

# **User Guide**

# Clavister® PinPoint™ Version 1.1

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# User Guide Clavister® PinPoint™ Version 1.1

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# **Table of Contents**

1. PinPoint Overview	5
2. Getting Started	8
3. Creating Custom Dashboards	
4. Using Dashboard Templates	
A. Adding Devices for Web UI	
B. Adding Devices Manually for FineTune	
C. PinPoint Keyboard Shortcuts	
PinPoint Glossary	
Alphabetical Index	

# **List of Figures**

1.1. PinPoint Dashboard Example 1	5
1.2. PinPoint Dashboard Example 2	
2.1. Restart Options	
3.1. The Design Mode Editor	
3.2. Selecting a New Monitoring Control	
3.3. A Speedometer Gauge	
3.4. Monitoring Control Properties	12
3.5. Choosing the Data Connection	13
3.6. A Connected Monitoring Control	
3.7. Configuring Slideshow Mode	
3.8. Opening a Dashboard File	15
4.1. Template Selection	16
4.2. Template Gateway Selection	
4.3. Template Interface Selection	
4.4. Template Hardware Monitoring Counter Selection	
4.5. Template Dashboard Creation	18
4.6. SG50 Template Dashboard Example	

# **Chapter 1. PinPoint Overview**

Clavister PinPoint is a real-time graphical monitoring tool for Clavister Security Gateways. It allows monitoring of one or more Clavister gateways using a variety of *Monitoring Controls* arranged in the style of a *Dashboard*. Two examples of typical PinPoint Dashboards are shown below to illustrate what is possible with the product.

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Figure 1.1. PinPoint Dashboard Example 1

The image above illustrates a Dashboard consisting of *Gauge* Monitoring Controls in various styles. Each Gauge is monitoring a single parameter in a CorePlus installation.

The image below shows a Dashboard consisting of a *List* Control at the top, a *Bar Chart* in the middle, with a *Line Chart* Control at the bottom. The List and Chart are each being used to monitor a number of different parameters in a CorePlus installation at the same time.

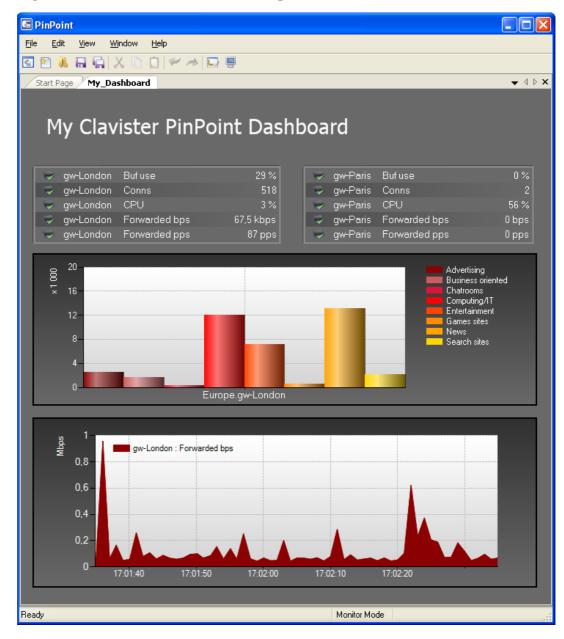


Figure 1.2. PinPoint Dashboard Example 2

## **PinPoint Components**

When using PinPoint, the essential components are:

#### **Monitoring Controls**

Monitoring Controls are graphical displays which can show the current value of a CorePlus operating parameter for a Clavister Security Gateway. Some Controls monitor only one parameter (Gauge), some can monitor multiple parameters (Chart or List). A range of Control styles are available and almost any style can be associated with any CorePlus parameter.

#### **Dashboards**

A *Dashboard* is a set of one of more Monitoring Controls that are displayed together for monitoring a group of CorePlus parameters. Different Controls in a single dashboard can monitor just one or

many Clavister Security Gateways. Monitoring Controls of any type can be placed anywhere on a Dashboard and they can be scaled to

any size.

Dashboard Templates Supplied with PinPoint are a pre-defined set of DashBoard

Templates. These consist of pre-defined sets of Monitoring Controls that are already associated with a CorePlus parameter. Using the PinPoint editor, a Template can be opened, possibly changed, associated with a Clavister Security Gateway, and then saved as a

normal user-defined Dashboard.

