Honeywell

Experion PKS
System Management Operations Guide

EPDOC-X142-en-431A
February 2015

Release 685

Honeywell

Document	Release	Issue	Date
EPDOC-X142-en-431A	685	0	February 2015

Disclaimer

Contents

1 About This Document

This document introduces the user to System Management tasks and monitoring node and component status. Managing component operations is also explained.

Revision History

Revision	Date	Description
A	February 2015	Initial release of the document.

2 References

The following list identifies all documents that may be sources of reference for material discussed in this publication.

Document Title	Document ID
System Management Configuration Guide	EPDOC-X141-en-410
Redirection Manager User's Guide	EPDOC-X116-en-410
Fault Tolerant Ethernet Status Display User's Guide	EPDOC-XX38-en-410
Fault Tolerant Ethernet Installation and Service Guide	EPDOC-XX36-en-410
TPN Server User's Guide	EPDOC-X143-en-410A
CL Server User's Guide	EPDOC-XX12-en-410
Configuration Utilities User's Guide	EPDOC-XX14-en-410A
OPC Specification Reference Manual	TP41

3 Introduction to System Management Operations

3.1 What are System Management Operations?

System Management represents the activity of managing your process control system through the use of Honeywell system management tools. Many of your system management tasks can be accomplished through the System Management Display.

Tip
Experion users can perform system management functions using the Network Tree in Configuration Studio. Refer to the *Server and Client Configuration Guide* for Network Tree tasks for more information.

3.1.1 What is the System Management Display?

The System Management Display is your interface for using System Management functionality. The display provides a hierarchical view of Windows domains, TPS Domains, Computers, and HCI Component Status.

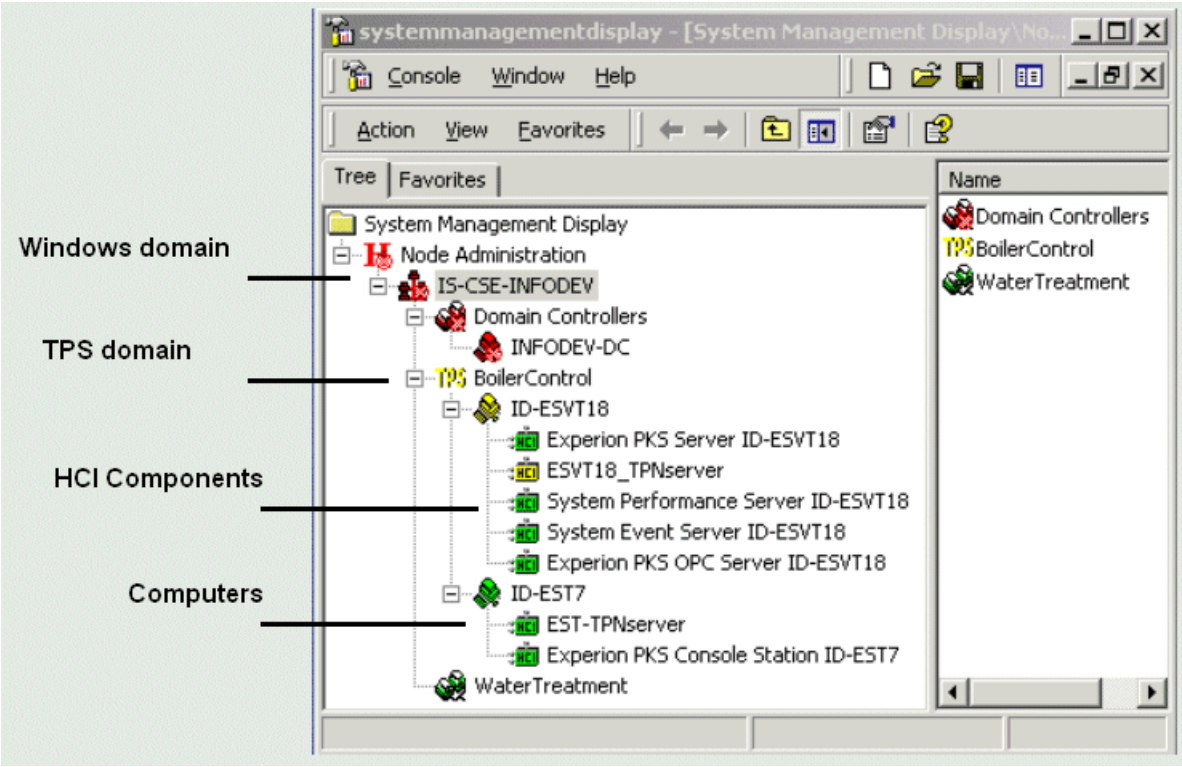


Figure 1: System Management Display

3.1.2 How can you use the System Management Display?

From the System Management Display, you can:

- Visually determine the status of nodes and components;
- Display, acknowledge, and clear events;
- Configure nodes or HCI components locally or remotely.

3.1.3 System Management Display supports Experion workgroups

The System Management Display also supports Experion workgroup configurations. The following figure shows an example Experion workgroup configuration.

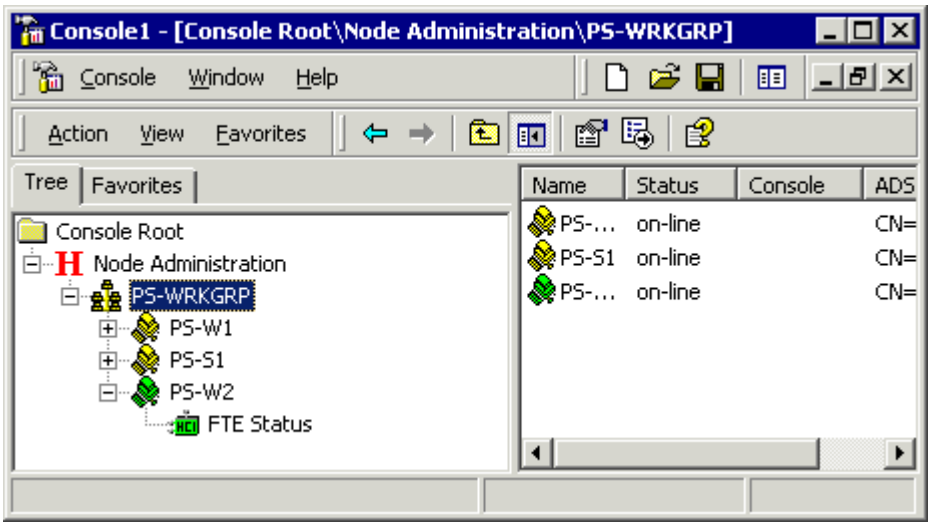


Figure 2: Example of Experion Workgroup

3.1.4 System Management Display supports configuration

TPS Domains and consoles appear in the System Management Display when initially configured as Active Directory Organizational Units. The System Management Display also provides a configuration window for HCI component and node configuration, and for TPS Domain, console, HCI components, and configuration tasks described in the *System Management Configuration Guide*.

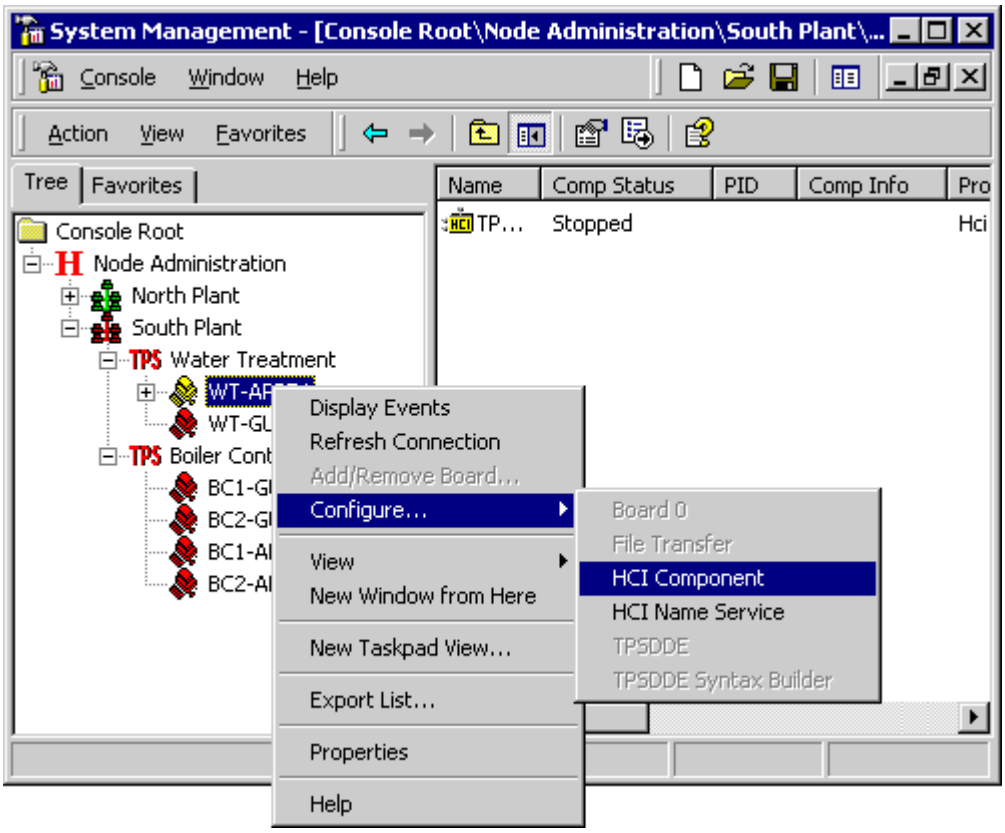


Figure 3: Configuration from System Management Display

3.1.5 Your plant's System Management Display views will be different

Your plant's System Management Display views may differ from the examples shown herein because the user can customize the System Management Display. Refer to Microsoft Online Help for more information about the menu selections that support customization.

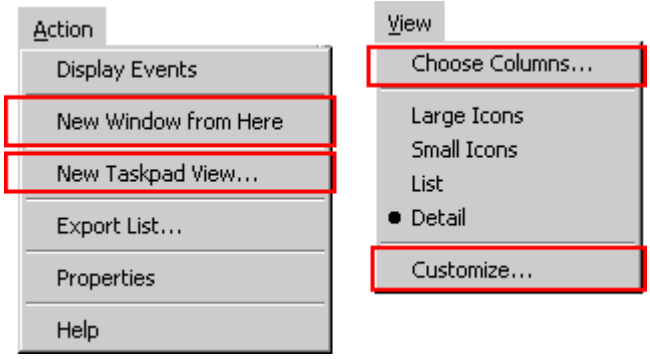


Figure 4: Display Customization

3.1.6 MMC files can be shared

System Management views are maintained in console (*.msc*) files that are saved by default on the hard disk of your computer. Console files are sometimes created on each computer, or pre-existing console files can be copied to different computers. Console files may also be saved in a shared or replicated location.

3.1.7 System Management Display appearance on Windows XP systems

The System Management Display on Windows XP systems appears with a single menu bar, where the File menu replaces the Console menu. System Management display operations remain the same for both Windows 2000 and Windows XP systems.

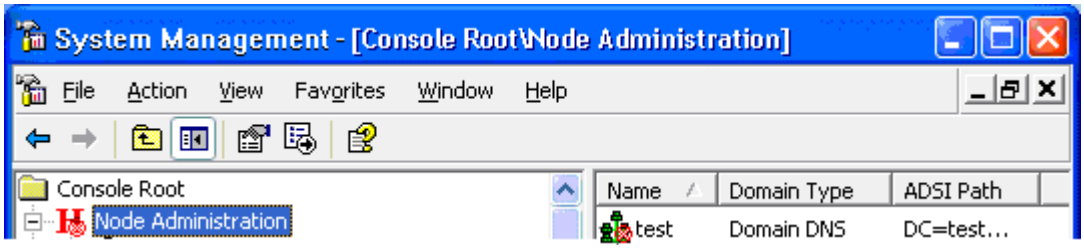


Figure 5: System Management Display Appearances on Windows XP

3.2 System Management Display Organization

A System Management Display is divided into the following three parts:

- Menu and headers are the common and customized controls display at the top of the window, which are used to control window or item behavior.
- Scope pane is the left pane of the console window used to display a tree-view of installed snap-ins, domains, workgroups, TPS Domains, and computers.
- Results pane is the right pane of the window that is used for displaying information about the item selected in the scope pane. The results pane provides customizable columns for the scope pane item. The results pane also displays any user-configured consoles when a TPS Domain or Experion workgroup is selected.

