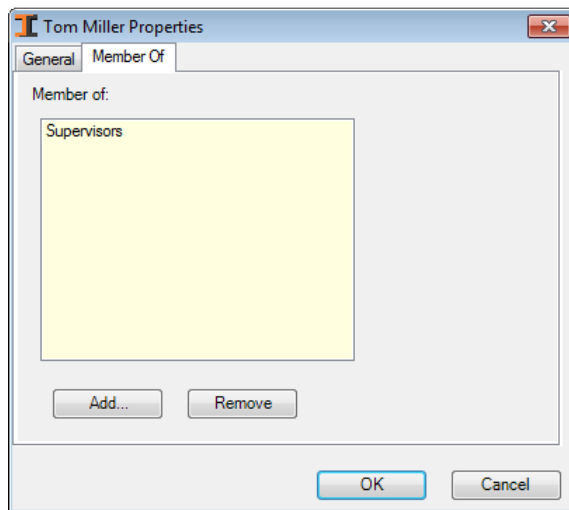
3. Right click on the selected user. A context menu appears.



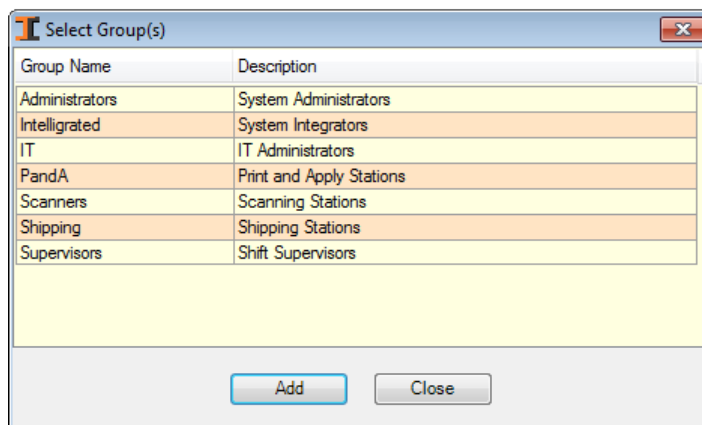
4. Select **Properties** from the context menu. A dialog box appears.



5. Click on the **Member Of** tab.

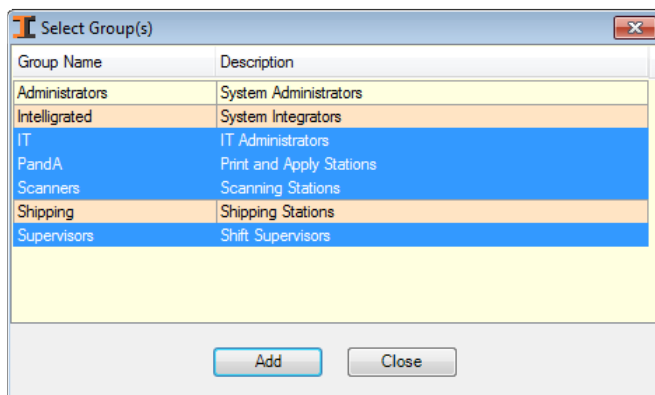


6. Select **Add**. A dialog box is displayed.

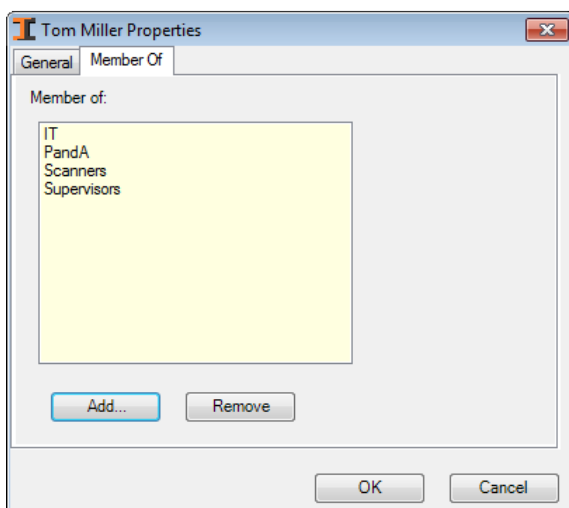




7. Select the group(s) to which you would like to assign this user. To select groups that appear consecutively in the list, hold down the SHIFT key and click on the first and last group that you want to include. To select multiple groups that are not listed consecutively, hold down the CTRL key as you click on the groups.



8. Select **Add** to assign this user to the selected groups and close the Select Group(s) dialog box. Notice that the groups you selected now appear in the Member Of list.



9. Select **OK** to save your changes and close the Properties dialog box.

3.3.5 Removing Users from Groups

Just as you can add users to groups in two ways, you can also remove users from groups in two ways, as follows:

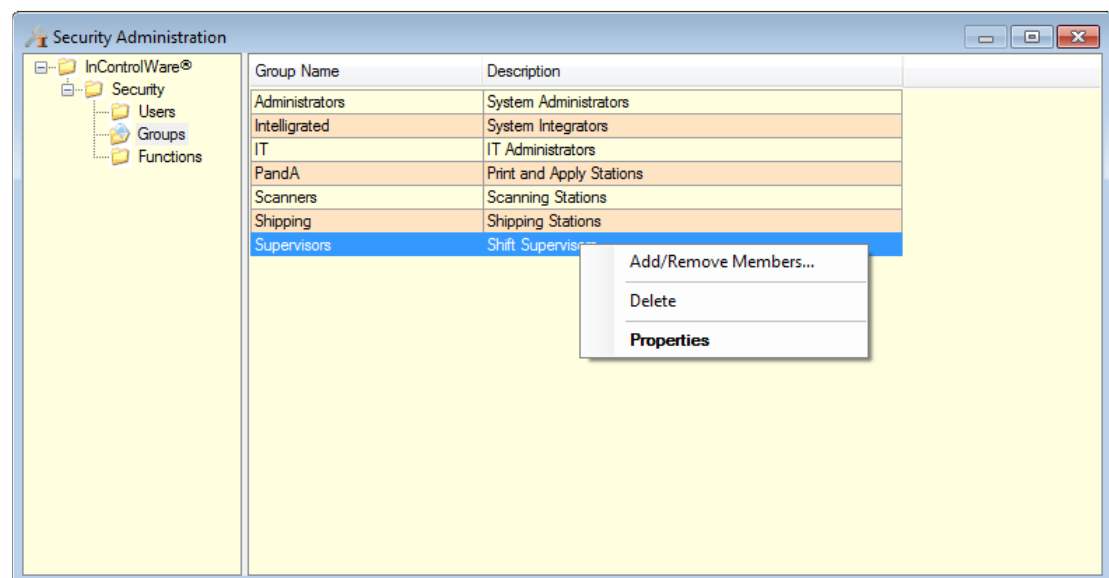
- If you would like to remove several users from a group at one time, use the Add/Remove Member dialog box.
- If you would like to remove a user from several groups at one time, use the user's Properties dialog box.

These methods are described in the following sections.

Removing Several Users from a Group

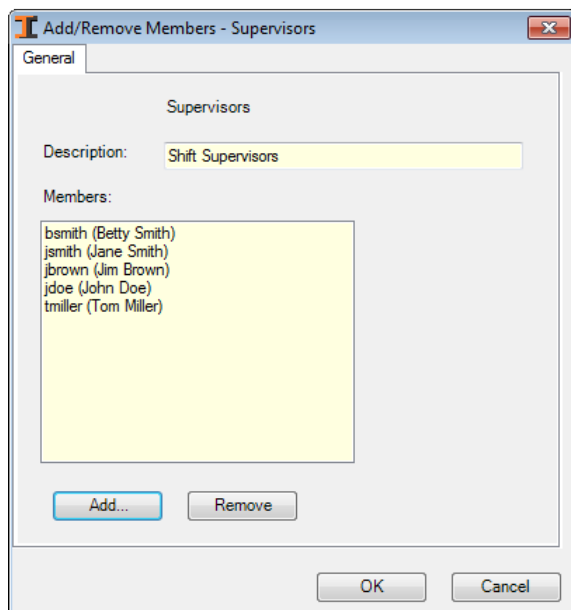
To remove several users from the same group at one time, complete the following steps:

1. Select **Groups** in the tree view. All of the current groups in the system will be displayed in the details pane.
2. Select the group that you want to change in the details pane.
3. Right click on the selected group. A context menu appears.





4. Select **Add/Remove Members** from the menu. A dialog box is displayed.



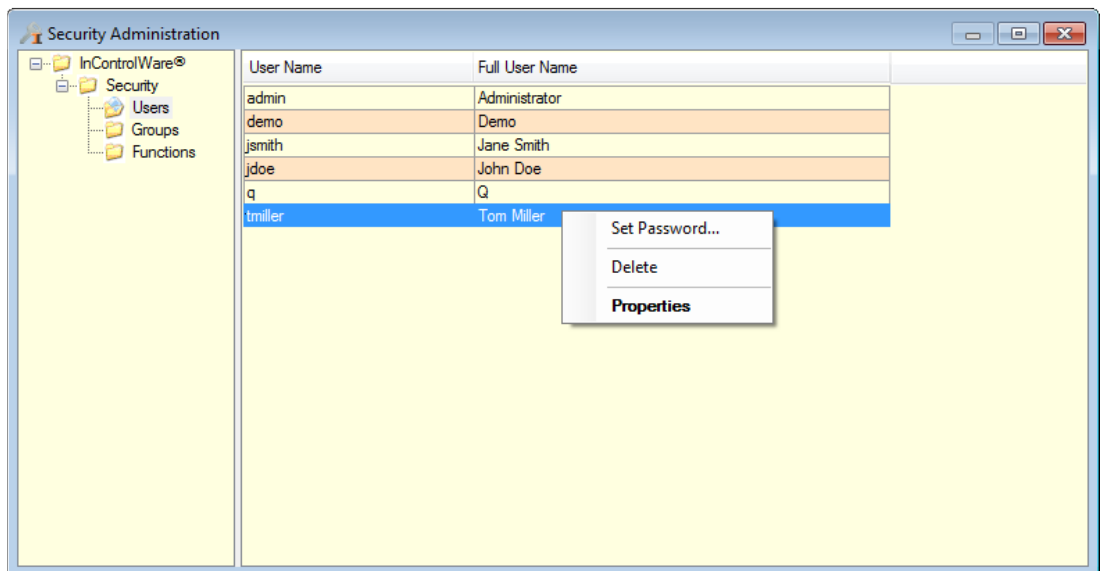
5. In the Members list, select a user that you would like to remove from the group. You can only select one user at a time.
6. Click on the **Remove** button. The user is removed from the list and the group.
7. Complete Steps 5 and 6 for each user that you want to remove from the group.
8. Select **OK** to save your changes and close the Add/Remove Members dialog box.

Removing a User from Several Groups

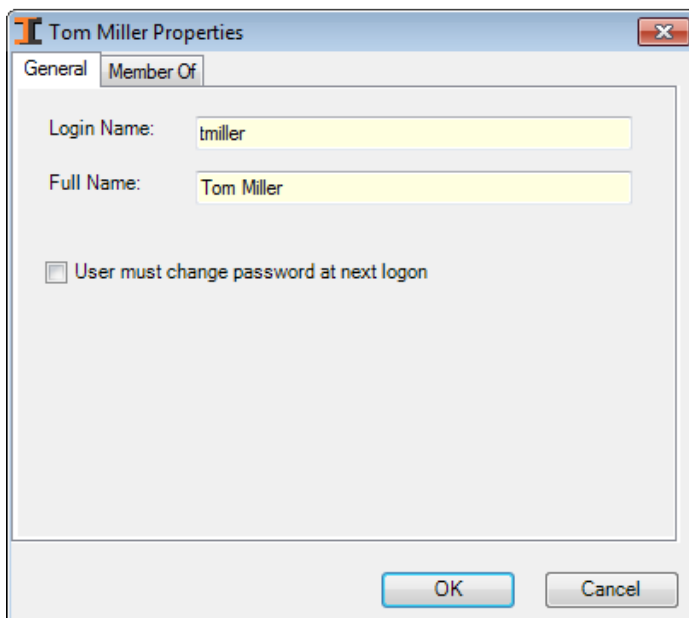
To remove a user from several groups at one time, complete the following steps:

1. Select **Users** in the tree view. All of the current users in the system will be displayed in the details pane.
2. Select the user that you want to remove in the details pane.