## **PinPoint Monitoring Controls**

The following types of Monitoring Controls are available in PinPoint:

**Generic Monitoring Controls** These fall into two categories:

**Gauge** A *Gauge* is a graphical display which

can show the current value of a single CorePlus operating parameter on a single Clavister Security Gateway. A range of Gauge styles are available and any style can be associated with

any CorePlus parameter.

**Chart and List** As an extension of a Gauge, the *Chart* 

and *List* are Gauges that can display mutliple parameters in a single graphical unit and provide a simple means to do comparisons. A Chart is available in two forms: a *Bar Chart* 

and a Line Chart.

Pre-defined Controls PinPoint includes special Controls that have been created to

monitor specific CorePlus parameters. The Web Content

Filtering Control is an example of this.

Layout Controls These consist of the Label Control for adding text and/or

images to a dashboard, and the Group Control for creating

groups of related Controls within a Dashboard.

#### **Design Mode and Monitor Mode**

PinPoint functions in one of two modes:

**Design Mode** In this mode, the PinPoint Editor is used to create individual Dashboards which

can be saved and re-edited later. Real-time monitoring is not activated while in

Design Mode.

Monitor Mode In this mode, a specific Dashboard associated with one or more Clavister

Security Gateways is used for live monitoring. This mode can optionally be

full-screen using F11 to toggle between normal and full-screen.

# **Chapter 2. Getting Started**

# **Installation Requirements**

PinPoint must be installed on a Windows PC with the Microsoft .NET framework Version 1.1 installed. This framework is installed automatically during PinPoint installation if not already present. If FineTune is being used, PinPoint is preferably installed on the same PC as FineTune, but this is not a requirement.

#### **PinPoint with FineTune**

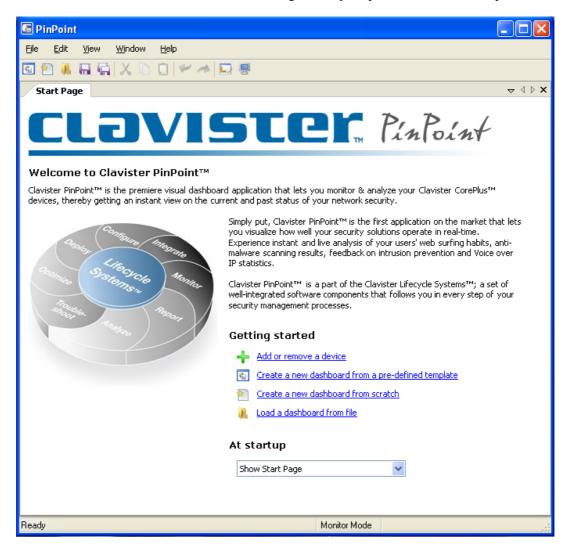
PinPoint is a separate product from FineTune. It uses the security keys found in the FineTune *Data Source* file to make the secure connection to a Clavister Security Gateway. Once installed, PinPoint will automatically find the Data Sources that exist on the management PC's disk.

## PinPoint with the Web Interface

The CorePlus 9.0 software release uses a pure web interface for access so a different approach is required to identify the available Clavister Security Gateways and how to communicate with them.

#### The PinPoint Start Screen

After starting PinPoint, the screen below appears asking the administrator what they would like to do. The screen contains a menu bar and tool bar to go directly to specific functions of the product.



# **Adding or Removing Devices**

The first option allows the definition of Clavister Security Gateways which PinPoint will communicate with and monitor. The two possibilities with this option are:

- If FineTune is being used then this option is not usually needed since PinPoint will automatically find all available devices from the local FineTune files on the workstation (if FineTune is running on a separate workstation then see Appendix B, *Adding Devices Manually for FineTune*).
- If the web user interface is being used then the Clavister Security Gateways to be monitored need to be defined with this option and doing this is fully described in Appendix A, *Adding Devices for Web UI*.

#### **Working with Dashboards**

The last three options in the start screen offer three ways of working with a Dashboard:

From a Template A quick and simple way to get going with the product, this allows the

opening of a pre-defined Dashboard supplied with PinPoint. Only associating the Dashboard's Monitoring Controls with a Clavister Security Gateway is then required before the Dashboard can be used for monitoring.

Templates are stored in files with the filetype .template.

**From scratch** This will take the user directly to an empty Dashboard in Design Mode.

Monitoring Controls and other cosmetic details can then be selected and added one by one. The Dashboard can be then used for monitoring and

optionally saved as a file.

From a file If PinPoint has been used previously to create and save a Dashboard to a

file. This file can then be opened later for editing or for use in monitoring.

Saved Dashboards have the filetype .dashboard.