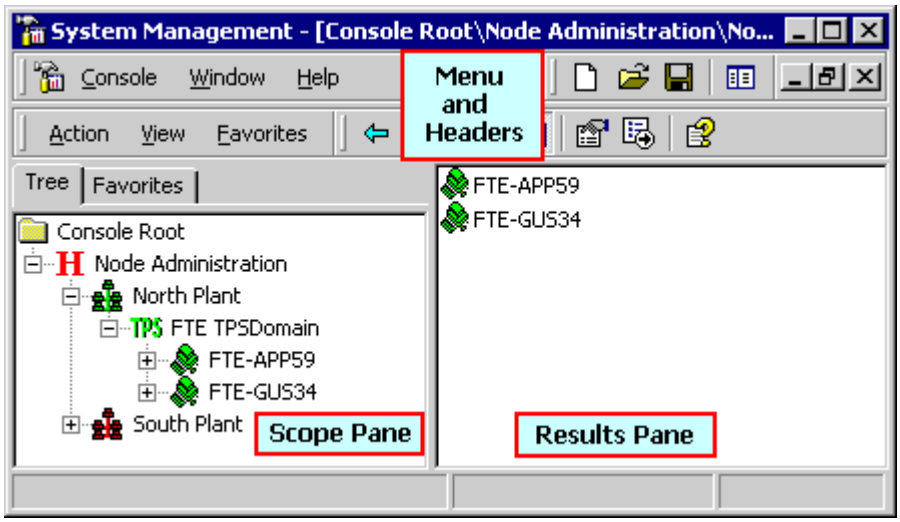


Figure 6: Display Organization

3.2.1 System Management Display scope pane content

Each domain or child domain appears below the Node Administration root of the System Management view. Domains may be subdivided into any number of TPS Domain Organizational Units. Domains and TPS Domains, themselves, contain computers.

From any defined hierarchy of monitored objects, a subtree may be selected for viewing in a new window. In the following figure, a new window created at the TPS Domain level provides a simplified view of the desired TPS domain.

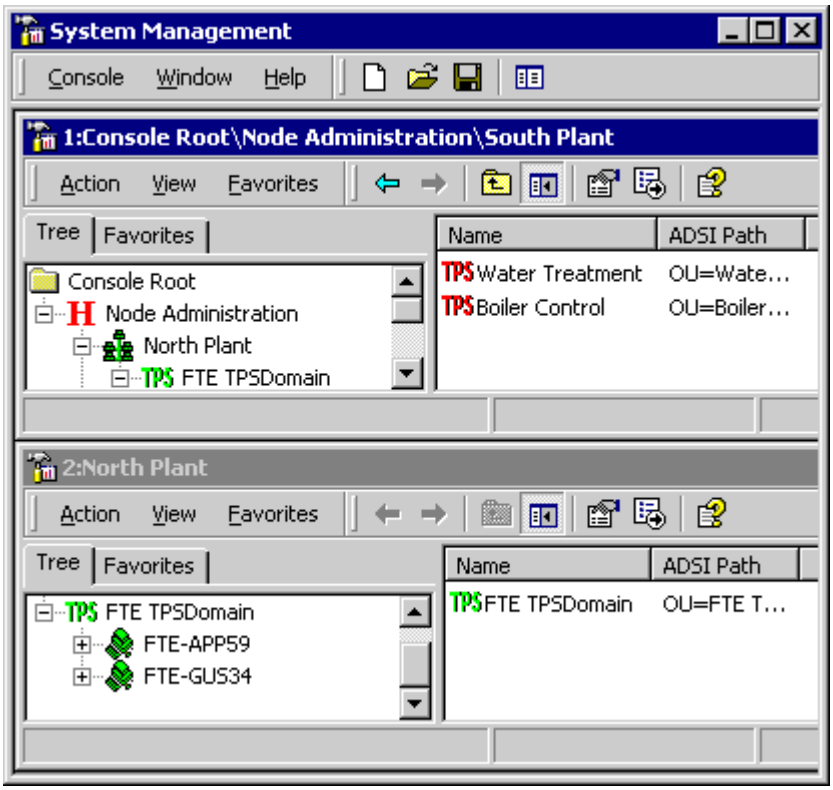


Figure 7: Viewing a Subtree

Tip
All windows or a subset of those windows may be viewed and/or saved in a console file for recall.

3.2.2 System Management Display result pane content

The console result pane contents are dependent on the scope pane item selected and the current view mode (that is, large icons, small icons, list, and detail).

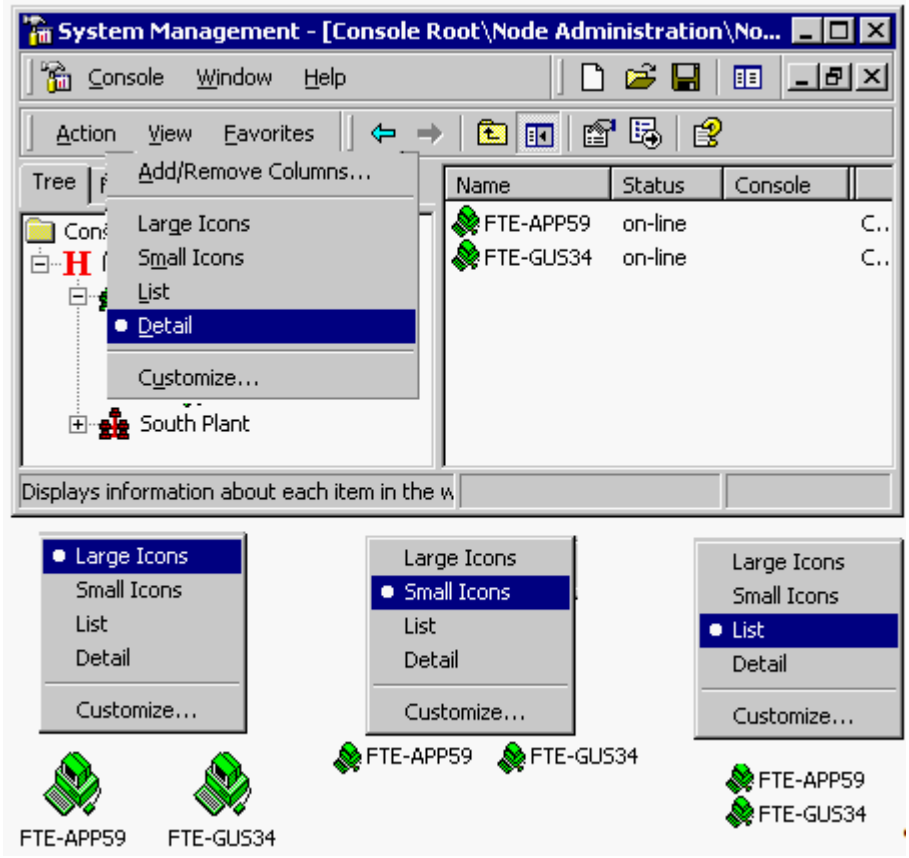


Figure 8: Results Pane Views

3.2.3 Result pane view mode

The Detail (default) view mode displays textual representations of scope pane item data in a multi-column format in the results pane. Displayed columns and their display order are customizable when you click **View** > **Add/Remove Columns**. Columns may be sorted by clicking column headers.

In Detail view mode, managed component status information is displayed in the result pane when a component is selected in the scope pane.

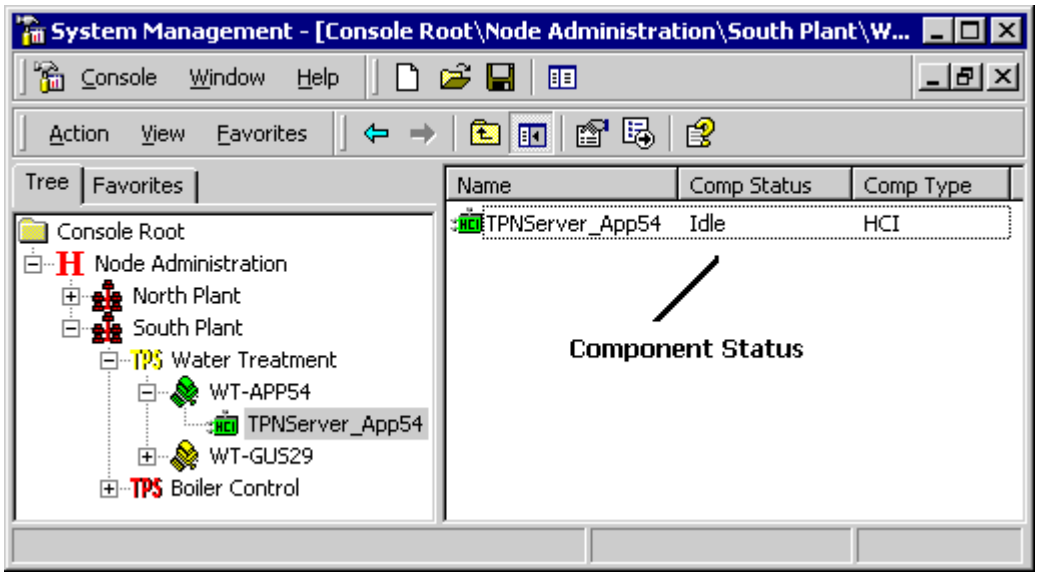


Figure 9: Component Status Example

3.2.4 Auxiliary Status Display appears in result pane

Each managed component may provide an Auxiliary Status display that provides component-specific configuration and status information.

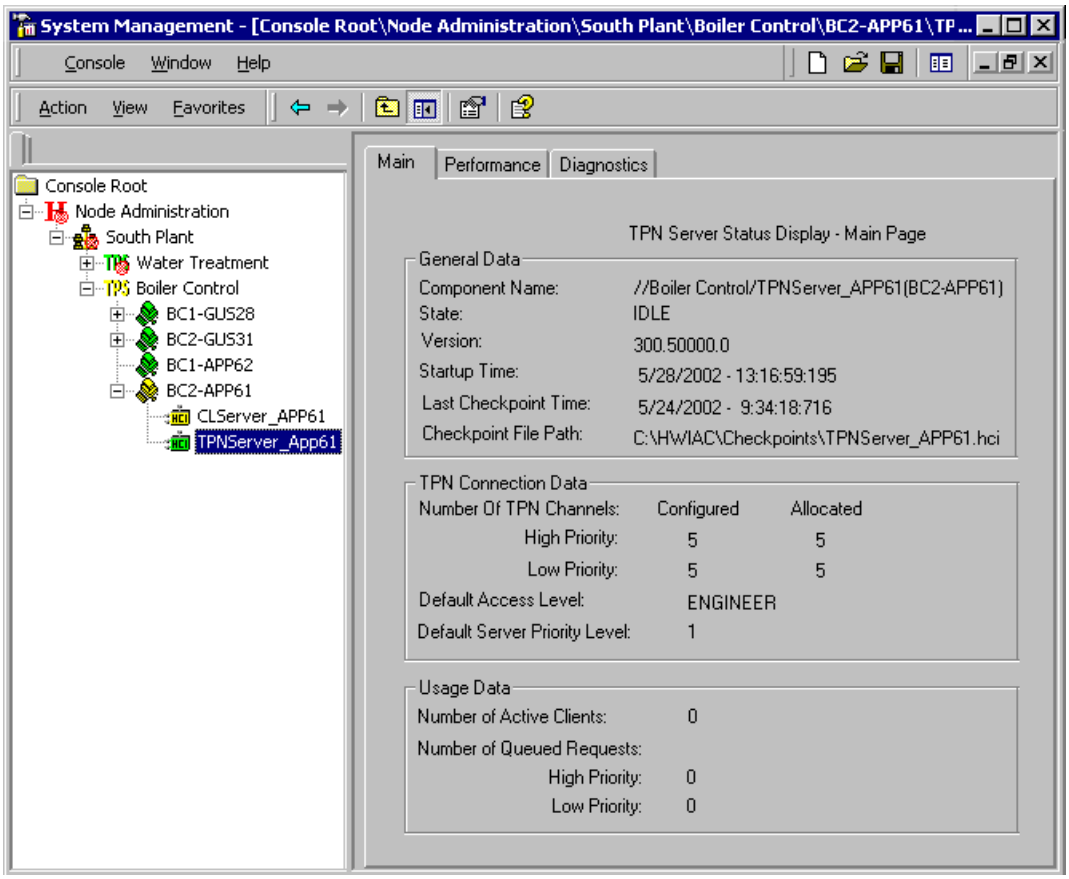


Figure 10: Auxiliary Status Display Example

An Auxiliary Status Display is accessed when you select Auxiliary Display from the component menu.