3. Right click on the selected user. A context menu appears.

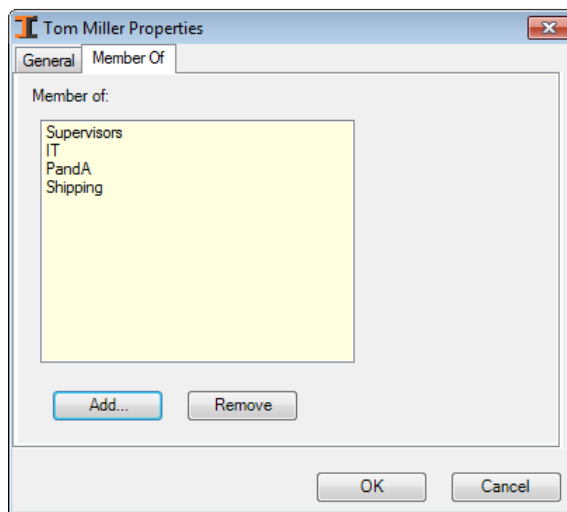


4. Select **Properties** from the context menu. A dialog box appears.





5. Click on the **Member Of** tab.



6. In the Member Of list, select the group from which you want to remove this user. You can only select one group at a time.
7. Click on the **Remove** button. The group is removed from the list and the user is removed from the group.
8. Complete Steps 5 and 6 for each group that this user should be removed from.
9. Select **OK** to save your changes and close the Properties dialog box.

3.4 Configuring InControlWare for Active Directory Authentication

By default, InControlWare is configured to use its own security mechanism. Some projects, however, will require Active Directory (AD) authentication instead.

Active Directory is an implementation of directory services by Microsoft for use in Windows environments. Its main purpose is to provide central authentication and authorization services for Windows-based computers. Active Directory also allows administrators to assign policies, deploy software, and apply critical updates to an organization. Active Directory stores information and settings in a central database.

To configure InControlWare for Microsoft AD, you will need to:

- Configure InControlWare to use AD credentials for authentication.
- Map AD groups to InControlWare groups. The InControlWare groups will be used to determine user access rights.

3.4.1 Configuring InControlWare to Use Active Directory Credentials

The InControlWare Interface Manager service must be configured to use Active Directory credentials for authentication. Doing so creates the entries in the Domain dropdown list on InControlWare's Log On dialog box. If it is necessary to support InControlWare's built-in security mechanism as well, one of the domains in the dropdown list will be configured for that purpose.

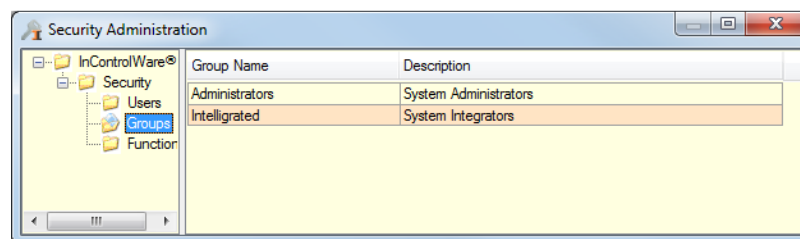
Active Directory is configured by Intelligrated's project team.

3.4.2 Mapping Active Directory Groups to InControlWare Groups

When Active Directory is used, user login information is passed from InControlWare to Active Directory when someone tries to log on to InControlWare. The information is passed using the SSPI protocol. Active Directory returns a list of groups that have the user as a member. InControlWare matches the AD groups to the InControlWare groups that have been mapped to them. InControlWare groups are located in security tables in its encrypted, SQL server database. These tables supply the user interface with permissions for the user.

A network administrator will need to create one AD group for each InControlWare group. InControlWare groups are defined using the Security Administration window. For information about working with groups, refer to Section 3.4.

Figure 3-2 Security Administration



The AD InControlWare group names need to be prefixed with a common prefix (e.g., ICW_). For example, "ICW_Intelligrated" would be the AD group name for the InControlWare group "Intelligrated." These groups all need to belong to the same AD domain (i.e., the InControlWare group domain) and the server running ICWInterfaceManager needs to be a member of a domain that is trusted by the domain containing the groups.

Multiple log on domains are acceptable but they must also be trusted by the AD domain that has the groups defined.

3.5 Working with Permissions

Permissions enable functionality in the InControlWare interface. They are assigned to groups and allow all of the users within the group to have access to the associated functionality. Access levels are assigned to the permission to dictate which type of access has been granted. For example, the User Administration permission is required to perform the tasks in this chapter. In addition, an Operate, Maintenance, or Delete access level must be assigned to that permission in order to access the Security Administration window and its controls. A user who has been granted the User Administration permission but only has a Report access level for it cannot perform the tasks in this chapter.



Note

Changes made by assigning permissions to a group, or removing permissions from a group, do not take effect until after you have logged out and logged back into InControlWare.

3.5.1 Access Levels

Access levels dictate the appearance and functionality of panels in the interface. Lower access levels allow fewer panel components to be viewed and limit the functionality of controls on the panel. Higher access levels allow more components to be viewed as well as permitting more control functionality. Within InControlWare, access levels are hierarchical; each succeeding access level includes the privileges of the levels that come before it. The access level hierarchy in use with InControlWare is illustrated below.

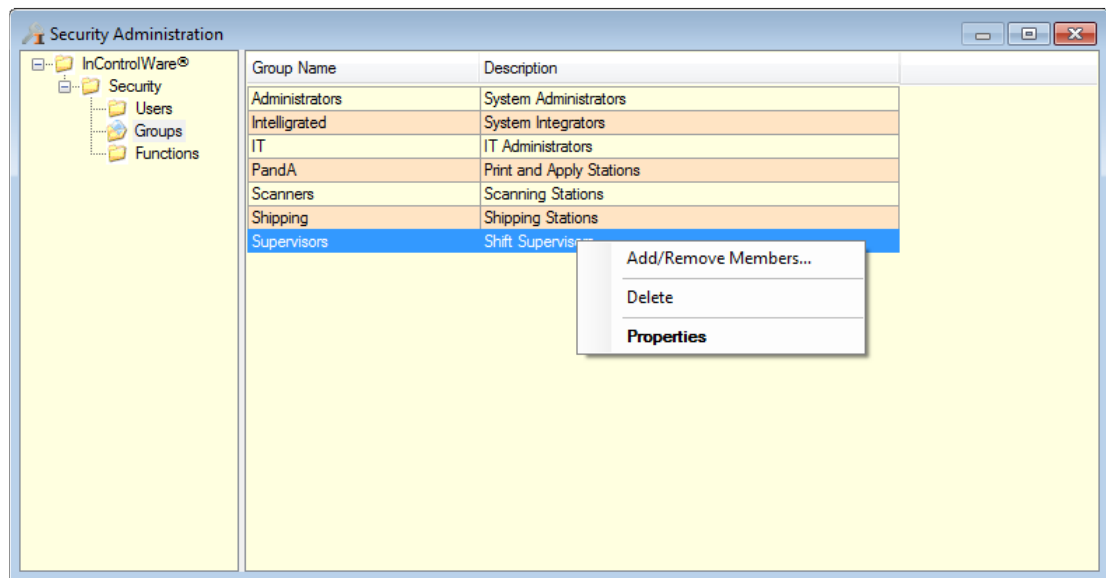
Figure 3-3 Permission Access Levels

3.5.2 Assigning Permissions to a Group

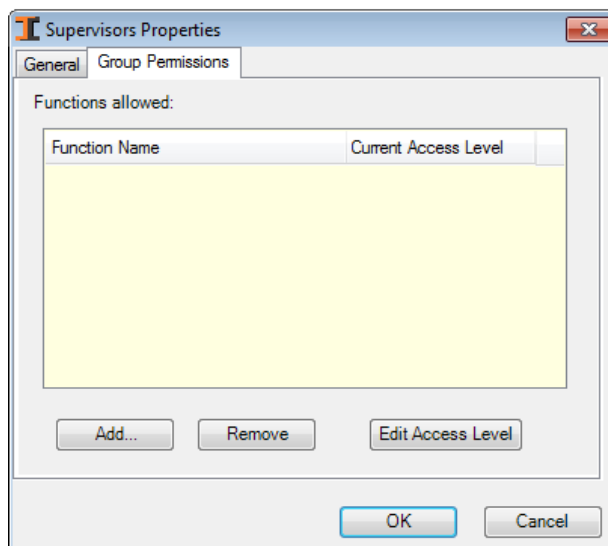
To assign a permission to a group, complete the following steps:

1. Display the Security Administration window.
2. Select **Groups** in the tree view. All of the current groups in the system will be displayed in the details pane.
3. Select the group to which you want to assign permissions.

4. Right click on the selected group. A context menu appears.

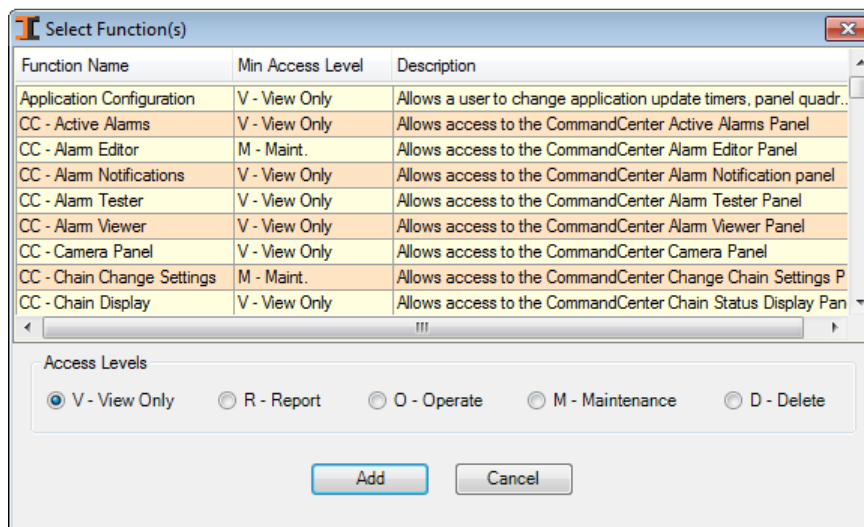


5. Select **Properties**. A dialog box appears.
6. Select the **Group Permissions** tab.





7. Select **Add**. A dialog box appears.



8. Scroll until the permission you are looking for is visible.
9. Left click on the permission to select it.

You can select more than one permission at a time. If the permissions you would like to select appear consecutively in the list, hold down the SHIFT key and click on the first and last permission that you want to include. If the permissions do not appear consecutively in the list, hold down the CTRL key as you click on the permissions.



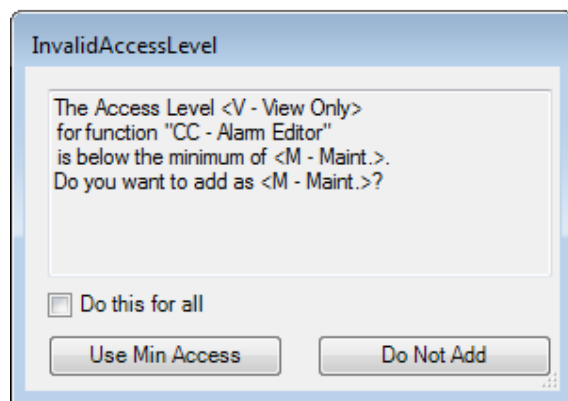
Note

You can also add a permission to a group by double clicking on it. Doing so will attempt to add the permission with a View Only access level. If that is below the minimum required access level, a prompt will appear. For information about this prompt, refer to Step 10.