## **Restart Options**

As part of the intial screen it's possible to choose what will be shown by default the next time PinPoint starts up.

Figure 2.1. Restart Options



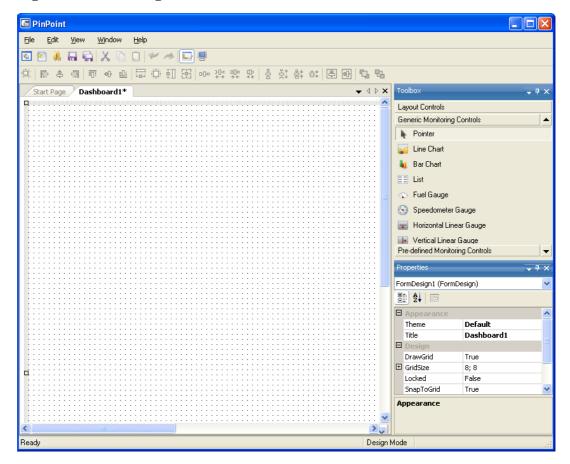
The following section looks at the second of these options, creating a custom dashboard.

# **Chapter 3. Creating Custom Dashboards**

# **Using Design Mode**

By using the PinPoint *Design Mode* editor, custom Dashboards may be created which contain the *Monitoring Controls* that are desired for monitoring a particular CorePlus installation. An initial empty editor screen is shown below with no controls yet added.

Figure 3.1. The Design Mode Editor



The main area used in Design Mode is a graphical workspace for defining the appearance of a dashboard. The *Toolbox* to the right is used to define new Controls in the Dashboard along with their *Properties*.

Monitor Controls may be added, moved around, resized, grouped together and annotated on the Dashboard. Using the tabs at the top of the editing area, several Dashboards can also be edited simultaneously and Monitoring Controls can be cut and pasted between them.

## **Monitoring Controls**

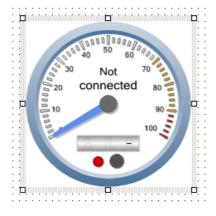
PinPoint provides a range of Monitoring Controls in different styles. Any style can be used to measure a CorePlus parameter and it is up to the user to decide the style that best suits their presentation needs. If it's preferable to have a single Control monitor more than one parameter, a Bar Chart, Line Chart or List Control can be used. Otherwise a Gauge might be more appropriate.

Figure 3.2. Selecting a New Monitoring Control



By selecting the *Speedometer Gauge* from the Control list and then dragging out a rectangle on the editor area to define the Control's size, a *Speedometer Gauge* like the one below will be added to the Dashboard editor area. Alternatively, it's possible to drag the Control from the Toolbox menu directly into the editor window, in which case a standard size is used for the Control.

Figure 3.3. A Speedometer Gauge



All Monitoring Control styles can be scaled to a smaller or larger size by dragging their edges at the marked points and their positions can be changed by dragging their borders.



#### Note

The text "Not Connected" appears in the Control to indicate that a Clavister Security Gateway and the CorePlus parameter it will monitor on that gateway have not yet been selected for the Control.

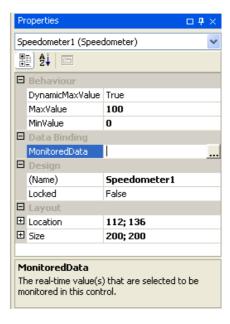
# **Cursor Styles**

The PinPoint editor cursor shows a crosshairs style when the mouse is to be dragged to define a new Monitor Control. To switch out of this mode select the **Pointer** option, indicated with the **\( \)** icon.

## **Monitoring Control Properties**

Once selected, any of the *Properties* of this Control can be set using the Properties display shown below:

**Figure 3.4. Monitoring Control Properties** 



For each Control, both the lower and maximum value of the monitored quantity can be specified. Where a Control, such as a Bar Chart or List, that can monitor several parameters in a single Control, several parameters can be defined and the parameters can be in different Clavister Security Gateways.

#### **Dynamic Maximums**

Sometimes it can be difficult to predict the maximum value of a parameter and in such a case the *Dynamic Maximum Value* can be set to **True**. This will mean that the Control will repaint itself and extends it's range automatically if the upper limit is exceeded (conversely it will reduce it's range if the value falls back below the upper limit).

#### The Data Binding

One of the Properties that must be set for a Control to perform monitoring is the *Data Binding*. This is the combination of a Clavister Security Gateway plus the CorePlus parameter within that gateway that is to be monitored.