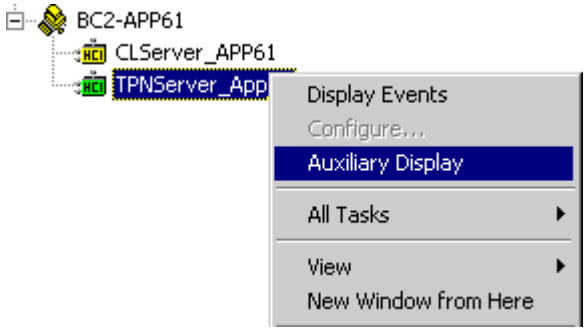


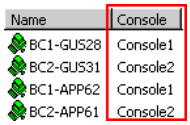
Figure 11: Auxiliary Status Menu Selection

The Auxiliary Status Display may have one or more pages depending on the component type.

3.3 System Management Display Items

The following table lists System Management Display items.

Table 1: System Management Display Items

Display item	Explanation
Windows 2000 domain: 	A Windows domain is a logical grouping of networked servers, computers, and devices that share common security and user-account information in a directory database. In the System Management Display, a Windows domain can contain Organizational Units such as the TPS Domain and Consoles as well as computers.
Windows 2000 workgroup: 	A Windows 2000 workgroup represents a group of users that share a common purpose and operate from interconnected computers. In the System Management Display, a workgroup contains computers.
	A TPS Domain provides a more granular grouping than a Windows domain. TPS Domains are Organizational Units within the Active Directory. When you expand a TPS Domain, the Organizational Unit item displays any Active Directory contained child computers.
Console: 	A console provides a grouping of similar process control computers within a TPS Domain. A console is defined as an Organizational Unit within the Active Directory.
Computer: 	A computer represents the individual device connected to the network. A computer can optionally contain and display one or more HCI Components.
HCI component: 	An HCI component is a software entity that can be named and established in a manner compliant with the TPS and/or Experion PKS system. A TPN Server is an example of a HCI component. Other examples include FTE Status, TPN, CL, and RDM servers. Each HCI component may also provide a device-specific Auxiliary Status Display and an HCI Component configuration page. HCI components are one of the following types: • **Local component**: A component intended to be accessed with the local host node's client applications. FTE Status, Redirection Manager (RDM), IO Map, and NWDDB (NodeWide Database) servers are examples of local components. • **Domain component**: A component that can be accessed with the local host node's client applications or remotely from another node's client applications. TPN Server and CL Server are examples of domain components. An HCI component that can be monitored from the System Management display is considered a “managed” component. Managed components include FTE Status, RDM, NWDDB, TPN, System Event Server (SES) status, System Performance Server (SPS) status, and CL Servers. Components that cannot be monitored are considered non-managed; IO Map is considered a non-managed component.

Display item	Explanation
Microsoft Management Console	MMC provides a host environment for management applications called snap-ins, snap-ins are available from Microsoft and Honeywell. Snap-ins performs the actual management behavior; the MMC, itself, does not provide any management functionality. The term console used in this context refers to a Microsoft Management Console. It is in no way related to the concept of process control consoles.
Organizational Units (OUs): 	Organizational Units (OUs) are Active Directory containers for users, groups, computers, and other organizational units. In the System Management Display, TPS Domains and Consoles are OUs.
System Management Display	The System Management Display includes the Node Administration snap-in. Domains, workgroups, TPS Domains and computers are organized into areas of interest or responsibility and appear below the Node Administration snap-in.
Root: 	The Node Administration root represents the Honeywell snap-in that allows a user to configure a System Management Display. All System Management Display items appear in tree view underneath the root.
Events: 	Events can be informational, warning, or error occurrences presented in the System Management Display and in its Event Summary. Events can be one of the following: • **Internal events** generated by the snap-in. • **System events** are defined in the event filters. System events are frequently generated by an HCI managed component. An example of a system event is a TPN Server changing from a stopped state to an idle state. Refer to Section 2 for a description of system events.

3.4 System Management Display Behaviors

The following table describes the behavior of the System Management Display of scope pane items.

Table 2: System Management Display Behaviors

Scope Pane Item	Display Behavior
Domain or TPS Domain:  Computer:  Managed Component:  	*Note*: The described behavior is the same for all items. Each item icon will be displayed in one of three colors indicating the composite state of the item and all contained child items. • **Green** color represents normal operations. It indicates the item and all sub items are in the normal operating state. No sub items are in either the marginal or the failed state. • **Yellow** color represents a marginal condition. It indicates that this item or at least one sub item is in a marginal condition requiring attention. No sub items are in the failed state. • **Red** color represents a failed state. It indicates that this item or at least one sub item is in a failed state requiring immediate attention.

Event Conditions

In addition to the green, yellow, and red colors representing the item state, each scope-pane item can have an event-condition image superimposed on the item when events occur that require attention. Informational events do not have an event condition and will not have an event-condition image superimposed on the item.

To call up the Event Summary for an item, right-click on the item and select Display Events from the context menu to view detailed information about the event.

Table 3: Event-Condition-Image Behaviors

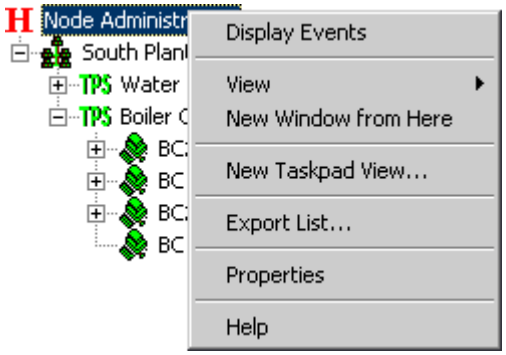
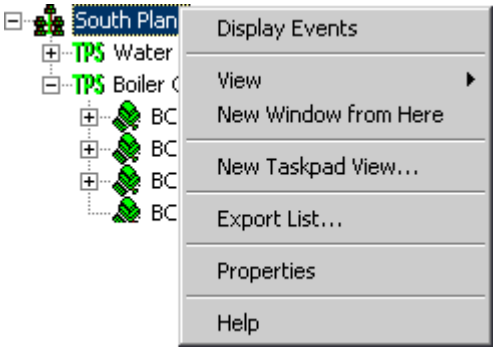
Event Condition Image	Meaning of Indication
Unacknowledged Warning (Yellow): 	At least one warning event requiring acknowledgement has appeared on the Event Summary for this item or any sub item. Also indicates that no error conditions exist at or below this level.
Acknowledged Warning (Yellow border): 	All warning events have been acknowledged for this item or any sub item. Also indicates that no error conditions exist at or below this level.

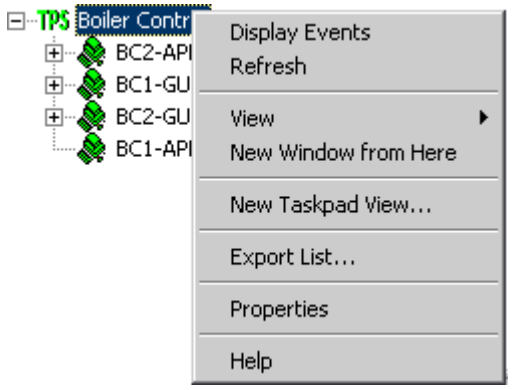
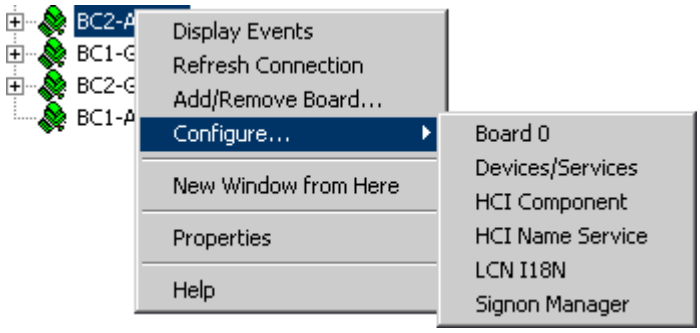
Event Condition Image	Meaning of Indication
Unacknowledged Error (Red): 	At least one error event requiring acknowledgement has appeared on the Event Summary for this item or any sub item.
Acknowledged Error (Red): 	All error events have been acknowledged for this item or any sub item. Also indicates that no error conditions exist at or below this level.

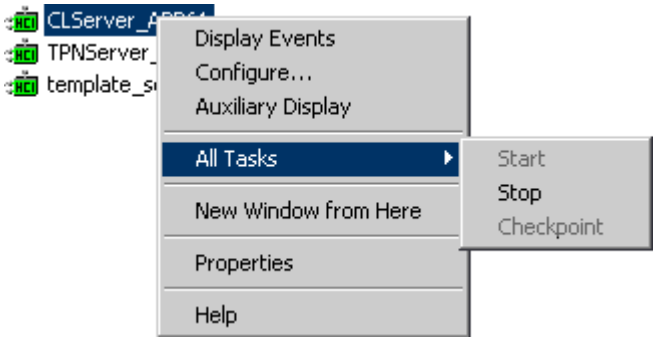
3.5 System Management Display Operations

The following table lists System Management Display operations performed from context menu selections. Refer to Microsoft online help for the MMC menu selections.

Table 4: System Management Display Operations

Display Item	System Management Context Menu Selections
Root:  Node Administration	 **Display Events** shows events associated with domains and workgroups. **Properties** list Node Administration snap-in properties.
Windows 2000 domain or workgroup: 	 **Display Events** shows events associated with the domain or workgroup. **Properties** list Windows domain or workgroup properties.

Display Item	System Management Context Menu Selections
TPS TPSDomain	 **Display Events** shows events associated with the TPS Domain. **Refresh** updates the connections to nodes associated with the TPS Domain. **Properties** list TPS Domain properties.
Computer: 	 **Display Events** shows events associated with the computer (node). **Refresh Connection** updates the connections to the computer. **Add/Remove Board** appears for nodes with LCNP boards. **Configure** accesses HCI Component configuration and HCI Name Service. Depending on the node type, additional selections may appear. **Properties** list computer properties.

Display Item	System Management Context Menu Selections
HCI component:  	 **Display Events** shows events associated with the component. **Configure** accesses Server-specific Configuration pages. **Auxiliary Display** selection (if available for the component) accesses an Auxiliary Status display specific to that component. **All Tasks** provides available component operation commands such as start, stop, and checkpoint. **Properties** list component properties.