10. Select a radio button in the Access Levels group to set an access level for the permission. If more than one permission is selected, this access level will be applied to all of the permissions.

11. Select **Add** to add the permission to the group and close the **Select Function(s)** dialog box.

Some permissions have a minimum required access level. If you chose an access level that is below this required level, a prompt will appear when you attempt to add the permission to the group.



To add the permission with the minimum required access level, select **Use Min Access**. If you do not want to assign the minimum access level, select **Do Not Add** and the permission will not be added to the group. A permission cannot be added to a group with an access level that is lower than the minimum requirement.

If you selected multiple permissions and would like to make this change for all of them, enable the **Do this for all** checkbox before you select a button. Doing so and then selecting **Use Min Access** will affect the access levels of the remaining permissions as follows:

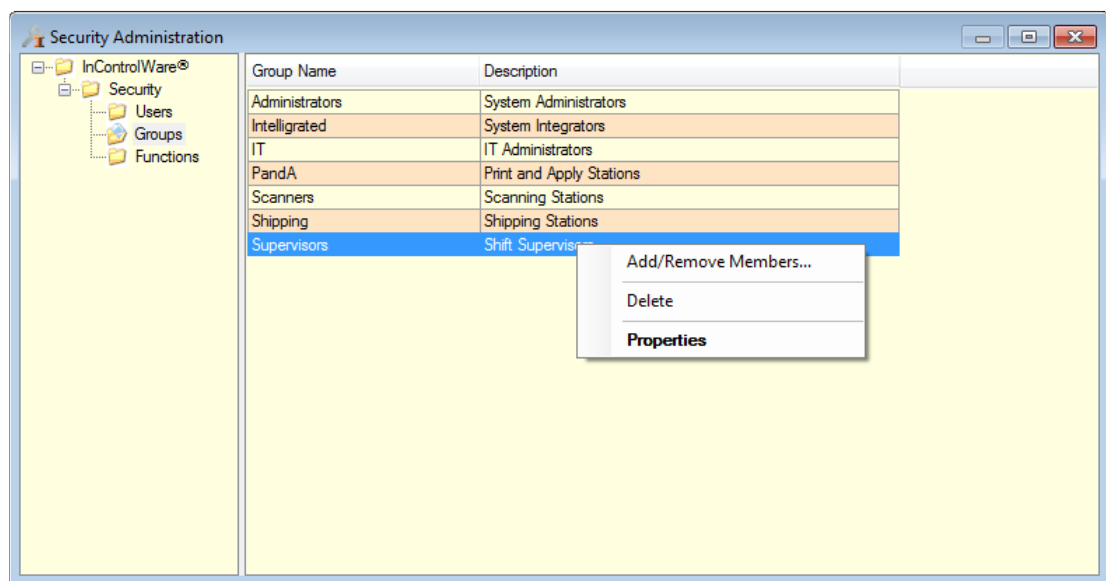
- If you assigned an access level that is lower than the minimum required access level, the access level will be increased to that level.
- If you assigned an access level that is higher than the minimum required access level, the access level will remain unchanged. The prompt will not cause an assigned access level to be decreased.

If you enable **Do this for all** and select the **Do Not Add** button, then all of the permissions with access levels below the minimum requirement will not be added to the group.

Changing the Access Level of a Permission

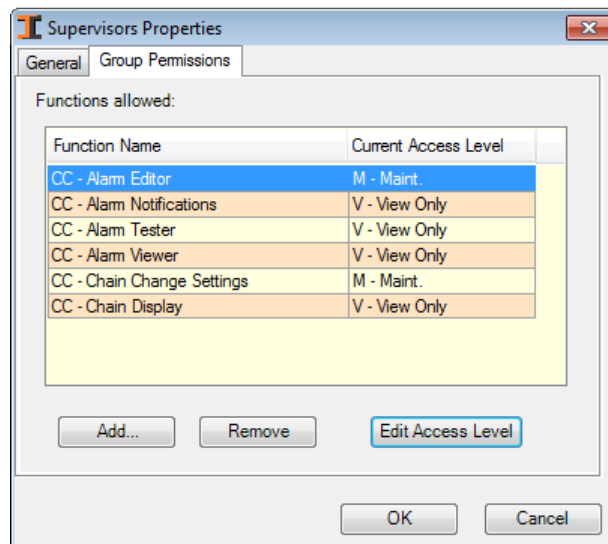
If you would like to change the access level of a permission, complete the following steps:

1. Select **Groups** in the tree view. All of the current groups in the system will be displayed in the details pane.
2. Select the group that you want to change in the details pane.
3. Right click on the selected group. A context menu appears.

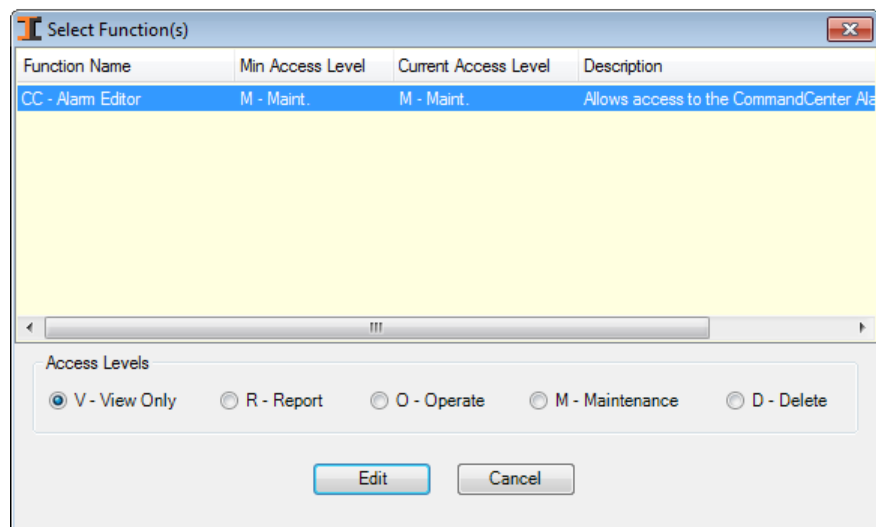


4. Select **Properties**. A dialog box appears.

5. Select the **Group Permissions** tab.



6. Select the permission that you would like to change.
7. Select the **Edit Access Level** button. A dialog box appears.

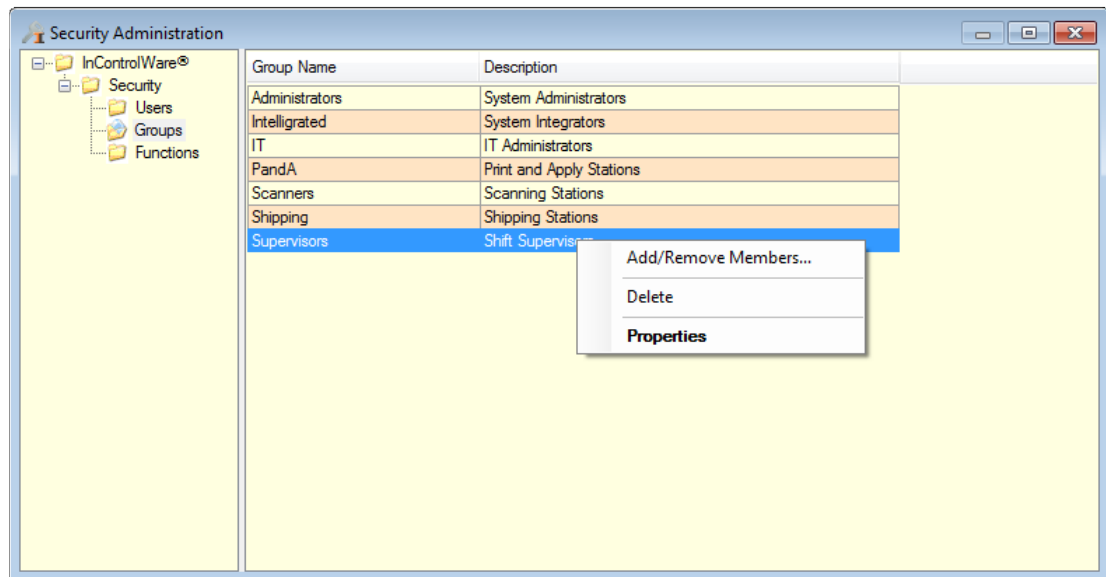


8. Select the new access level in the Access Levels group.
9. Select **Edit** to change the access level and close the dialog box.
10. Select **OK** to close the Properties dialog box and save the change.

3.5.3 Deleting a Permission from a Group

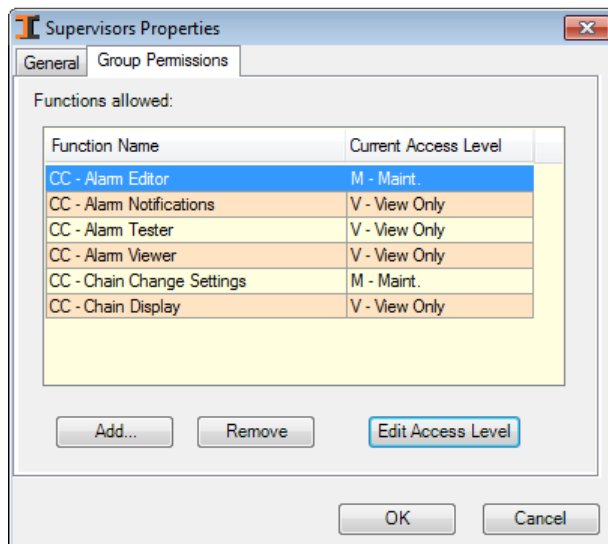
If you would like to remove a permission from a group, complete the following steps:

1. Select **Groups** in the tree view. All of the current groups in the system will be displayed in the details pane.
2. Select the group that you want to change in the details pane.
3. Right click on the selected group. A context menu appears.

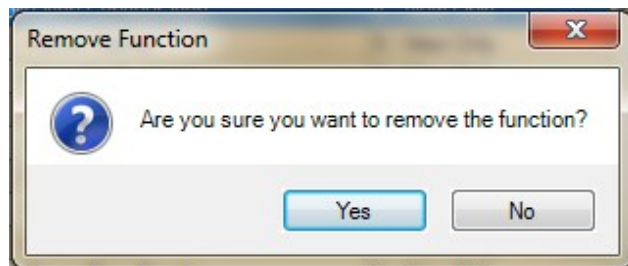


4. Select **Properties**. A dialog box appears.

5. Select the **Group Permissions** tab.



6. Select the permission that you would like to delete.
7. Select the **Remove** button. A prompt appears.



8. Select **Yes** to delete the permission.

If you accidentally delete a permission that you did not want to delete, selecting **Cancel** will close the Properties dialog box and discard any changes that were made.

9. Select **OK** to save your changes and close the Properties dialog box.

Project Views

4

The InControlWare user interface is highly customizable. The panels available to each user can be organized in whichever way best suits their workflow. Additionally, splitters can be used to display several panels in the same window. This chapter describes how to use the Project View Editor and its features to create a custom project view for a user.

4.1 Before You Begin

Before you begin making a project view, you will want to:

1. Make sure that you have Delete access level privileges for the Application Configuration permission. This permission and access level gives you access to the features discussed in this chapter. To see if you have the correct privileges, view the Group Permissions tab for the groups you belong to.
2. Create a new group that represents the group of users that will use the new view.

The panels that are available for a project view are dictated by the permissions that have been assigned to the group that uses the view. The appearance and functionality of the panels is dictated by the access levels assigned to the permissions. Both permissions and access levels are unique to each group of users. For information about assigning permissions to groups, refer to Section 3.6.