Selecting the Data Binding property will cause the dialog shown below to appear. On the left of the dialog are the Clavister Security Gateways which have been located automatically by PinPoint, on the right are the individual CorePlus parameters which can be monitored in each gateway.

Select Real-time Value Select Real-time Value Select the real-time value you want to monitor. Browse Real-time Values Security Gateway: Real-time Value ⊕-- 🊹 Asia 🖃 📭 Europe 🤛 gw-London I-D Rule Use gw-Paris Interfaces Reassembly ⊕ Rule Use Buf use Conns Forwarded bps # OΚ Cancel

Figure 3.5. Choosing the Data Connection

Once the Control is associated with a parameter, the parameter's name will appear on the Control as shown below.

Figure 3.6. A Connected Monitoring Control





#### Note

CorePlus provides a extensive set of parameters which can be monitored by PinPoint. If a Monitoring Control is not associated with one of these CorePlus parameters it won't do anything in Monitor Mode.

## **Changing Design Mode to Monitor Mode**

In order to have a defined dashboard become "live" and start monitoring Clavister Security Gateways, it is necessary to switch from Design to *Monitor mode*. This is done by simply pressing the "toggle" button in the toolbar. As soon as Monitor mode is switched on, the currently

displayed Dashboard will appear as a live display and beginning showing actual values. Pressing the toggle button again will switch PinPoint back to Design mode.

# **Changing to Slideshow Mode**

When switching to monitor mode it is possible to operate in *Slideshow Mode* which allows the continuous switching between different dashboards during monitoring.

Slideshows only work when more than one dashboard is opened at the same time and this is achieved by using the tabs at the top of the editing window. Each tab corresponds to a separate dashboard. To run a slideshow of a number of previously saved dashboards, the individual dashboard files should be opened one by one into a new tab and then monitoring should commence in slideshow mode.

Enabling Slideshow Mode and changing parameters such as the frequency of switching between dashboards, as well as setting the visual transition technique, are configurable through the preferences dialog. This is displayed through the menu options: **Edit** > **Preferences**.

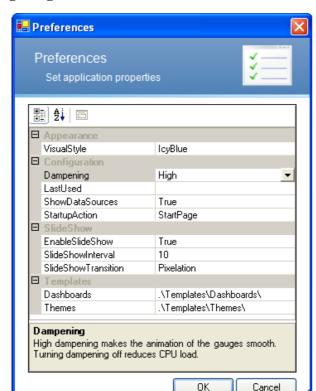


Figure 3.7. Configuring Slideshow Mode

## **Adding Text Captions**

Text Captions can be placed anywhere in a Dashboard and can contain either text or an image. Their purpose is purely cosmetic and they provide a means to add helpful annotations or graphics such as a company logo to a Dashboard. Like Monitoring Controls, their size can be dragged larger or smaller, and properties such as the font can be changed.

## **Defining a Group**

A *Group* is a display area that has a textual caption and several related Controls can be placed into a Group's display area. By dragging it's corners, a Group display area can be made smaller or bigger. A Group can be similarly dragged around the overall Dashboard display area and when this is done all the Controls it contains will be dragged with it.

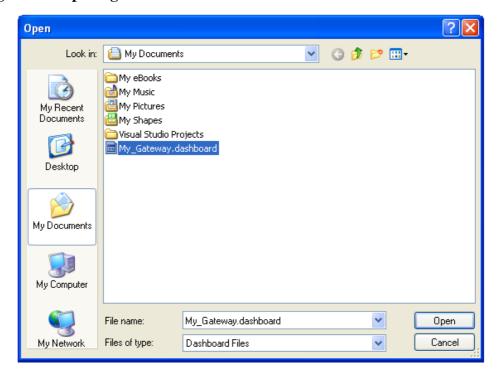
# **Using Themes**

The look and feel of a Dashboard or the individual components can often be set by selecting a *Theme*. Themes are purely cosmetic and provide a way to get a color scheme that suits the user.

#### Saving a Dashboard

Once a Dashboard has been created, it can be saved with a user defined name into a file with filetype **.dashboard** anywhere in the file system. Once saved, it can be opened at any time by selecting it with PinPoint's Open function which is shown below. Alternatively double clicking a **.dashboard** file from Windows will open the Dashboard in PinPoint's monitoring mode.