3.5.1 About computer operations

You cannot perform computer (node) operations from the System Management Display such as starting or shutting down a node or loading its personality. To do these operations, follow the procedures described in their respective system operation manuals.

4 Monitoring Node and Component Status

Related topics

“Starting the System Management Display” on page 28
“Responding to Events” on page 32
“Events appear in Event Summary” on page 35
“Acknowledging events” on page 38

4.1 Starting the System Management Display

A System Management Display can be started in one of the following ways:

- From the Start Menu
- From the Run Command
- From a configured console that contains the System Management Display
- From a link in the Experion System Status if using an Experion node

From the Start Menu

Use one of the following paths to call up the System Management Display. The path depends on the type of system you have (Honeywell Experion PKS or Honeywell TPS).

- For a Honeywell Experion PKS System:

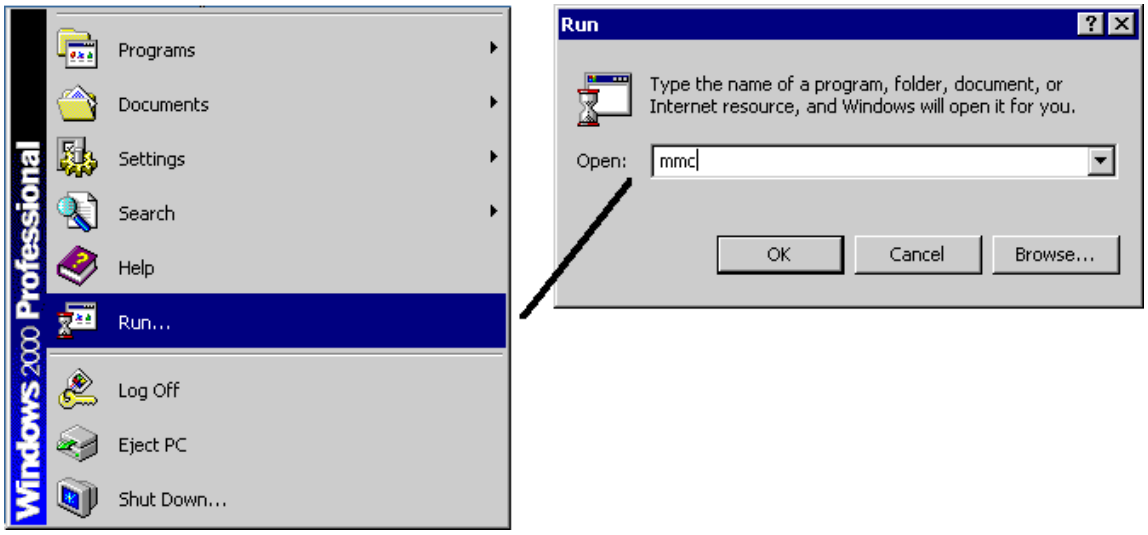
  Start > **Programs** > **Honeywell Experion PKS** > **System Management** > **System Management Display**
- For a Honeywell TPS System:

  Start > **Programs** > **Honeywell TPS System Management** > **System Management Display**

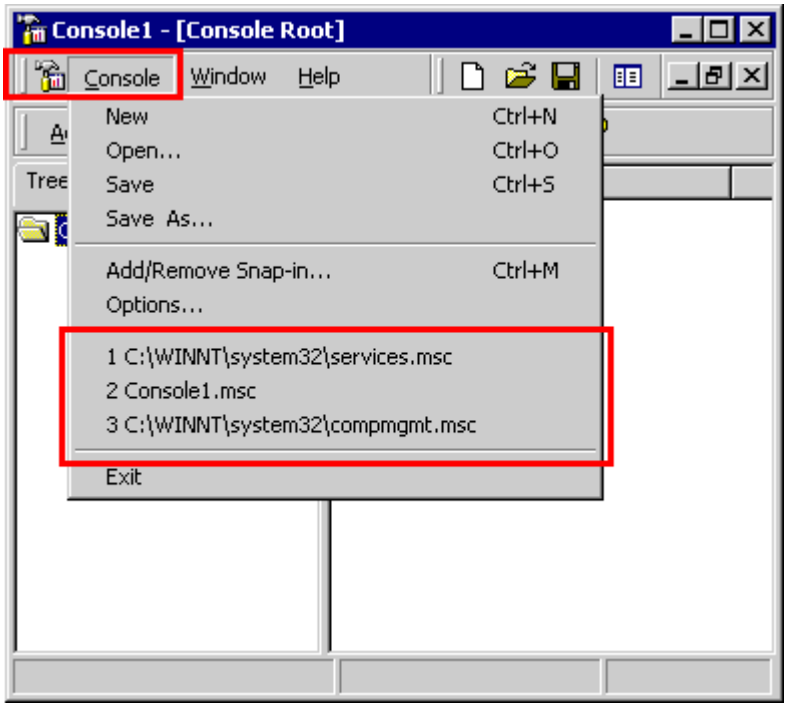
From the RUN Command

Do the following procedure to start the System Management Display from the RUN command.

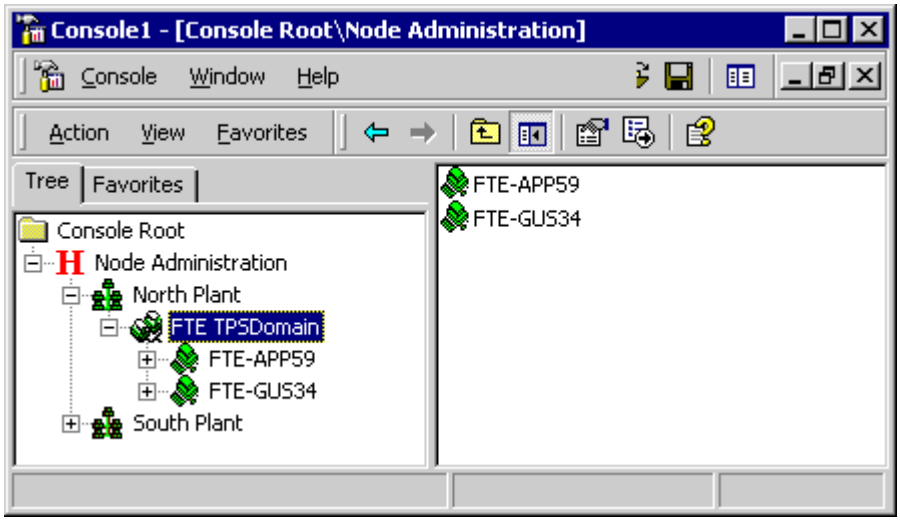
1. Select **Run** from the **Start** menu and type “mmc” in the command line.



   Result: The Microsoft Management Console appears.
2. Select a previously saved console view and respond to any request for User ID and password.



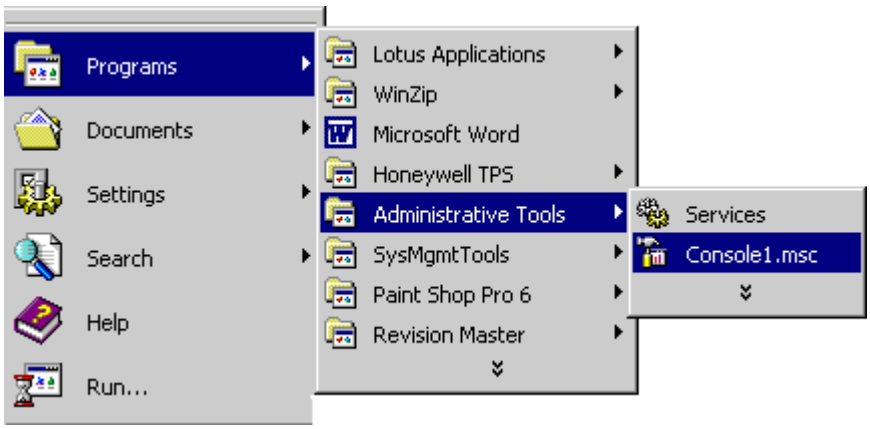
Result: The selected console appears.



From a configured console that contains the System Management Display

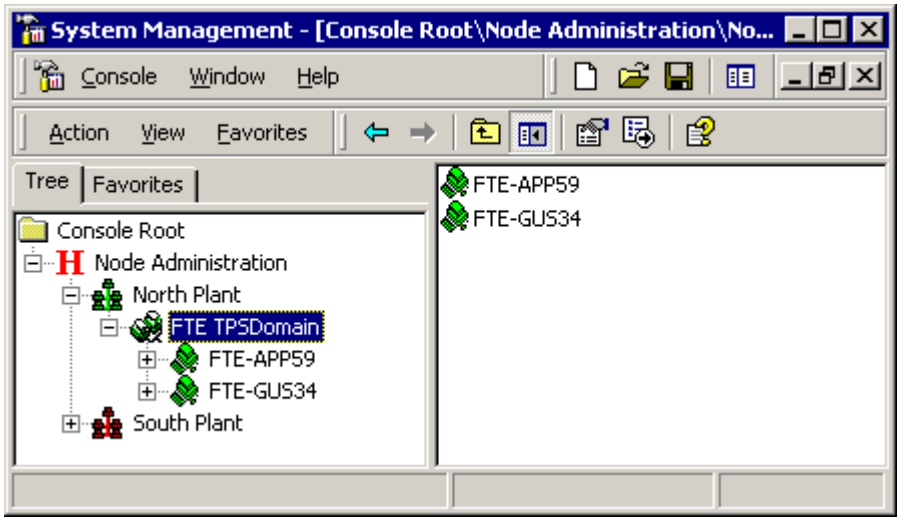
If a System Management Display has already been configured, you can start the console from the Start Menu as shown in the following procedure.

1. Select a previously saved console view from **Programs** > **Administrative Tools** > **[console name].msc**.



2. Respond to any request for User ID and password.

   Result: The selected console appears.



From a link in Experion System Status

The Experion System Status provides a tree view status of entities within the system. If System Management is installed on an Experion node, an additional link appears to launch the System Management display. The Experion System Status also provides links to support Fault Tolerant Ethernet (FTE) and the TPS System Status if the options are present.

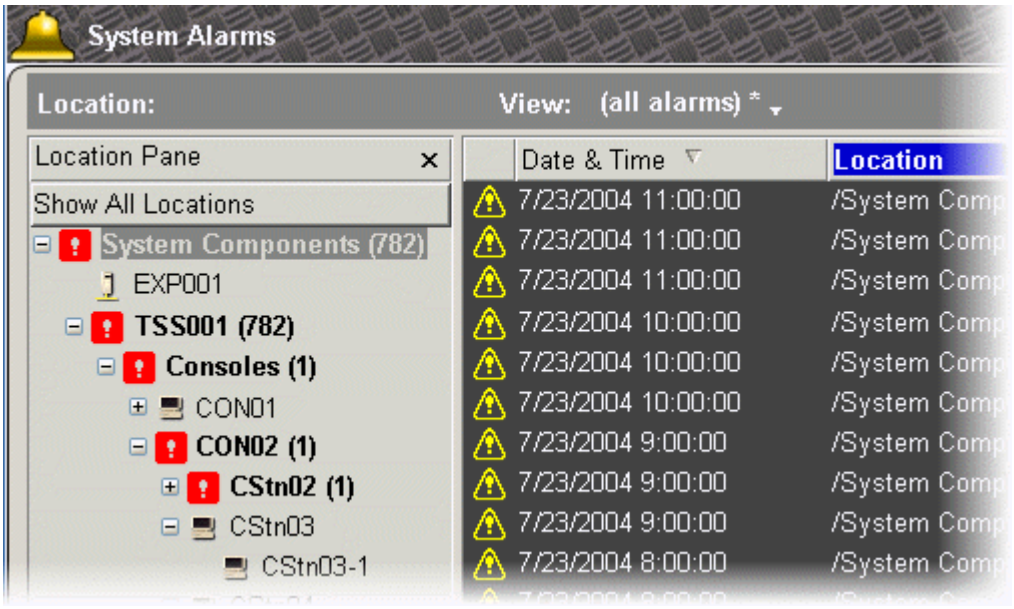
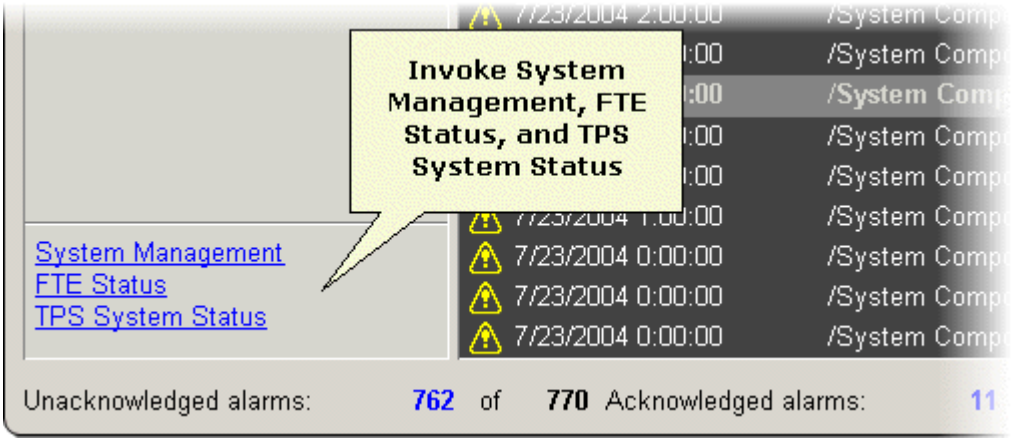


Figure 12: Experion System Status Tree View



4.1.1 What happens when a System Management Display starts?

When a configured System Management Display starts, the following actions occur.