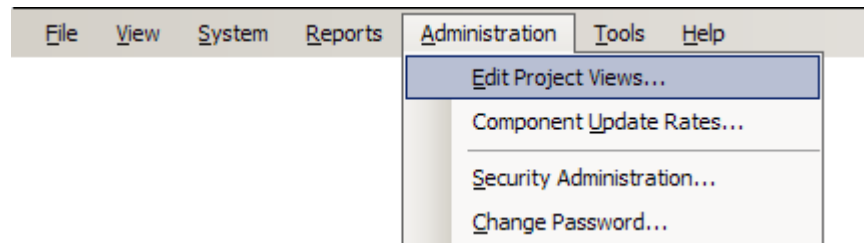
3. Assign permissions to the group so that the group can view the features and panels that you want them to view.
4. Create users, if they have not already been created, and assign them to the group.

Once you have created the project view, you will assign it to this group so that it is automatically used whenever a user in the group logs into InControlWare.

4.2 Starting the Editor

To start the Project View Editor, select **Edit Project Views** from the **Administration** menu. The Project View Editor will be displayed. Notice that the Default (CC) project view is currently displayed.

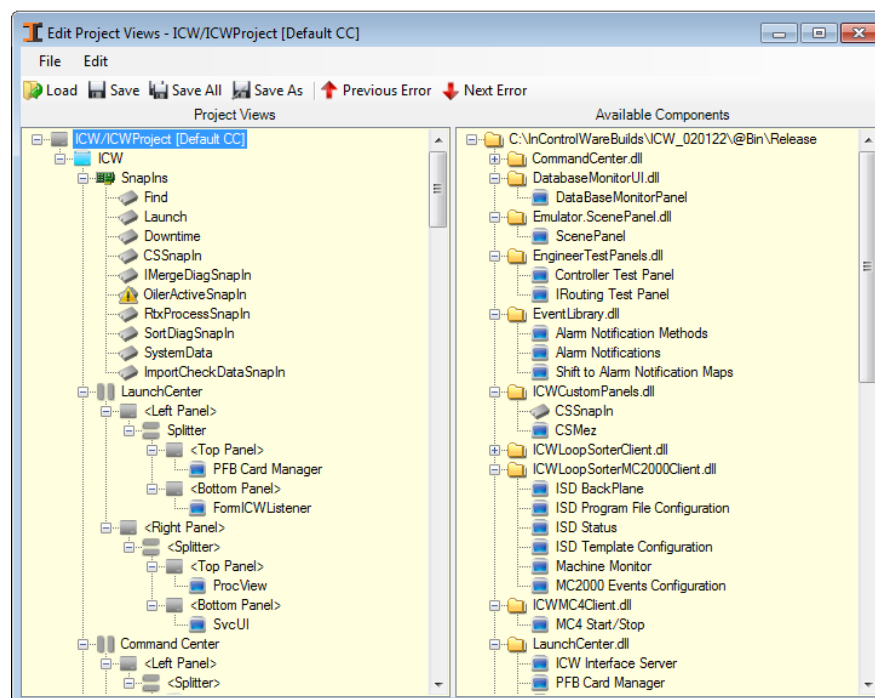
Figure 4-1 Administration Menu



4.3 The Project View Editor

The Project View Editor allows you to arrange the panels in the user interface. You can decide the order in which panels appear, which panels are grouped together, and even whether or not multiple panels appear in the same window.

Figure 4-2 Project View Editor





The editor has two panes: the Project Views pane and the Available Components pane. The Project Views pane contains a list of the panels and SnapIns in the current project view. The Available Components pane contains a list of all of the panels and SnapIns that are available.

4.4 Creating a Project View

A project view is a configuration of panels that is tailored to a specific group of users. You can create a new project view by:

- making changes to one of the default project views. In this case, you'll use the default project view as your starting point.
- loading an existing project view. This can be useful if you have created a project view template that you use as a starting point for new project views.

4.4.1 Using the Default Project Views

Default project views are provided with InControlWare and are described below.

Table 4-1 Default Project Views

Project View	Description
Default (CC)	The default Command Center project view. This is the view that is automatically displayed for the Administrators and Integrators groups.
Default (LC)	A Launch Center project view. This view contains the most commonly used panels for Launch Center.
Default (Studio)	A project view for ICWStudio. This view contains the panels that are needed to work in ICWStudio.
Default (TS)	A project view that is used for testing. This view does not contain any panels and can be useful as a starting point for creating new project views.
Default (VC)	A View Center project view. This view contains the panels that are needed to work with View Center runtime.

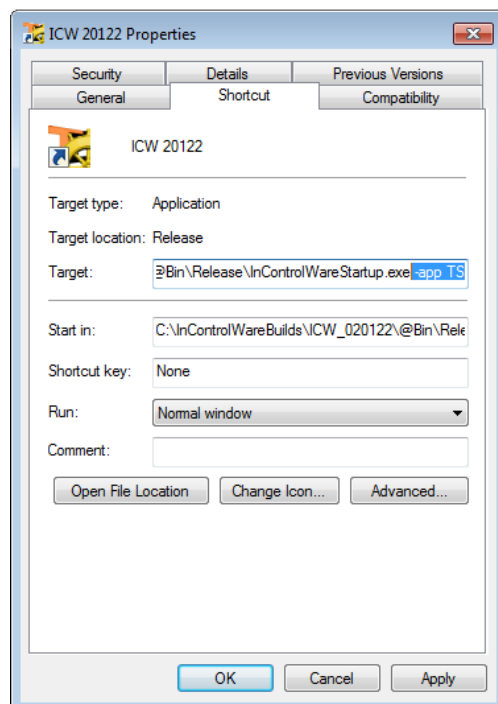
By default, the Default (CC) view is displayed. You can change the default by either appending a switch to the executable in the InControlWare shortcut or by changing the name of another project view to Default (CC). These methods are described in the following sections.

Changing the Default Project View with a Command Line Switch

You can change the project view that is displayed when InControlWare is started by appending a command line switch to the name of the executable file. This can be useful when project views are created. For example, switching to the TS project view would give you a blank slate to work with when creating small project views, eliminating the need to remove dozens of panels from other views before you can get started.

To change the project view that is displayed when InControlWare is started, complete the following steps:

1. Locate the shortcut that is used to start InControlWare. If a shortcut doesn't exist, create one.
2. Right click on the shortcut. A context menu appears.
3. Select the **Properties** option. The Properties dialog box appears.
4. Append the **Target** value with **-app XX**, where **XX** is the view name for the project view that you want displayed.





5. Select **OK** to save the change.

The next time the shortcut is used to start InControlWare, the specified project view will be displayed.

Changing the Default Project View by Renaming Views

As a workaround, you can change the name of a project view to Default (CC) so that it will automatically be displayed when InControlWare is started.



Important

Before completing this process, you should rename the Default (CC) project view so that you retain a copy of it. If you do not, the existing Default (CC) project view will be overwritten if you give another view that name.

To rename a project view, complete the following steps:

1. Display the Project View Editor.
2. Make any changes to the current view that you would like to make.
3. Select **Save As** in the toolbar. A dialog box appears.

The screenshot shows a dialog box titled "Save ICW/ICWProject' As". It contains the following fields and controls:

- Project folder display name:** A text box containing "ICW".
- View name:** A dropdown menu showing "CC".
- Project name:** A dropdown menu showing "ICWProject".
- Entity type:** A dropdown menu showing "Default".
- Project view:** A text box containing "ICW/ICWProject [Default CC]".
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

4. Enter the new name for the project view in the **View Name** field.



Note

If a project view exists with the same name that you entered, it will be overwritten with the new project view when you complete the next step.

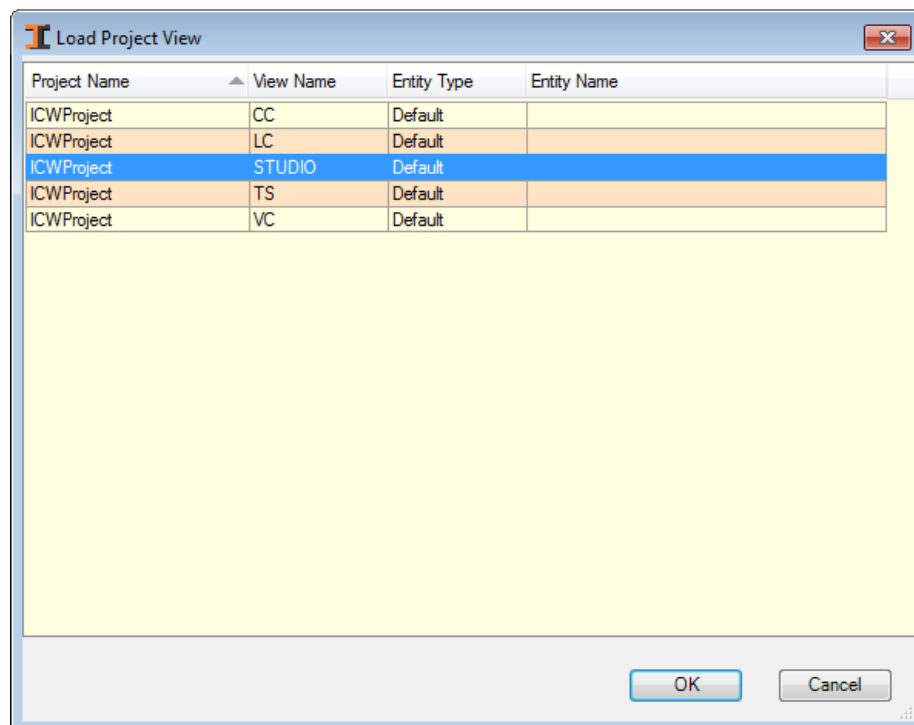
5. Leave **Default** as the **Entity Type**.
6. Select **OK**. Notice that the title bar of the Project View Editor now displays the new project name.

4.4.2 Loading a Project View

You can load an existing project view to use as the starting point for a new view. Doing so does not change the default project view. Instead, the new view is added below the existing view in the Project Views pane.

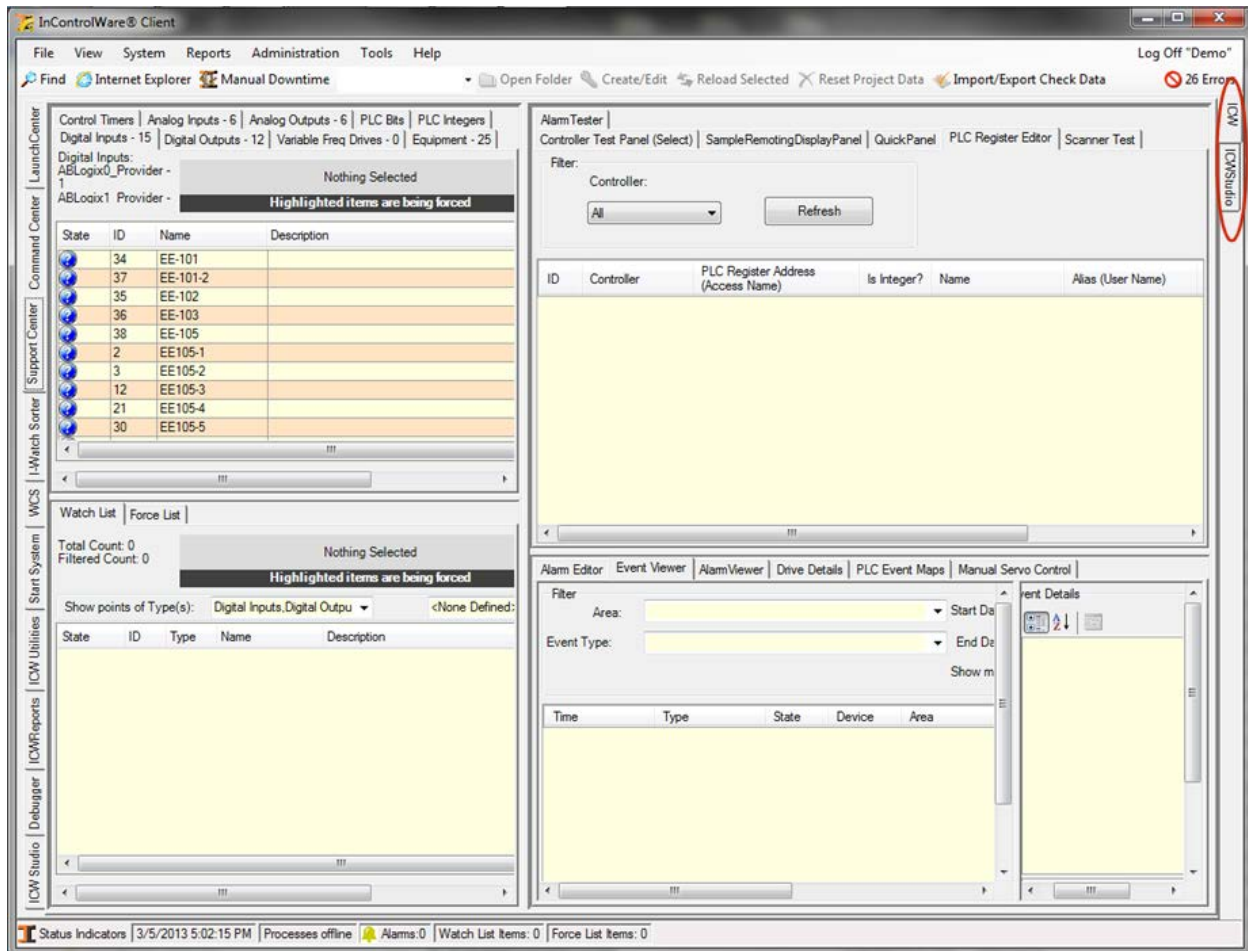
To load a project view, complete the following steps:

1. Select the **Load** button on the Project View Editor's toolbar. A dialog box appears containing a list of all of the project views that currently exist in the database.