Figure 3.8. Opening a Dashboard File



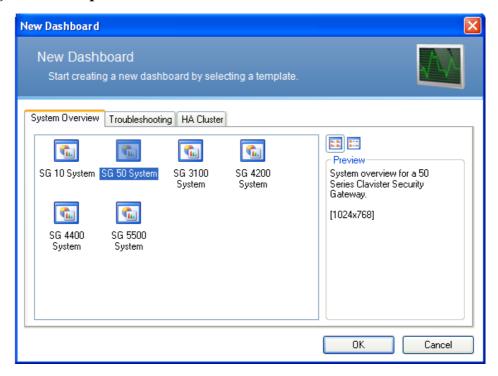
# **Chapter 4. Using Dashboard Templates**

The quickest and easiest way to use PinPoint is to select an existing Dashboard Template.

Templates are pre-defined Dashboards that are already included with the product and that with pre-defined layouts of Monitoring Controls are already connected to a set of parameters. They are designed to provide a quick and easy way to begin monitoring using PinPoint without having to spend time creating a Dashboard from scratch.

PinPoint Templates are stored as files and have the filetype .template. When selecting New Dashboard From Template in the menu the following dialog is displayed.

Figure 4.1. Template Selection



Alternatively, a template file can be selected outside of PinPoint by double clicking the file in the Windows file explorer.

The three groups of templates available are:

- System A general Dashboard suitable for each Clavister Hardware Series.
- Troubleshooting Dashboards designed to identify problems
- HA Cluster A Dashboard suitable only for High Availability Clusters.

After selection, a template still lacks connection to a Clavister Security Gateway and to define this, the following dialog appears.

Figure 4.2. Template Gateway Selection



In this dialog "(SG50)" must be replaced by one of the available Clavister Security Gateways shown in the drop-down box in the right part of the dialog. In this case *Europe.gw-Paris* might be the selected gateway.

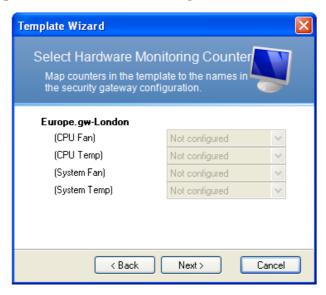
Once the appropriate Clavister Security Gateway is selected there may still be a mismatch between the individual values monitored in the Template and the values in the gateway. These mismatched values are resolved in the following steps.

Figure 4.3. Template Interface Selection



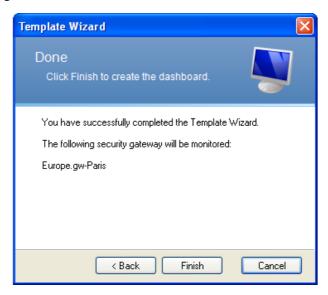
If the names of the physical interfaces of the gateway have been changed from the default ones in the configuration it is necessary to select which name to use for each interface in the Template.

Figure 4.4. Template Hardware Monitoring Counter Selection



Some Templates use hardware monitoring counters that show values collected from sensors in the Clavister Security Gateway. If these sensors have been configured in the gateway they can be selected in the next step of the wizard.

Figure 4.5. Template Dashboard Creation



The Template is now opened in PinPoint and can be used as a normal dashboard as well as being able to be saved to a new Dashboard file.

The following image illustrates a dashboard that comes from a template for the Clavister SG50 hardware series:

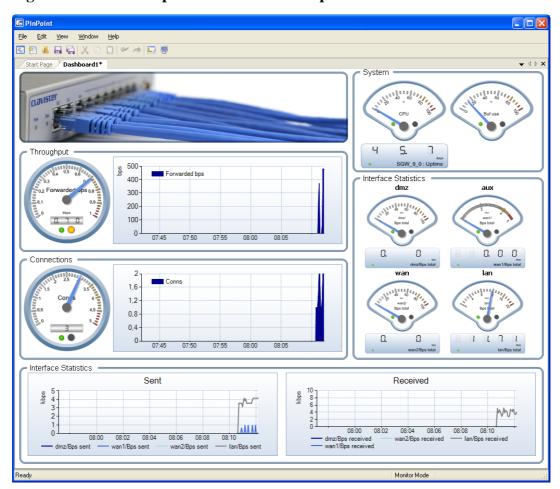
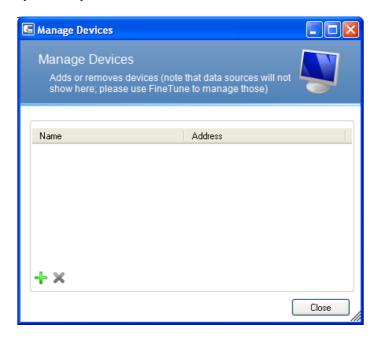