1. The scope pane is populated with the configured domains, TPS Domains, and computers.
2. The System Management Display retrieves node information and status.
3. Status information is reflected in the display through colors (red, yellow, and green) and icons, which reflect event status.
4. Status information is sent up the hierarchy tree to show a composite status. For example, a component condition is sent to the node, the node sends it to the TPS Domain. The node and TPS Domain show a condition.
5. The System Management Display updates its event lists.

4.2 Responding to Events

4.2.1 What happens when an event occurs?

When an event occurs, the composite status is represented in the scope pane. For example, an HCI Component state change represents an event displayed on the System Management Display.

The following example describes a scenario where one or more nodes are running a System Management Display that is monitoring node A's component state change through the use of filter file configuration.

- The System Management Display updates its event lists.
- An event occurs when Component A on Node A changes state. For example, a state change from warning to stop occurs.
- Node A logs an event to the Application Event Log.
- Each System Management Display receives the updated component status information.
- Each System Management Display updates its display to reflect the new component status and displays an icon event mask
- The component status flows up the scope pane tree to show a composite node and TPS Domain status as well as a composite event status.

For more information about event filter file configuration, see the “Configuring Event Filtering” section in the *System Management Configuration Guide*.

4.2.2 How are events displayed?

All items displayed in the scope pane can log snap-in events. The events can be informational, warnings, or errors as described in this section. All events are collected cumulatively for each tree item and its sub items. This allows warnings and errors to flow up the tree, and prevents error conditions from being hidden when a tree in a scope pane is not expanded.

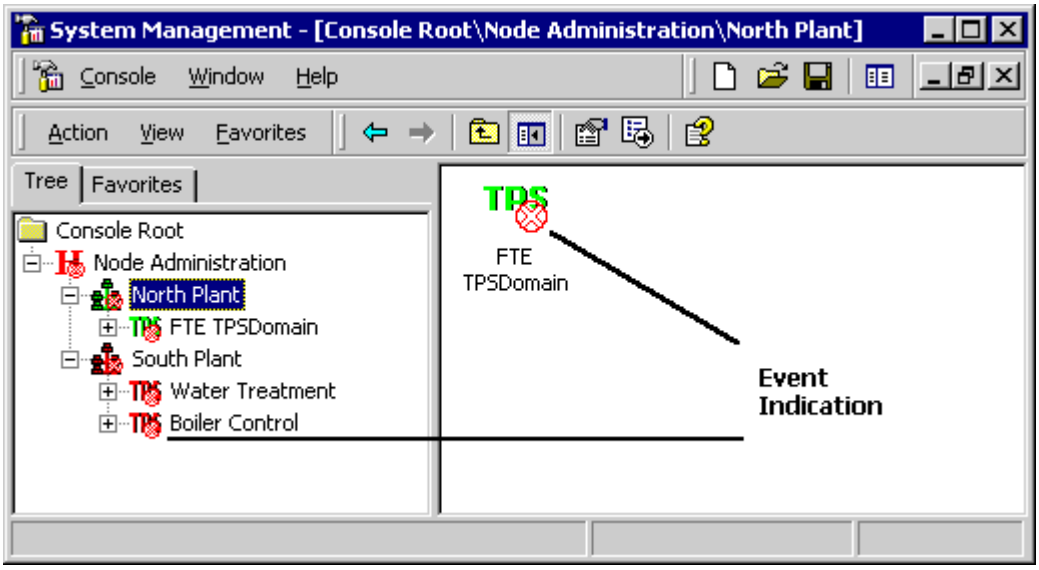


Figure 13: Event Indication Example

4.2.3 What are the types of event indications?

An item can appear in the scope pane with a warning or error mask icon over it.

- *Error*: Logging a snap-in error event will cause an error icon mask to be applied to the item's displayed icon.
- *Warning*: Logging a warning event will cause a warning icon mask to be applied to the item's displayed icon if the state is currently normal. The error state supersedes the warning state.
- *Informational*: Logging an informational event will not change the item icon, but will add the informational event to the item's event summary.

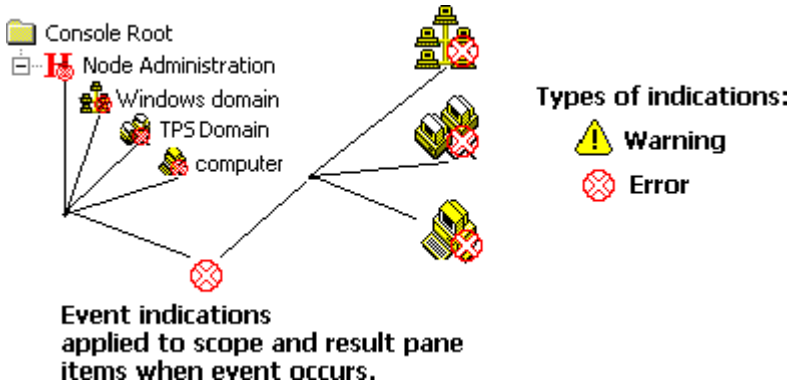


Figure 14: Types of Event Indications

4.2.4 What are the event types?

There are two types of events: Local events and System events.

Local events

Local events are events generated by the System Management Display to provide information about communication or operational errors. An example of a local event is an event that is generated when the System Management Display attempts to connect to a remote node that is off-line. This event is shown on the Event Summary Display so that the user is aware that a connection has not been made to the specified node. Local events do not require acknowledgement and can be cleared from the Event Summary Display at any time.

System events

System events are events received from the System Event Provider (SEP) and are defined by the event filter. An example of a system event is when a managed component changes state, such as from idle to shutdown.

There are three types of system events: Simple, Tracking, and Condition-Related. The system event types are defined in the following table.

Table 5: System Event Types

System Event Type	Description
Simple	Simple events are non-critical events. Simple events are identified by the letter. Simple events are not retained in the event repository, and the events do not require acknowledgement Only those clients that are connected when the event is logged receive the event. A simple event is not a recoverable event.

System Event Type	Description
Tracking	A tracking event is a notification of a change in the monitored system such as a configuration change or a user change. Tracking events are not retained in the event repository. Only those clients that are connected when the event is logged receive the event. A tracking event is not recoverable.
Condition-Related	A condition-related event is an event that is paired with another event that defines a return-to-normal condition from the alarm condition. Condition-related events are used when an alarm must have guaranteed delivery and must be acknowledged. Condition-related events are retained in the event repository mapped by OPC event source and condition. These events are synchronized across all nodes in the configured scope of the SEP. A client connecting to the System Event Server (SES) receives all condition-related events that are either active or have not been acknowledged.

Active events are condition-related events that represent the current state of an event source. As an example, a managed component that transitions from the *Running* state to the *Failed* state would log an active event indicating that the component has entered the *Failed* state. When the component transitions to the *Shutdown* state, the event indicating the *Failed* condition no longer represents the component condition and the event becomes inactive. If the inactive event has been previously acknowledged, the inactive event is removed from the event list. If the event has not been acknowledged, the event remains on the event list as an inactive unacknowledged event. When the inactive event is acknowledged, the event is removed from the list.

Active events are automatically inactivated after one hour. This method ensures that active events are removed from the Event Summary display in cases where an inactive event state may never happen. As an example, a node failure creates an active node-failure event and the decision by plant management is not to replace the node. If the active event were not automatically inactivated after one hour, the active event would remain on the Event Summary Display forever because it would be repeatedly acknowledged and inactivated.

Simple, tracking, and condition-related system event types are shown on the Event Summary Display using an icon overlay of the letter S, T, or C over the error icon as shown in Figure 2-3.

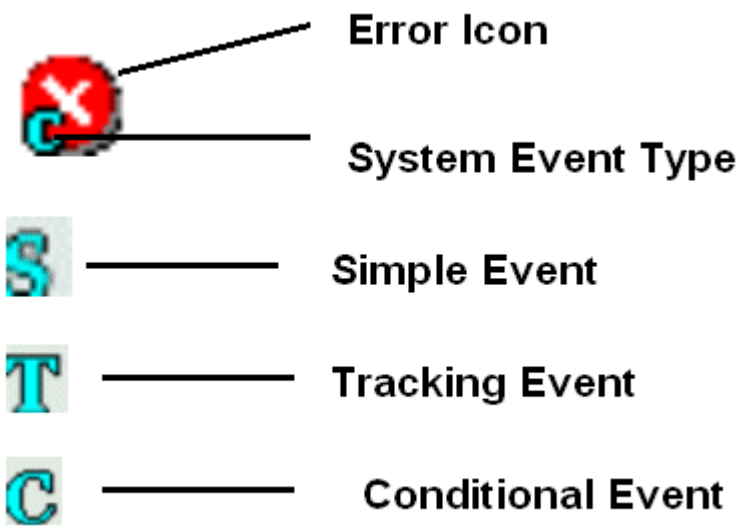


Figure 15: System Event Indications

4.3 Events appear in Event Summary

4.3.1 Local and System Events

Local and system events are viewable from the Event Summary. The following figure shows an Event Summary which has three columns of data: Date/Time, Description, and Source.