2. Double click on a project view to add it to the currently displayed views. You can also single click the project view and select **OK**. Notice that the project view now appears at the bottom of the list in the Project Views pane. It also appears in the tabbed list of views on the right side of the screen.



4.5 Designing a Project View

Once you have displayed the project view that you want to use as the starting point for your view, you are ready to start designing the new view. Designing a project view can consist of a number of actions, such as:

- Adding new folders that will contain panels and SnapIns.
- Adding new panels and/or SnapIns.
- Removing existing panels and/or SnapIns.
- Using splitters to divide a single screen so that multiple panels are displayed at one time.

The following sections describe how to use folders, panels, SnapIns, and splitters to create the project view that you want.

4.5.1 Adding a Folder to the View

Folders are used to identify a group of panels or SnapIns that have related functionality; they provide a means for organizing parts of the interface to reduce clutter that can overwhelm users. Each folder can be displayed as a tab in the interface, allowing users to view the related items easily. Folders are also required if you would like to use splitters.

To create a folder, complete the following steps:

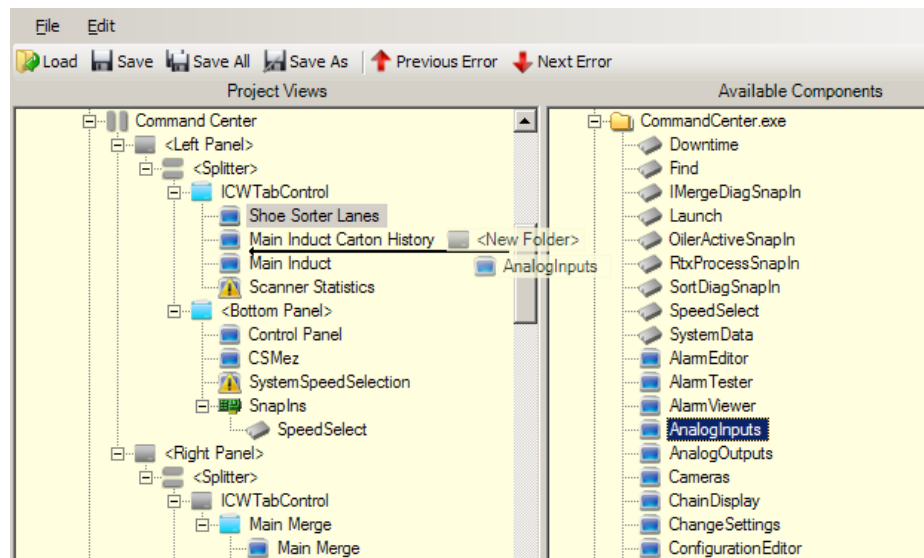
1. Select the project view name at the top of the project view tree.
2. Right click on it to display a context menu.
3. Select **New Tab Folder** from the menu. A new folder appears in the project view.
4. Enter a name for the new folder.
5. Click and drag the folder to the position you would like within the hierarchy. You can now add items to the folder.



4.5.2 Adding a Component to the View

To add a panel or SnapIn to the view, complete the following steps:

1. Left click and hold the item in the **Available Components** pane on the right.
2. Drag the item to the correct location in the hierarchy on the left. Notice the arrow that appears in the project view. This arrow indicates where the item will be placed.



3. Release the mouse button when the item is correctly positioned.



Note

The position in which you place items in the project view is not permanent. You can move them to new locations at any time.

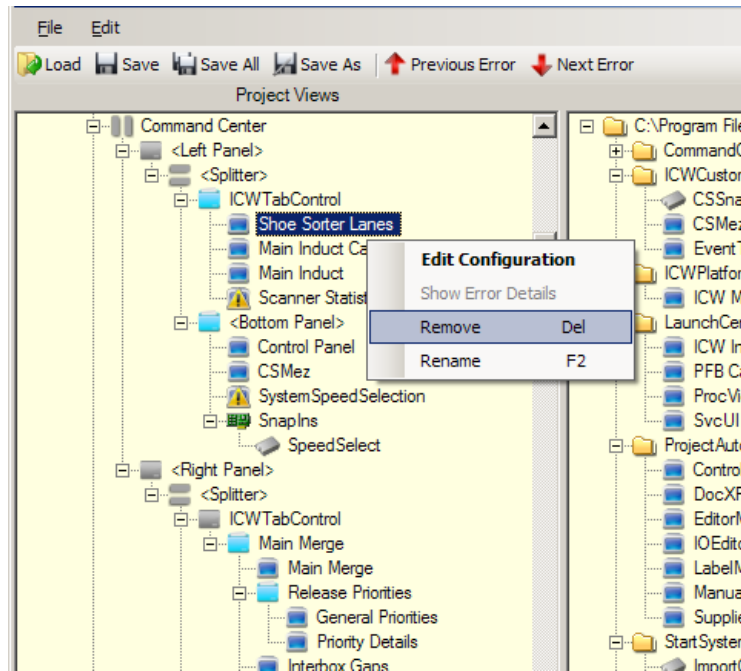
If you change your mind and decide not to add the panel after you have already started to drag it, press the ESC key or release the left mouse button with the cursor still positioned in the **Available Components** pane.

If the component requires configuration, you will be prompted to enter the configuration information when you add the panel. Panel configuration is unique to each panel.

4.5.3 Removing a Panel or SnapIn

To remove an item from the project view, right-click on its name and choose **Remove** from the context menu. You can also remove items by left clicking on them and pressing the DELETE key.

Figure 4-3 Panel Context Menu

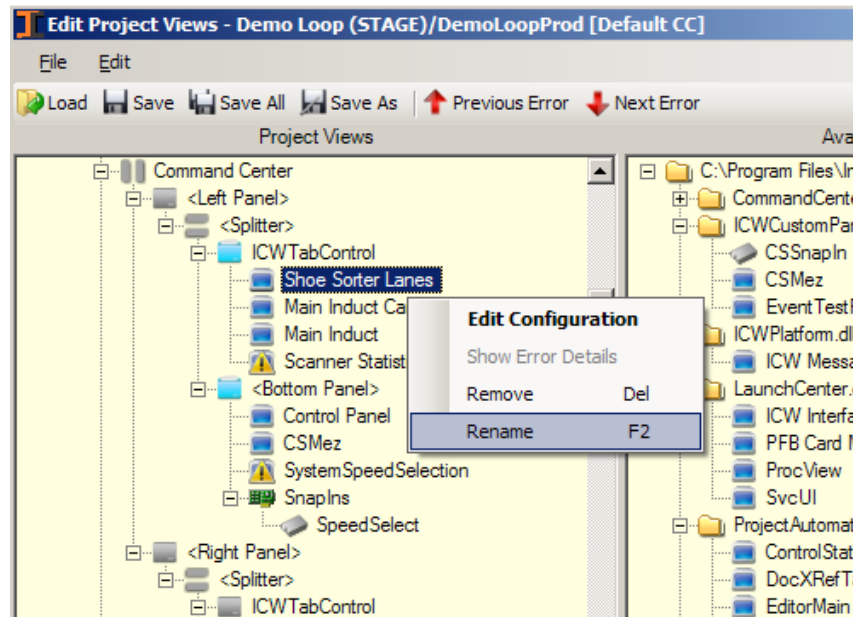




4.5.4 Renaming a Panel

To rename a panel, right-click on its name and choose **Rename** from the context menu. You can also rename a panel by left clicking on its name and pressing the **F2** key. SnapIns cannot be renamed.

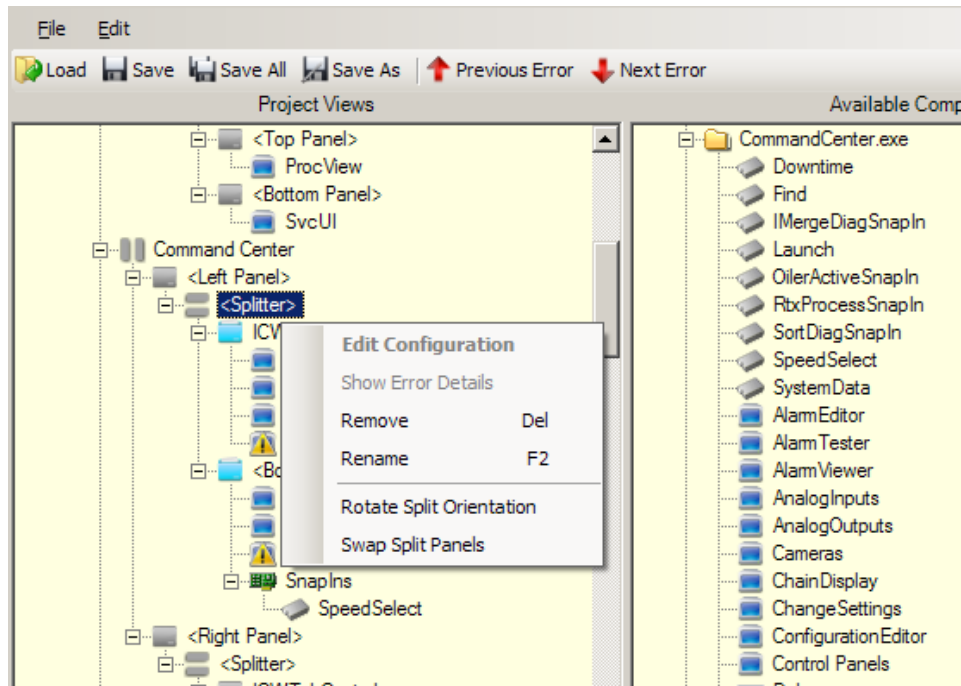
Figure 4-4 Panel Context Menu



4.5.5 Adding Splitters

Splitters are used to divide a screen into quadrants. Each quadrant can then be used to display a panel. This allows several panels to appear on the same screen and is useful for panels that are interrelated. It is also necessary for dependent panels that only display information or options as the result of an action that was made on another panel. Splitters can only be added to folders.