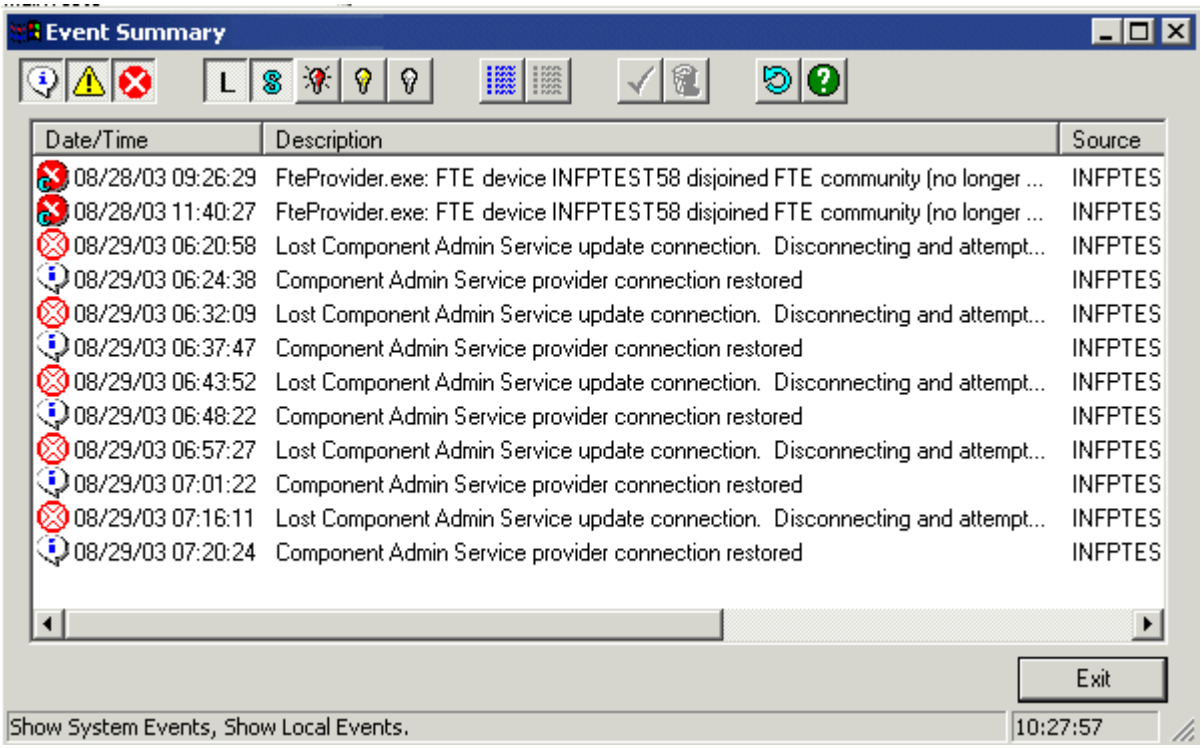


Figure 16: Event Summary Example

4.3.2 Event Summary toolbar

The Event Summary toolbar shown in the following figure lets you filter the displayed events, acknowledge events, and clear events from the Event Summary Display.

Figure 17: Event Summary - Toolbar Buttons

The following table lists and describes the toolbar buttons. The buttons in the table are arranged into functional groups.

Table 6: Event Summary Display - Toolbar Buttons

Toolbar Button	Button Name/Function
The following toolbar buttons allow you to filter events by severity:	

Toolbar Button	Button Name/Function
	Show Informational Events.
	Show Warning Events.
	Show Error Events.
The following toolbar buttons allow you to filter events by the event type:	
	Show Local Events.
	Show System Events.
 (Red)	Show Only Events That Require Acknowledgement.
 (Yellow)	Show Only Active Events.
 (White)	Show Only Events That Can Be Cleared
The following toolbar buttons allow you to control selection of events:	
 (Blue)	Select All Displared Events.
(Gray)	Deselect All Selected Events.
The following toolbar buttons allow you to acknowledge and clear events. These buttons are active only when selected events can be acknowledged or can be cleared.	
	Acknowledge An Event (after a condition-related event is acknowledged, the event icon changes state and the event is automatically cleared only when the event is inactive). All active system events are automatically inactivated after 1 hour to ensure that state events do not remain in the event list. If the events have not been acknowledged, the events remain on the event list.
	Clear An Event (Simple, Tracking, and Local events can be cleared using this icon).
The following toolbar buttons allow you to refresh the event list and to access help information.	
	Refresh The Event List.

Toolbar Button	Button Name/Function
	Show Help Information.

4.4 Acknowledging events

4.4.1 Effects of acknowledging events

The Node Administration snap-in forwards all events to parent items. Thus, when you view the events in any item's event display, its events and its children events are shown. Condition-related events acknowledged at the parent level also acknowledge the event at the child level. Events may be displayed and acknowledged using the toolbar buttons.

Acknowledgement of events has the affect of changing the status icon (warning or failed), and leaving the event message in the event summary. Acknowledging a condition-related event changes the icon but does NOT clear the icon. The icon and the event are cleared automatically when the condition-related event becomes inactive.

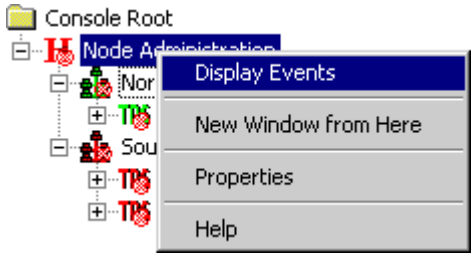
Procedure to acknowledge an event

Attention

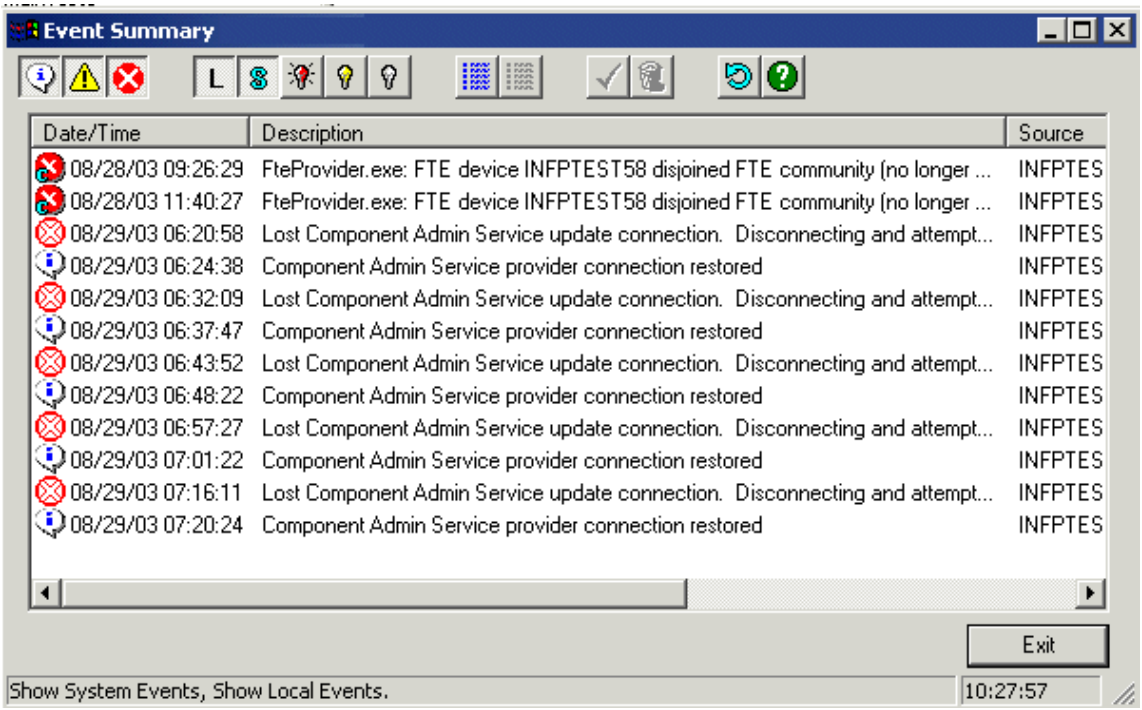
Acknowledgement of local event occurrences affects only the local snap-in view. Acknowledging system event occurrences will synchronize that action with all managed nodes. Events are synchronized with all managed nodes that are in the same System Event Provider scope.

1. Right-click a display item of interest and select **Display Events** from the menu.

Result: The events are displayed in an Event Summary.



2. To show only the events that require acknowledgement, click the



(red) button .

3. Click the event in the **Event Summary** that you want to acknowledge.

   Result: The event appears selected and the

   button is enabled.

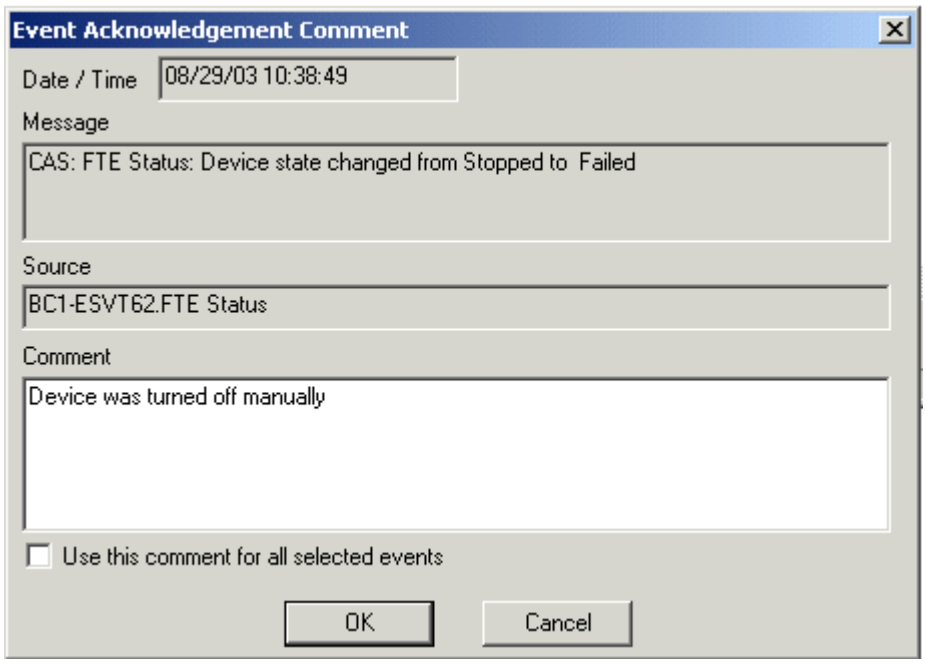
   Note: An acknowledgeable event must be acknowledged before it can be cleared. In addition, only alarm and warning events that have icons with solid-color backgrounds can be acknowledged.

4. Click the

   button to acknowledge the event.

   Result: The acknowledgement is multicast to all nodes and their status displays are updated to show the change as a result of acknowledgement. In the Event Summary, the icon changes to indicate acknowledgement. The following dialog box also appears.



5. Type a comment into the window and then click **OK**.

   Result: After a condition-related event is acknowledged, the event icon changes state and the event is automatically cleared only when the event is inactive. All active system events are automatically inactivated after 1 hour to ensure that state events do not remain in the event list. If the events have not been acknowledged, the events remain on the event list.

4.4.2 Clearing events

Simple, tracking, and local events can be cleared from the Event Summary display. Clearing the event clears the status icon and removes the event from the Event Summary display. Events may be displayed and cleared using the toolbar buttons.

Because Node Administration forwards all events to parent items, when you view the events in any item's event display the view is that of its own events and its children. Simple, tracking, and local events cleared at the parent level also clear the event at the child level.

Procedure to clear an event

1. Click the

   white (Show Only Clearable Events) button to show only the clearable events

   Result: Only the clearable events (simple, tracking, and local) remain on the screen.
2. Select the event to be cleared from the Event Summary.

   Result: The event appears selected and the

   (Clear the Event) button is enabled.
3. Click

to remove the event from the Event Summary.

Result: The event is removed from the Event Summary.

4. Repeat the previous steps for other events.
5. To select multiple events, hold down the <CTRL> key on the keyboard while selecting the desired events. You can also click the

(blue) button to select all the events in the Event Summary.

For information about OPC Alarms and Events, refer to the *OPC Specification Reference Manual*.

5 Managing Component Operations

5.1 HCI Managed Component Operations

The System Management Display supports the following component operations, which are described in this section:

- Starting an HCI Managed Component
- Checkpointing an HCI Managed Component
- Shutting Down an HCI Managed Component
- Invoking an Auxiliary Status Display

5.1.1 Starting an HCI Managed Component

Attention

HCI components may be configured to automatically start when the node containing them starts. You only have to start a component in cases where automatic startup is not configured, or when you have reinstalled the component.

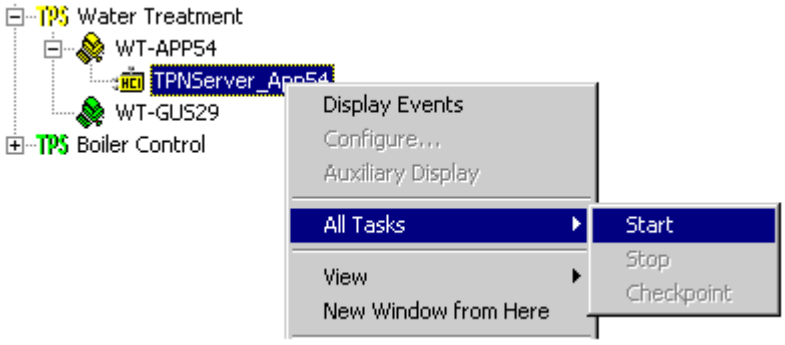
The System Performance Server (SPS) is configured for autostart by default, and the default-installed permissions allow the SPS to be started by the System Management Display. A client can connect to the SPS only when it is running.

A managed HCI component can be manually started from the System Management Display using the following procedure.

1 From the System Management Display, select the desired node and expand its view.

2 Right-click the HCI component that is to be started.
Result: A context menu appears.

3 Click **All Tasks** > **Start**.



Result: After a few seconds the component goes to the idle/running state

5.2 Checkpointing an HCI Managed Component

Attention

Component configuration is automatically saved when the component is initially configured. Additionally, some HCI components are checkpointed automatically prior to a component shutdown. You should checkpoint after making database changes. A component must be started before it can be checkpointed.

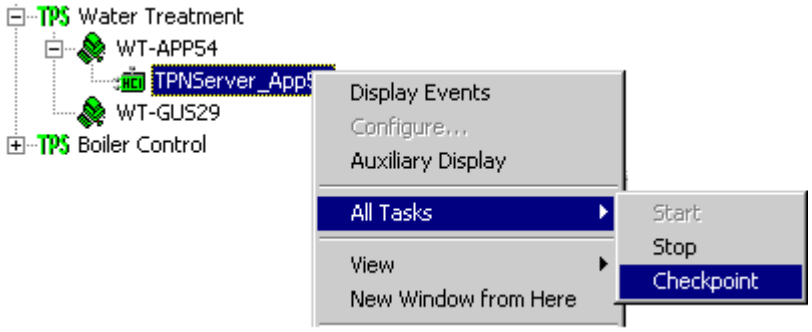
For an HCI managed component such as a TPN Server, checkpointing preserves the state of a server during a planned or unplanned shutdown. Servers such as the System Event Server (SES) and System Performance Server (SPS) do not require the saving of the current state; therefore, checkpointing is not implemented for the SES and SPS.

To checkpoint an HCI managed component from the System Management Display:

1 From the System Management Display, select the desired node and expand its view.

2 Right-click the HCI component that is to be checkpointed.
Result: A context menu appears.

3 Click **All Tasks** > **Checkpoint**.



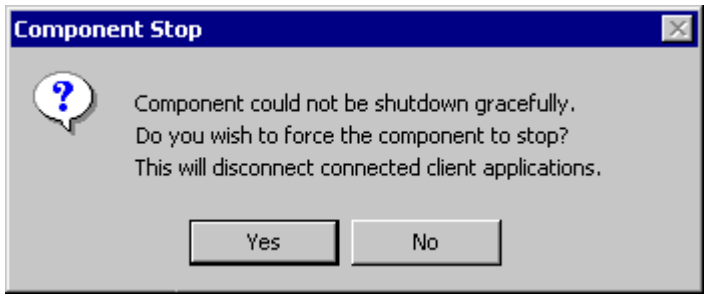
Result: The component's database is saved.

5.3 Shutting Down an HCI Managed Component

Some managed components, such as the TPN Server, CL Server, System Event Server (SES), and System Performance Server (SPS) can be shutdown as a default configuration. The SES and SPS can be manually shutdown from the System Management Display.

Attention

When attempting to manually shut down a component that has connected client applications, a dialog appears informing you that the connected applications will be disconnected. Confirming the dialog causes a forced shutdown to occur. Be sure that you are aware of your plant's policies for forcing a shutdown to avoid unexpected results of a disconnected application.



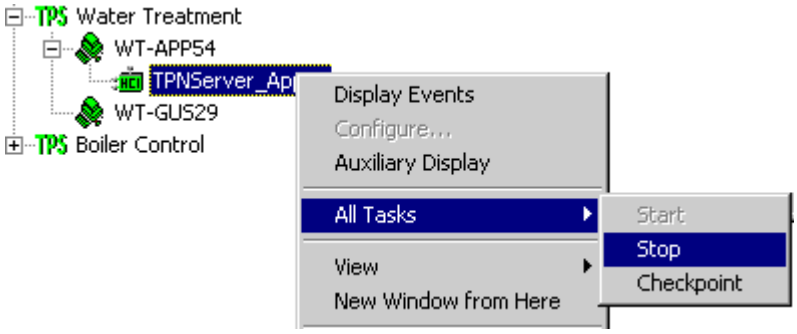
System administrators can assign the users who are allowed to perform a forced shutdown when they define the security setting for the shutdown force capability file. Refer to the respective component user's guides for additional information on how to set the security settings.

To manually shut down an HCI managed component

1 From the System Management Display, select the desired node and expand its view.

2 Right-click the HCI component that is to be shutdown.
Result: A context menu appears.

3 Click **All Tasks** > **Stop**.
Note: If the shutdown is forced, a Component Stop dialog appears informing you that connected applications will be disconnected. Respond to the dialog according to your plant's policies for forcing a shutdown.



Result: After a few seconds the component goes to the configured shutdown state.

If the shutdown is forced and the user did not have the necessary rights to perform a forced shutdown, the stop command is ignored and the component remains in its previous state. A Load Access denied event is recorded for the component in the snap-in's event log.

5.4 Invoking an Auxiliary Status Display

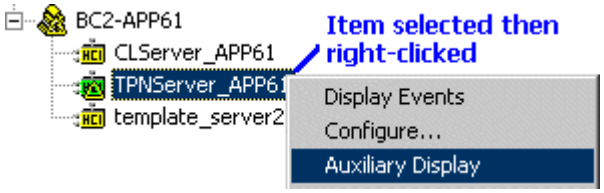
5.4.1 Auxiliary Status Display availability depends on component

Depending on the HCI component, an Auxiliary Status Display may be available. The Auxiliary Status Display shows more detailed component status information. For the Auxiliary Status Display to appear as an enabled selection on the menu, the following is required.

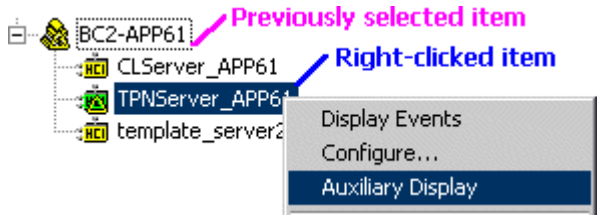
- The Auxiliary Status Display is available on the node.
- The component selected is in a state to support the display, running, warning, or idle. (The HCI component must have been previously started.)
- Select and then right-click when invoking an Auxiliary Status Display.

Tip

When performing an MMC operation, a good practice is to select the item first before right-clicking the item to call up its context menu. This approach is useful when invoking the Auxiliary Status Display for an HCI Component, as shown in the following figure.



It is possible to right-click an MMC item with another item selected, as shown in the following figure.



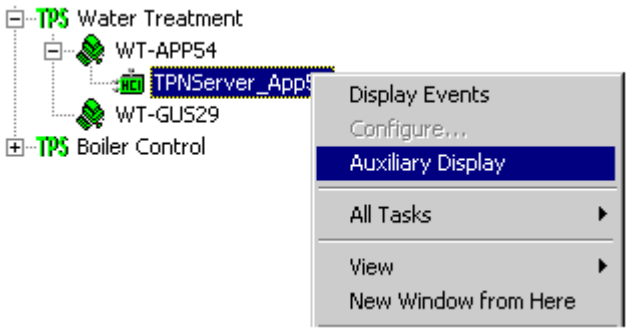
In that case, you will have to select the HCI component of interest again for its Auxiliary Status Display to appear.

Procedure to invoke an Auxiliary Status Display

The following procedure describes how to invoke an Auxiliary Status Display.

1. Right-click an HCI component in the scope pane of the System Management Display.

   Result: A context menu appears.
2. Select **Auxiliary Display**.



Result: The Auxiliary Status Display appears in the result pane with retrieved component information.

Attention

If an Auxiliary Status Display does not launch after selecting an enabled menu item for the Auxiliary Status Display, your system support personnel may need to install the Client Connectivity Package for the respective server on the node that needs to invoke the Auxiliary Status Display.

5.4.2 Auxiliary Status Display may have several pages

An Auxiliary Status Display may have one page or several tabs that invoke more pages.

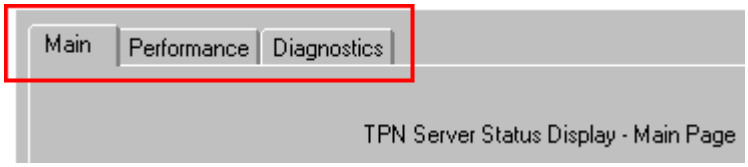


Figure 18: Auxiliary Status Display

5.4.3 System Event Server Auxiliary Status Display

The SES Auxiliary Display provides you with the current values of key SES operating parameters. The parameter values can be used to determine the operational condition of the SES. The parameter values are updated automatically as events are processed.

System Event Server Auxiliary Status Display content

An SES Auxiliary Status display is shown in the following figure.

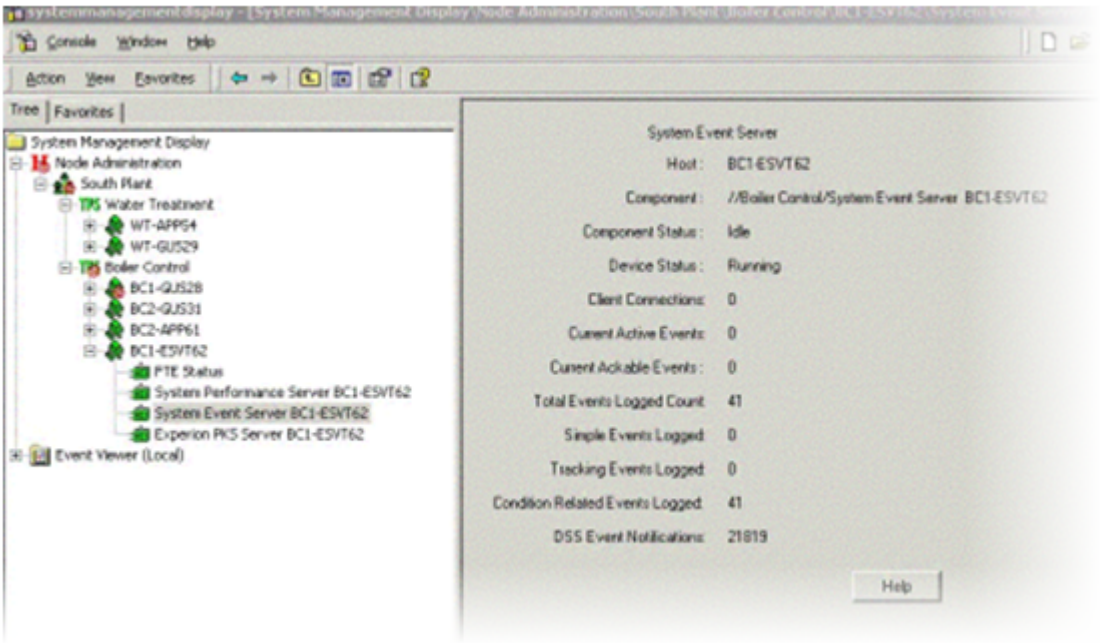


Figure 19: SES Auxiliary Status Display

The following table describes the content of the SES Auxiliary Status Display.