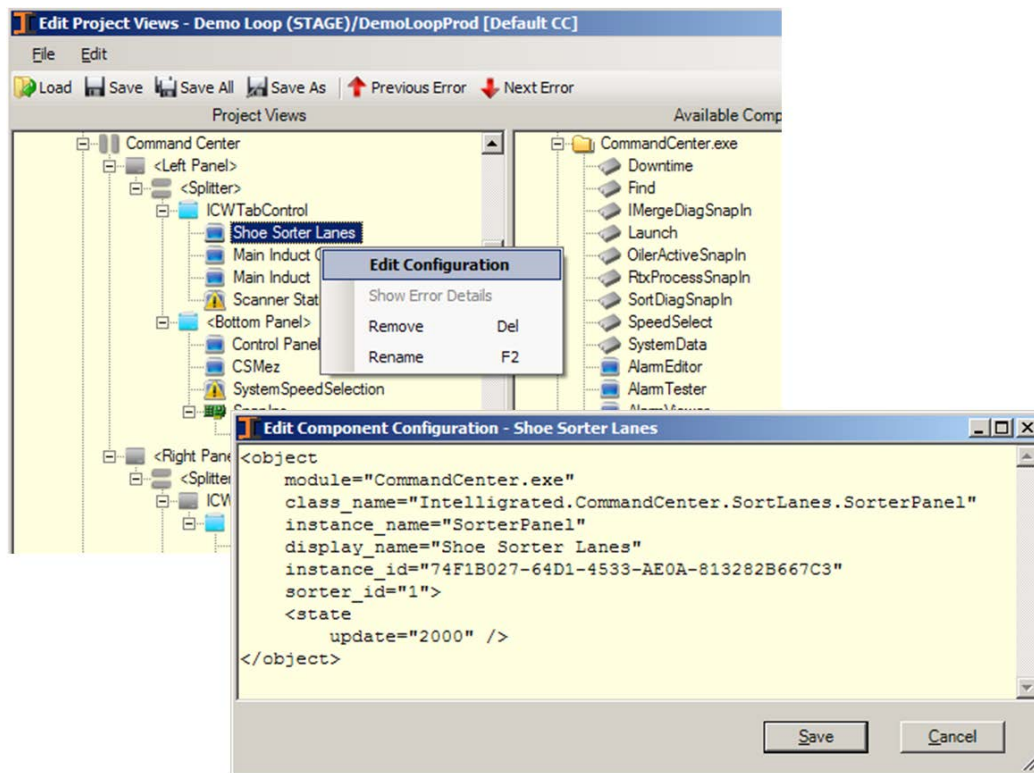
To add a splitter to a project view, right click on a folder and select either **New Horizontal Splitter** or **New Vertical Splitter** from the context menu. If you would like to change the orientation of a splitter once you have added it, right click on the splitter and select **Rotate Split Orientation** from the menu. To swap the left and right panels, or to swap the top and bottom panels, click on **Swap Split Panels** in the context menu.

Figure 4-5 Splitter Context Menu

4.5.6 Editing a Panel's Configuration

Some panels require configuration when you add them to a project view. As previously noted, you will be prompted to provide the configuration when you add the panel. If you would like to make changes to a panel's configuration later, right click on the panel's name and select **Edit Configuration** from the context menu. A configuration editor will appear allowing you to make changes to the XML for that panel.

Figure 4-6 Edit Panel Configuration



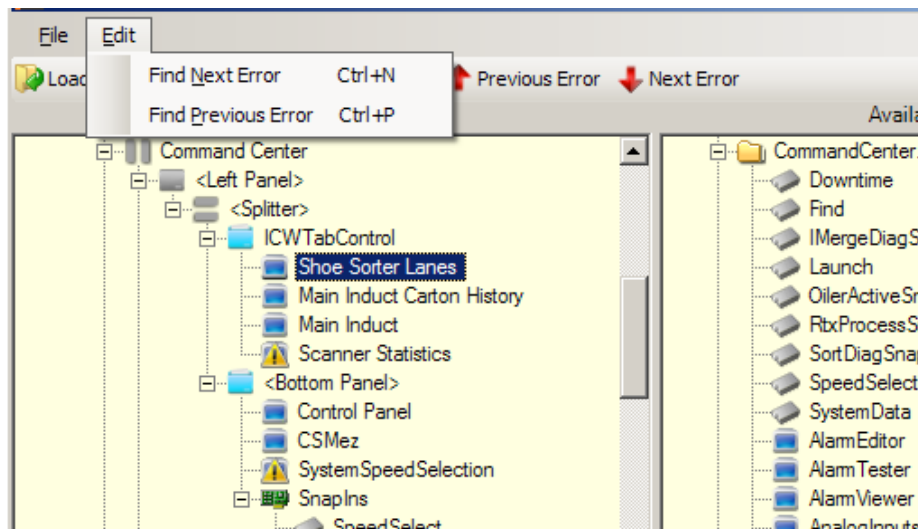
The elements and attributes in the editor will vary depending on the panel.

4.5.7 Finding Errors

If a panel or SnapIn is in an error state, it appears with an exclamation point (⚠) over it in the project view. You will need to diagnose and resolve each error individually. To find the next or previous error, use the **Edit** menu. Select the **Find Next Error** option to jump to the next error or select the **Find Previous Error** option to jump to the previous error. Both jumps are relative to the currently selected panel.

You can use the CTRL+N or CTRL+P shortcut keys to find the next or previous error. Alternately, you can use the toolbar buttons.

Figure 4-7 Project View Edit Menu



4.5.8 Adding the Finishing Touches

When you have finished adding and removing components from the project view, there are a few finishing touches that you can add to further customize it. These features are only available at the folder and quadrant level.

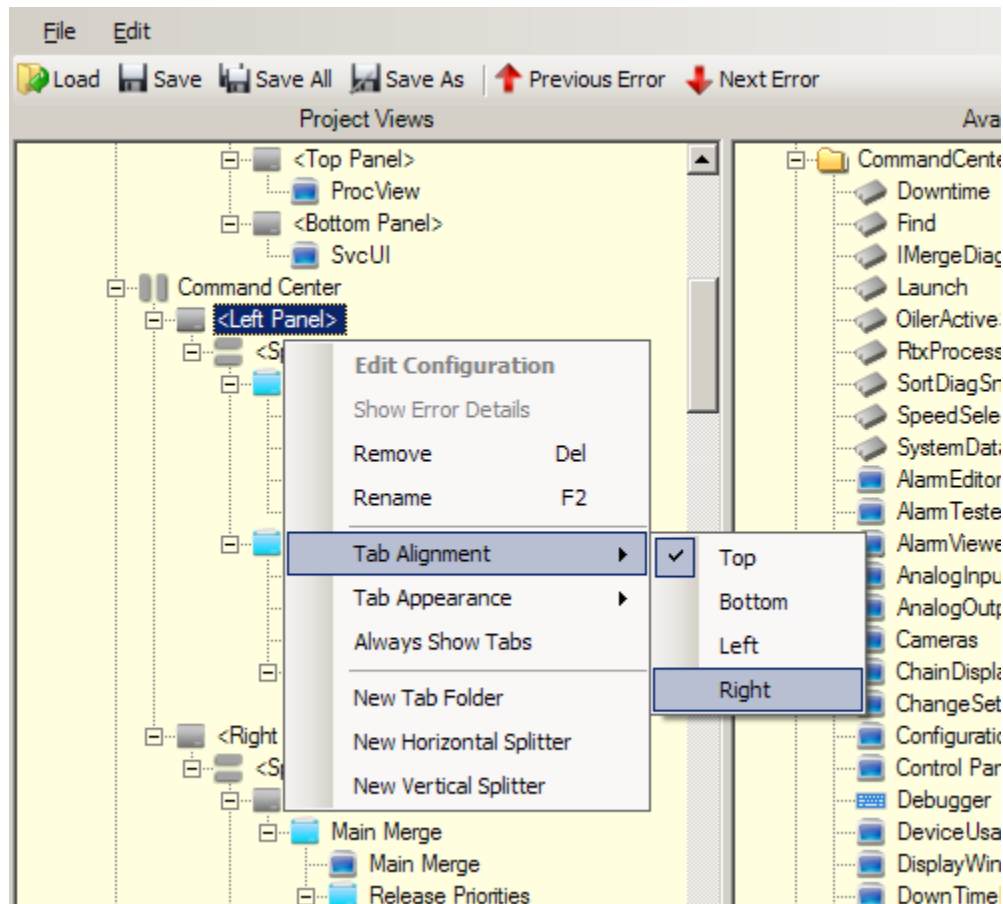
Tab Alignment

Tabs can be aligned along the top, bottom, right, or left edges of the panel. To configure where they will appear, complete the following steps:

1. Right click on a folder or quadrant to display a context menu.
2. Highlight the **Tab Alignment** option to display its sub-menu.



3. Select the **Top**, **Bottom**, **Right**, or **Left** option to indicate where the tabs in that folder will be displayed.



Tab Appearance

Tabs can have a normal, raised button, or flat button appearance. To select the type of tab you would like to use, complete the following steps:

1. Right click on a folder or quadrant to display the context menu.
2. Highlight the **Tab Appearance** option to display its sub-menu.

3. Select the **Normal**, **Buttons**, or **Flat Buttons** option to indicate how the tabs should look.

Figure 4-8 Normal Tabs

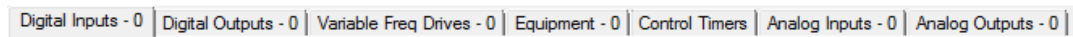
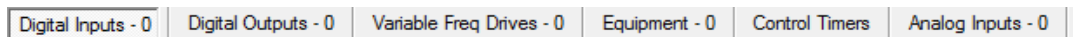


Figure 4-9 Button Tabs



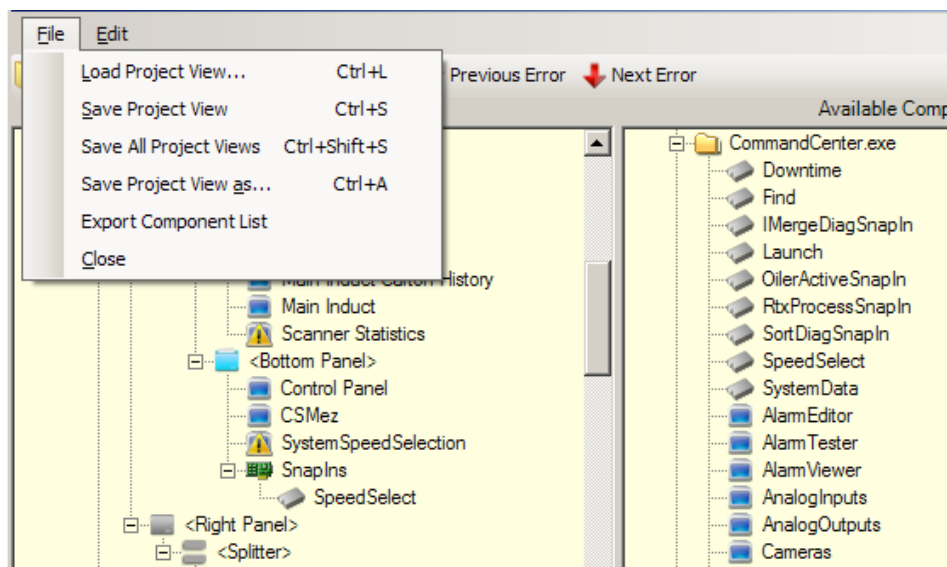
Figure 4-10 Flat Button Tabs



4.6 Working with Project Views

You can use the options in the File menu to load and save project views. Most of these options are also available in the toolbar beneath the menu bar.