Table 7: SES Auxiliary Status Display Content

Item	Description		
Host	Name of host in which the SES resides.		
Component	Name of SES being monitored.		
Component Status	Status of SES is as follows:		
	Status	*Icon Color*	*Description*
	Failed	Red	SES has detected an unrecoverable error and is in a failed\ condition.
	Idle	Green	SES is running, but no clients are connected.
	Initializing	Yellow	SES is initializing.
	Running	Green	SES is running and clients are currently connected.
	Shutting down	Yellow	SES is shutting down.
	Shutdown complete	Yellow	SES shutdown has completed.
	Suspended	Yellow	SES is in a suspended state (not used).
	Test	Yellow	SES is performing a self-test.
	Warning	Yellow	SES is running, but it has a problem that is not disabling the SES.
Device Status	Status of connection to System Event Provider event subsystem.		
Client Connections	Number of clients currently connected to SES.		
Current Active Events	Number of events that are currently active. Events represent the current condition of a specified source.		
Current Ackable Events	Total number of events requiring acknowledgement.		
Total Events Logged Count	Total number of events received by SES from the SEP event subsystem.		
Simple Events Logged	Total number of events received by the SES from the SEP event subsystem. A simple event is classified as being a non-critical event. Simple events are not retained in the event repository. Only those clients that are connected when the event is logged receive the event. A simple event is not recoverable.		
Tracking Events Logged	Total number of tracking events received by the SES from the SEP event subsystem. A tracking event is a notification of a change in the monitored system such as a configuration change or a user change. Tracking events are not retained in the event repository. Only those clients that are connected when the event is logged receive the event. A tracking event is not recoverable.		
Condition -Related Events Logged	Total number of condition-related events received by the SES from the SEP event subsystem		
DSS Event Notifications	Total number of events, including internal server “keepalive” notifications. This is an internal indicator of the health of the SES server.		

5.4.4 System Performance Server Auxiliary Status Display

The SPS Auxiliary Status Display provides you with the current values of key SPS operating parameters. The parameter values can be used to determine the operational condition of the SPS. The parameter values are updated automatically as events are processed.

System Performance Server Auxiliary Status Display content

An SPS Auxiliary Status display is shown in the following figure.

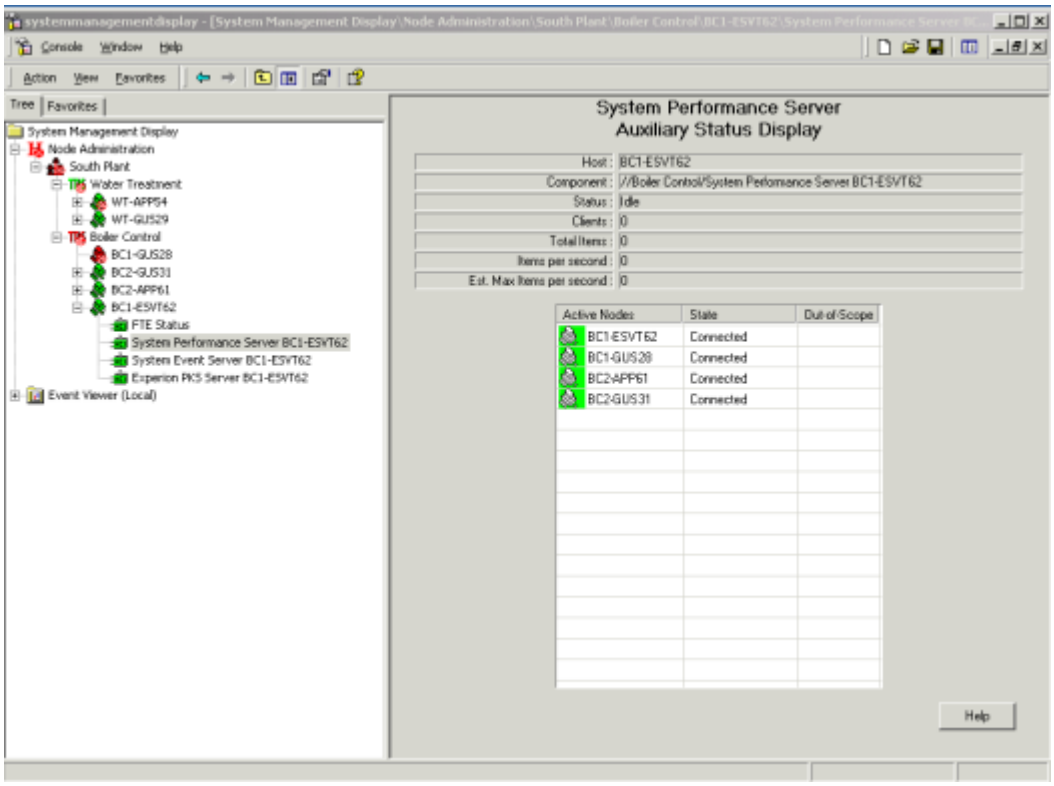


Figure 20: SPS Auxiliary Status Display

System Performance Server Auxiliary Display - Top Section

The information contained in the following table describes the content in the top section the SPS Auxiliary Status Display.

Table 8: SPS Auxiliary Status Display Content - Top Section

Item	Description		
Host	Name of the node on which the SPS resides.		
Component	Name of service component that SPS is running as on the host node.		
Status	Status of SPS is as follows:		
	Status	*Icon Color*	*Description*
	Failed	Red	SPS has detected an unrecoverable error and is in a failed condition.
	Idle	Green	SPS is running, but no clients are connected.
	Initializing	Yellow	SPS is initializing.
	Running	Green	SPS is running and clients are currently connected.
	Shutting down	Yellow	SPS is shutting down.
	Shutdown complete	Yellow	SPS shutdown has completed.
	Suspended	Yellow	SPS is in a suspended state (not used).
	Test	Yellow	SPS is performing a self-test.

Item	Description		
	Warning	Yellow	SPS is running, but it has a problem that is not disabling the SPS.
Clients	Number of client connections to SPS.		
Total Items	Total number of items monitored by SPS.		
Items per second	Number of item updates SPS receives per second.		
Est. Max items per second	Estimated maximum number of item updates SPS could receive per second.		

System Performance Server Auxiliary Display - Bottom Section

The bottom section of the display contains the following three columns:

- Active Nodes - Lists all the nodes that can be seen by the SPS.
- State - Describes the current connection state (Connecting, Connected, Disconnected, or Access Denied) of the node.
- Out-of-Scope - Indicates whether a node is out of the scope of the SPS. An asterisk is added to the node icon to indicate that the node is out-of-scope.

The following table describes the connection states and the respective icons that can be shown in the bottom section of the SPS Auxiliary Status Display.

Table 9: SPS Auxiliary Status Display Content - Bottom Section

Connection State/ (Icon Color)	Node is Within Scope	Node is Out-of-Scope (Icon with asterisk)
Connecting (Yellow) - SPS is currently attempting to make a connection with a node and is unsure of the node status.		
Connected (Green) - SPS has made a good connection with the node.		
Disconnected (Red) - SPS is unable to connect to the node.		
Access Denied (Green with Red) - SPS is unable to connect to the node because the SPS was denied access.		

Additional references for Auxiliary Status Display

The documents listed in the following table describe the Auxiliary Status Display content for the managed components.

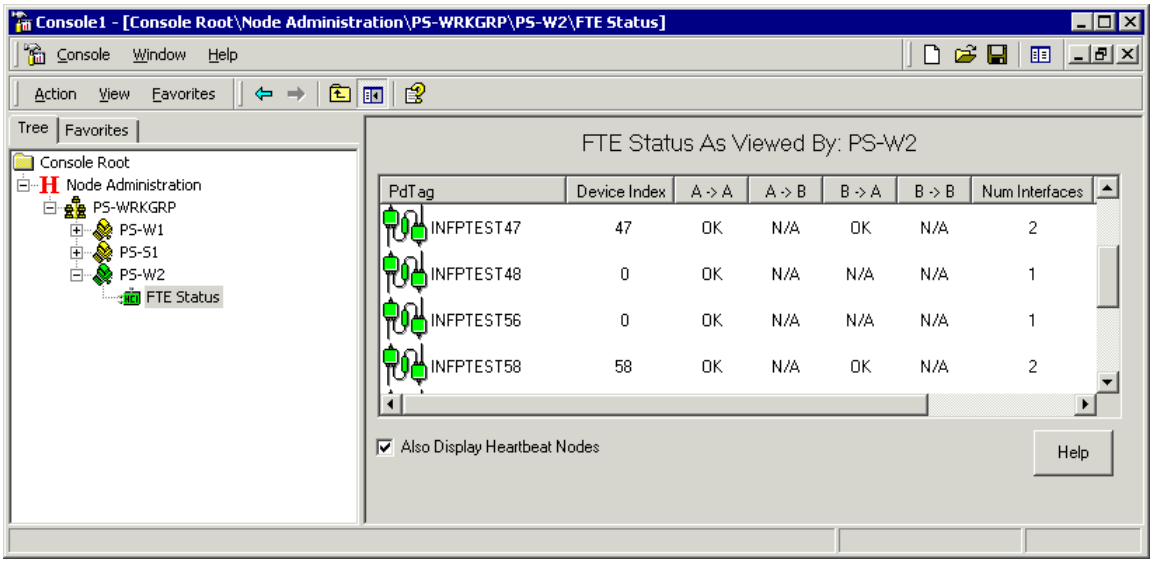
Table 10: Auxiliary Status Display References

Component	Reference
TPN Server	Refer to the section *Auxiliary Status Display - TPN Server* in the *TPN Server User's Guide*.
CL Server	Refer to the section *Auxiliary Status Display - CL Server* in the *CL Server User's Guide*.
Redirection Manager	Refer to the section *RDM Status and Diagnostic Support* in the *Redirection Manager User's Guide*.

5.5 About the FTE Status Server Display

The Fault Tolerant Ethernet (FTE) Status Server's display and FTE component configuration is supported from the System Management Display. An example FTE Status display is shown in the following figure.

Table 11: FTE Status Server Display



5.5.1 Reference for using FTE Status Server Display

For more information about the FTE Status Server Display, see the “Introduction” section in the *Fault Tolerant Ethernet Status Display User's Guide*.

6 Notices

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6.1 Documentation feedback

You can find the most up-to-date documents on the Honeywell Process Solutions support website at:

http://www.honeywellprocess.com/support

If you have comments about Honeywell Process Solutions documentation, send your feedback to:

hpsdocs@honeywell.com

Use this email address to provide feedback, or to report errors and omissions in the documentation. For immediate help with a technical problem, contact your local Honeywell Process Solutions Customer Contact Center (CCC) or Honeywell Technical Assistance Center (TAC) listed in the “Support and other contacts” section of this document.

6.2 How to report a security vulnerability

For the purpose of submission, a security vulnerability is defined as a software defect or weakness that can be exploited to reduce the operational or security capabilities of the software.

Honeywell investigates all reports of security vulnerabilities affecting Honeywell products and services.

To report a potential security vulnerability against any Honeywell product, please follow the instructions at:

https://honeywell.com/pages/vulnerabilityreporting.aspx

Submit the requested information to Honeywell using one of the following methods:

- Send an email to security@honeywell.com.

  or

- Contact your local Honeywell Process Solutions Customer Contact Center (CCC) or Honeywell Technical Assistance Center (TAC) listed in the “Support and other contacts” section of this document.

6.3 Support

For support, contact your local Honeywell Process Solutions Customer Contact Center (CCC). To find your local CCC visit the website, https://www.honeywellprocess.com/en-US/contact-us/customer-support-contacts/Pages/default.aspx.

6.4 Training classes

Honeywell holds technical training classes on Experion PKS. These classes are taught by experts in the field of process control systems. For more information about these classes, contact your Honeywell representative, or see http://www.automationcollege.com.