Figure 4-11 Project View File Menu





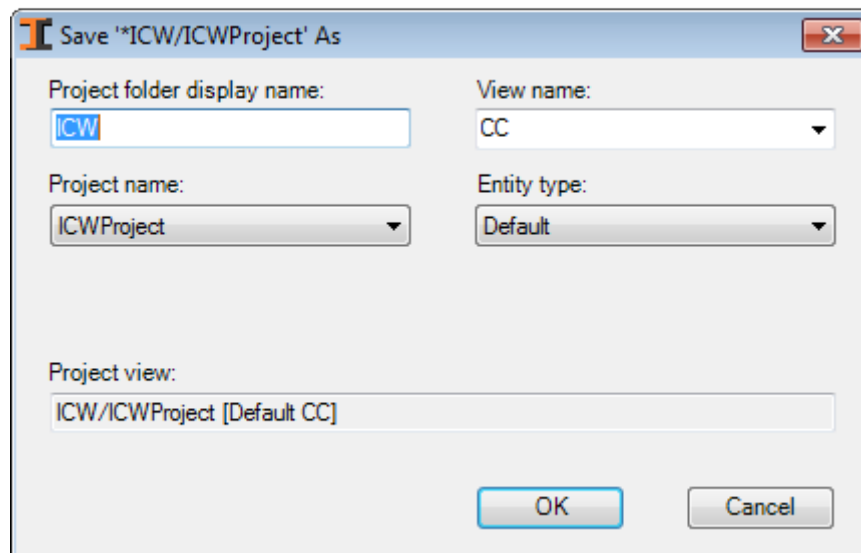
The options in the menu are described below.

Option	Description
Load Project View	Displays a list of all of the project views that have been created and saved on this workstation. To make a selection from the list, double click a project view.
Save Project View	Saves the current project view under its current name.
Save All Project Views	Saves all of the currently loaded project views using their current names.
Save Project View As	Displays a dialog box that lets you change the display name and project view name. You can also elect to save the view in a different project or change the project view type.
Export Component List	Exports the names of all of the panels and SnapIns in the Available Components list. A browser window is displayed so that you can enter a name for the file and store it at the location of your choosing.
Close	Closes the Project View Editor.

4.7 Assigning a Project View to a User or Group

You can assign project views to users and groups so that, whenever a user logs on, that project view will be displayed. To do so, complete the following steps:

1. Select **Save As** from the toolbar or **File** menu. A dialog box appears.



2. Complete the fields in the dialog box as follows:

Field	Description
Project Folder Display Name	Enter the display name of this project view. The name will be used on the root folder in the Project View hierarchy and on the view's tab when multiple views are displayed.
View Name	The name of the view. This name is also used by the <code>-app</code> command line switch.
Project Name	Select the name of the project under which this project view should be saved.
Entity Type	Select a type for this project view. Current allowable types are Default, User, and Group. If you select User or Group, a second dropdown list will appear. Use it to select the specific user or group to which you want to assign this project view.
Project View	This field is automatically populated as you make selections and cannot be edited.

3. Select **OK** to save your selections and close the dialog box. Notice that the new Project View name appears in the Project Views pane.

Shifts and Breaks

5

This chapter describes the panels that are used to configure shifts and breaks in InControlWare. To define shifts, as well as breaks associated with those shifts, you will complete the following process:

1. Define shifts on the Shift Information panel.
2. Make a selection from the Shift Information panel to populate the Shift Breaks panel.
3. Define breaks for the selected shift using the Shift Breaks panel.

5.1 The Shift Information Panel

The data grid on the Shift Information panel contains a list of all of the shifts that have been configured in InControlWare.

Figure 5-1 Shift Information Editor Panel

Shift Name	Shift Day of Week	Shift Number For Week	Shift Number For Day	Shift Start	Shift End
First	Sunday	1	1	6:00	16:00
Second	Sunday	2	2	16:00	2:00
First	Monday	3	1	6:00	16:00
Second	Monday	4	2	16:00	2:00
First	Tuesday	5	1	6:00	16:00
Second	Tuesday	6	2	16:00	2:00
First	Wednesday	7	1	6:00	16:00
Second	Wednesday	8	2	16:00	2:00
First	Thursday	9	1	6:00	16:00
Second	Thursday	10	2	16:00	2:00
First	Friday	11	1	6:00	16:00
Second	Friday	12	2	16:00	02:00
First	Saturday	13	1	06:00	16:00
Second	Saturday	14	2	16:00	02:00






The columns in the data grid contain the following information:

Column	Description
Shift Name	The name of the shift, such as "Thursday Morning" (maximum of 50 characters).
Shift Day of Week	The day of the week on which the shift occurs.
Shift Number for Week	This field is optional and will accept any integer value up to 10 digits. No logic or calculations are performed with this value and no meaning is assigned to this value. For this reason, any value that has meaning to the user can be entered.
Shift Number for Day	This field is optional and will accept any integer value up to 10 digits. No logic or calculations are performed with this value and no meaning is assigned to this value. For this reason, any value that has meaning to the user can be entered.
Shift Start	The start time for the shift in 24-hour notation (i.e., military time). Note: Do not specify overlapping shifts.
Shift End	The end time for the shift in 24-hour notation (i.e., military time). Note: Do not specify overlapping shifts.

5.1.1 Adding and Editing Shifts

Shift information can be edited and new shifts can be added using the Add/Edit Shift dialog boxes. To display these dialog boxes, right click on a row in the shift list to display the context menu and select a function.

Figure 5-2 Shift Information Panel's Context Menu

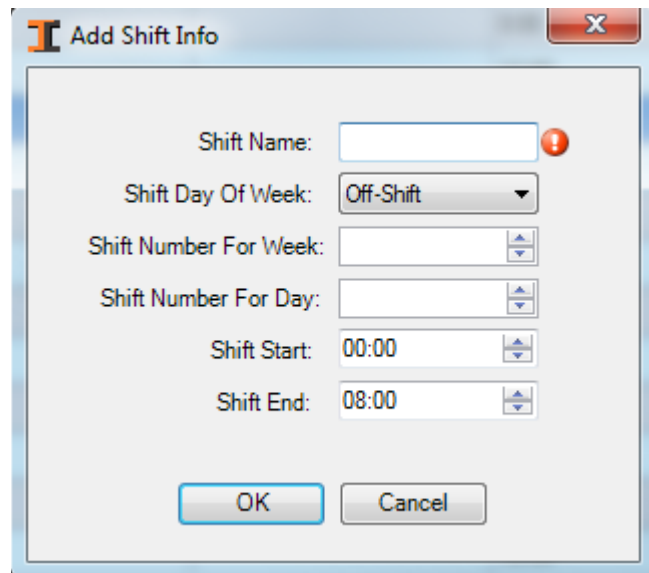
	Refresh	F5
	Copy Cell to Clipboard	
	Add	Ins
	Edit	Enter
	Delete	Del



Note

You must have Administrator level security clearance to see the Add, Edit, and Delete choices on this context menu.

Figure 5-3 Add/Edit Shift Information




Note

Fields that contain incorrect, invalid, or missing data will be marked with a red exclamation mark (❗). The OK button will not function until the errors are corrected. Hover over the exclamation mark to see a message describing the error.

5.2 The Shift Breaks Panel

The Shift Breaks panel is used to add, edit, and delete breaks in InControlWare. A break is considered to be any period of time during a shift in which employees are authorized to take time off from their jobs.

The Shift Breaks panel contains a list of the breaks that have been defined for a shift. The panel is empty until a shift is selected on the Shift Information panel. Double-clicking on a shift on that panel populates the data grid on the Shift Breaks panel. You can then add, edit, and delete breaks as needed.

Figure 5-4 Shift Breaks Panel

Shift Breaks associated with Shift Name: **First**
 Shift Day of Week: **Sunday**
 Shift Number for Week: **1**
 Shift Number for Day:

Name	Description	Start Time	End Time
Break 2	Break 2	06:00:00	16:00:00
Break	Break 1	12:00:00	01:00:00

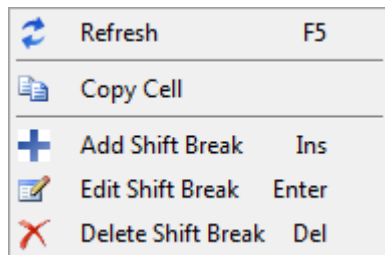
The fields and columns on the Shift Breaks panel contain the following information:

Field/Column	Description
Shift Breaks associated Shift Name	The name of the shift. This information is retrieved from the Shift Information Editor panel when a shift is selected on that panel.
Shift Day of Week	The number that corresponds to the day of the week. This information is retrieved from the Shift Information Editor panel when a shift is selected on that panel.
Shift Number for Week	This information is retrieved from the Shift Information Editor panel when a shift is selected on that panel.
Shift Number for Day	This information is retrieved from the Shift Information Editor panel when a shift is selected on that panel.
Name	The name assigned to the break, such as "Lunch."
Description	A description of the break.
Start Time	The time that the break starts in 24-hour notation (i.e., military time).
End Time	The time that the break ends in 24-hour notation (i.e., military time).

5.3 Adding, Editing, and Deleting Breaks

Once the Shift Breaks panel is populated, you can add, edit, and delete breaks. To do so, highlight a break in the list and right click. A context menu appears.

Figure 5-5 Shift Breaks Context Menu



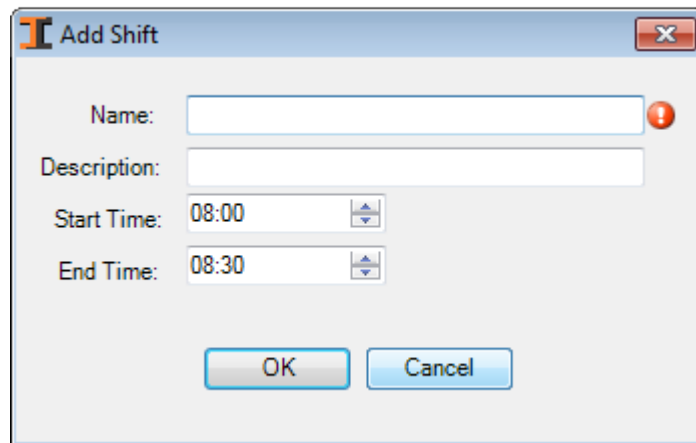
The following options are available on the menu:

Option	Description
Refresh	Retrieve new or updated information from the database and display it on the panel.
Copy Cell	Copy the contents of the cell at the cursor's position to the Windows clipboard. The information can then be pasted into other applications.
Add Shift Break	Display the Add Shift Break dialog box. You can use this dialog box to define a new break.
Edit Shift Break	Display the Edit Shift Break dialog box. You can use this dialog box to edit a break.
Delete Shift Break	Delete the selected break from the associated shift. A prompt will appear asking you to confirm the action.

5.3.1 Adding a Shift Break

You can use the Add Shift Break dialog box to define a new break.

Figure 5-6 Add Shift Break Dialog Box



The dialog box is titled "Add Shift" and contains the following fields and controls:

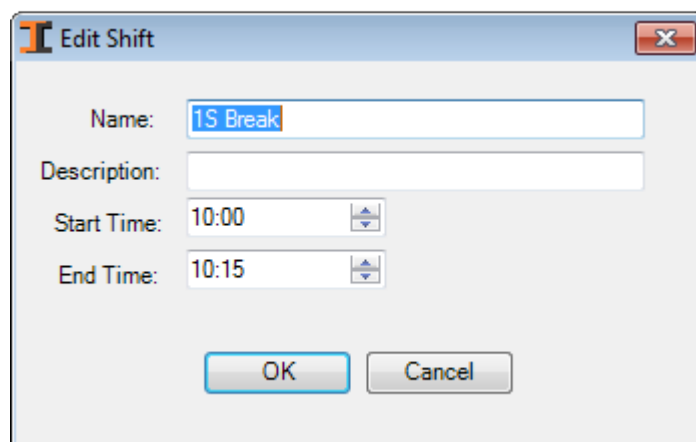
- Name:** A text input field with a red exclamation mark icon to its right.
- Description:** A text input field.
- Start Time:** A time selection field showing "08:00" with up and down arrows.
- End Time:** A time selection field showing "08:30" with up and down arrows.
- Buttons:** "OK" and "Cancel" buttons at the bottom.

To define a new break, enter a name and brief description for the break and then specify the starting and ending time of the break. The times must fall within the range of time defined for the associated shift. Select **OK** to save the new break.

5.3.2 Editing a Shift Break

You can use the Edit Shift Break dialog box to modify an existing break.

Figure 5-7 Edit Shift Break Dialog Box



The dialog box is titled "Edit Shift" and contains the following fields and controls:

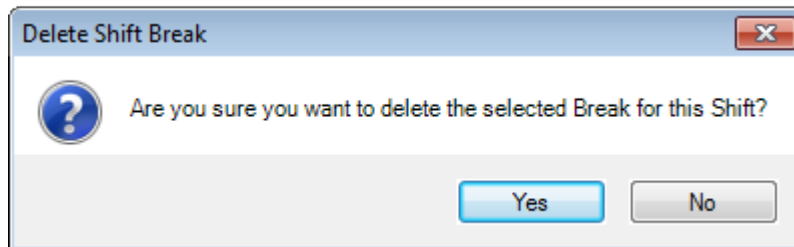
- Name:** A text input field containing "1S Break" with a blue selection highlight.
- Description:** A text input field.
- Start Time:** A time selection field showing "10:00" with up and down arrows.
- End Time:** A time selection field showing "10:15" with up and down arrows.
- Buttons:** "OK" and "Cancel" buttons at the bottom.

You can make changes to the name, description, and start/end time. The times must fall within the range of time defined for the associated shift.

5.3.3 Deleting a Shift Break

To delete a shift break, highlight it in the Shift Breaks list and right click to display the context menu. Select **Delete Shift Break** from the context menu. A prompt appears.

Figure 5-8 Delete Shift Break Prompt



Select **Yes** to delete the break.

Component Update Rates

6

6.1 Introduction

Most InControlWare panels contain data that must be updated periodically. The frequency with which this data must be updated depends on the nature of the data itself and the needs of the facility in which the InControlWare software is running. Component update rates allow the update rate for each panel to be adjusted as needed.

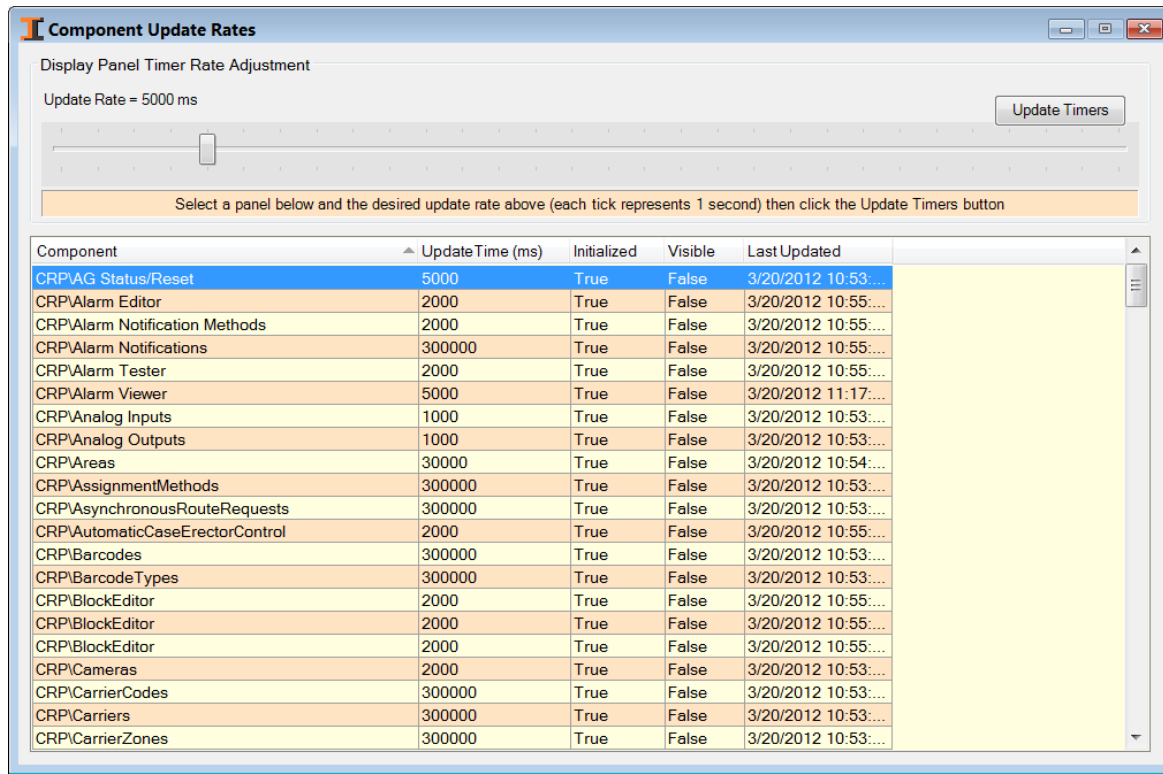


Note

The effects of component update rates are local. That is, changes made to the update rate only affect the workstation on which the adjustment is made.

To make adjustments to component update rates, select **Component Update Rates** from the **Administration** menu. The Component Update Rates dialog box appears.

Figure 6-1 Component Update Rates Panel



To change a component update rate, complete the following steps:

1. Select the update rate(s) in the list that you would like to change.



Note

Press SHIFT as you click to select multiple rates that appear consecutively in the list. Press CTRL as you click to select multiple rates that are not listed consecutively.

2. Use the slider above the list to increase or decrease the update rate. Notice that the **Update Rate =** field in the upper left corner of the dialog box adjusts as you move the slider.
3. Select **Update Timers** to apply your change to the update rate. The new rate will appear in the **Update Time (ms)** column in the list.

TraceView

7

7.1 How to Configure ICW Tracing

In order to make debugging InControlWare easier, a trace file is used to record application configuration, exceptions, and code paths taken. The trace file is used by the user interface and InControlWare services.

7.1.1 System Requirements

The following requirements must be met in order to use trace output:

- The Windows user account must have access to the trace file directories.
- The Windows user account must be granted the **Create global objects** local security policy.
- User Account Control (UAC) must be disabled. UAC is a security feature added by Microsoft starting with Vista and Server 2008. If UAC is enabled, the InControlWare client will fail to load, reporting an error creating the memory mapped trace file writer. The only way around this is to start the client as an administrator.

7.2 How Optional Trace Output Works

7.2.1 Optional Trace Output Summary

To enable trace output by the user interface or Windows Services, MemoryMappedTraceFileLibrary.dll must be present in the installation directory. All trace output can be easily disabled by removing this file. Optional trace output is controlled by XML attributes in the Config.xml file.



Note

Be sure MemoryMappedTraceFileLibrary.dll exists in the installation directory. If it is not, no trace output is generated by the user interface or Windows Services.

7.2.2 Turning Trace Output On and Off

When the InControlWare user interface or Windows Services are started, they write a <trace> XML element to the current trace file:

```
<trace  
  is_trace_xml_helper_echo_import_config="False"  
>
```

To determine the available trace output options, copy and paste this into the Config.xml file under the main <configuration> XML element and change the value to True.

```
<trace  
  is_trace_xml_helper_echo_import_config="True"  
>
```

Then, the next time the InControlWare user interface or services are started, they output <trace> XML elements showing all of the options available. Copy and paste the options you need into the Config.xml file. If Config.xml does not contain a <trace> element, you must create one. Be sure there is one and only one <trace> element, because any <trace> elements after the first one are ignored. Also make sure that any sub elements of trace are copied to Config.xml exactly as they appear in the trace output.

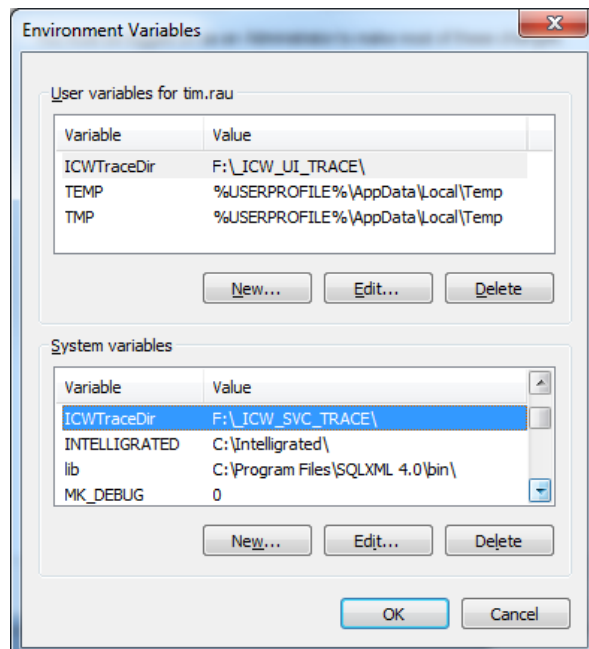
7.2.3 Setting Trace File Locations

The default trace file directory can be configured for different computers and users by setting environment variables. Tracing uses the following logic to determine the trace file directory:

- Look for the ICWTraceDir environment variable. If found, use its value as the trace files directory.
- Otherwise, look for the ICWLogDir environment variable. If found, use its value as the trace files directory.
- Otherwise, look for the LogDir environment variable. If found, use its value as the trace files directory.
- Otherwise, use "C:\Intelligent TraceFiles" as the directory.

Please note that the Windows Services used by InControlWare will not use any user variables, only system variables. The InControlWare user interface will use any user variables first, then any system variables. If different user variables and system variables are set, it is possible for the InControlWare user interface and the Windows Services to write to two different trace files.

Figure 7-1 Environment Variables



7.3 Configuring Additional Trace Output Options

Trace functionality is implemented by trace listeners, which is the software that records the trace messages sent by the user interface and InControlWare services. It is configured in the `trace_listener` node as in the following example:

```
<trace>
  <trace_listener
    class="MemoryMappedFileTraceListener"
    min_age_in_days="7"
    max_age_in_days="30"
    min_free_disk_space_bytes="1073741824"
  />
</trace>
```

where,

Attribute	Description
class	Trace Listener. The default is MemoryMappedFileTraceListener.
base_trace_file_spec	Base trace file specifier. Default is ICW.
min_age_in_days	Minimum number of days to keep old trace files.
max_age_in_days	Maximum number of days to keep old trace files.
min_free_disk_space_bytes	Minimum amount of free disk space to leave (bytes).
max_write_rate_kb_sec	Maximum desired write rate (KB/sec; 0 for no limit).
is_error_message_box_wanted	True to pop up message box on error, else False.
is_threadless_mode	True to perform inline service routine. False to create dedicated service thread.

The current date is appended to the trace file name in the form YYYY-MM-DD WWW where YYYY is year [0000-9999], MM is month [01-12], DD is day [01-31], and WWW is the day of the week [Sun, Mon, Tue, Wed, Thu, Fri, or Sat]).

Files older than 'max_age_in_days' are deleted (0 means don't keep old log files, 1 means keep only yesterday's file, and -1 means never delete old trace files).

The 'min_free_disk_space_bytes' attribute specifies the minimum free disk space needed for writes to be allowed. If free disk space falls below this threshold, PCMemoryMappedTraceFileWriter::DeleteOldTraceFiles() is called, looping from max_age_in_days down to min_age_in_days and attempting to free up disk space by deleting old trace files. If sufficient space still cannot be freed, m_IsLowFreeDiskSpace is set to TRUE. This causes subsequent calls to the PCMemoryMappedTraceFileWriter::Write() methods to discard trace output.

If the output 'isFailed' is TRUE, an error occurred during initialization, and PCMemoryMappedTraceFileWriter::Close() has been called.

Once PCMemoryMappedTraceFileWriter::Close() has been called, subsequent calls to PCMemoryMappedTraceFileWriter::Write() are ignored.

If max_write_rate_kb_sec is set to a value other than zero and the average write rate exceeds the specified value, delays are inserted into write operations until the average falls back to the desired value.



Important

Because the added delays are synchronous, they slow down the execution of the calling thread and, therefore, have a negative impact on performance.

Setting 'is_threadless_mode' to True hampers performance, but allows DLLs to perform logging without concern for the state of the Windows "OS Loader Lock" (in other words, if 'is_threadless_mode' is True, tracing will work from within the DllMain() function and from within the C runtime startup code for a DLL).

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