Figure 4.6. SG50 Template Dashboard Example

# Appendix A. Adding Devices for Web UI

If administration is being performed with the web user interface then this option will be needed to enter details of the Clavister Security Gateway(s) in order for PinPoint communicate with the device. The steps required are:

- With the web user interface create a new Pre-shared key by going to: Objects > Authentication Objects > Add > Pre-Shared key
- 2. For the Pre-shared key enter:
  - A suitable name for the key eg. *MgmtKey*.
  - Select Hexadecimal Key.
  - Choose the key length to be 512.
  - Press the Generate Random Key button.
- 3. The key generated will appear in the **Passphrase** window. This key should now by copied into the system clipboard and saved. It will be entered later into PinPoint.
- Still in the web interface, go to:
   System > Remote Management > Add > NetCon Management
- 5. For this NetCon management object enter:
  - A suitable name eg. *NetconMgr* and specify the **Mode** as *Uptime polling*.
  - Choose the **PSK** to be the *MgmtKey* object defined earlier.
  - Set the interface and network where PinPoint is located then click **OK**.
- 6. Now **Save** and then **Activate** the new CorePlus configuration.
- 7. From the PinPoint start screen screen choose the 4 Add or remove a device option.
- 8. The dialog below will appear which allows the administrator to manage all the Clavister Security Gateways currently defined for PinPoint.





9. After pressing the 4- button, the dialog below will appear for adding a device.

Enter a suitable name for the Clavister Security Gateway then enter the management IP address. The address can either be an IP address or a URL. Paste into the **Key** field the Pre-shared key that was created earlier and saved to the system clipboard.

10. Click the **Add** button to return the device management dialog. If there are no more Clavister Security Gateways to add, press **Close**.

# **Using the CLI**

It is possible to use the command line interface (CLI) as an alternative to the web interface for adding devices but this is not recommended. The large key length makes using the CLI difficult and because of this, the CLI commands are not described in this appendix.

# Appendix B. Adding Devices Manually for FineTune

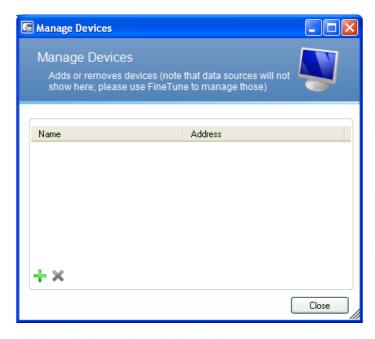
When using PinPoint with FineTune, PinPoint usually runs on the same PC workstation as FineTune. If this is the case then the security keys for communication with the NetCon protocol between a Clavister Security Gateway and PinPoint will automatically be found in the Data Source files for the gateway.

If, however, PinPoint is being run on a PC that isn't the one with FineTune installed on it, the administrator must manually find and copy the necessary management key and insert it into PinPoint. The following steps describe how to do this:

- 1. Go to the the PC where FineTune is installed for controlling the Clavister Security Gateway.
- 2. In the directory which contains the Data Source files, open the file *<mygateway>.efw* in a text editor (where *<mygateway>* is the name assigned to the Clavister Security Gateway).
- 3. In this file there are four lines that begin:

FWEKEY
FWHKEY
PINGEKEY
PINGHKEY

- 4. Cut and paste these four lines into a new text file, then remove the *FWEKEY*, *FWHKEY*, *PINGEKEY* and *PINGHKEY* characters, as well as the space that follows them. What is left are three lines each with a separate part of the key.
- 5. Remove the three carriage returns that separate the four lines so that all four keys are now concatenated together into a single key. This is the management key that will be used.
- 6. In PinPoint select the Add or remove device option from the start screen. The device management dialog will appear.



Choose to add a device with the 
 button in the dialog.

8. The dialog to add a device will appear.



Define the device with a name, IP address and paste the concatenated key retrieved earlier, into the  $\mathbf{Key}$  field.

9. The Clavister Security Gateway is now defined for PinPoint and the product will be able to communicate with it and monitor it. When a dashboard is associated with a Clavister Security Gateway the newly defined device will appear in the list of available devices.

# Appendix C. PinPoint Keyboard Shortcuts

The following keyboard shortcuts are available when using PinPoint.

**F1** Display the user guide

**F4** Toggle properties window

F5 Toggle to design mode

**F8** Toggle toolbox window

**F11** Toggle to full screen mode

F12 View the current preferences

CTRL+S Save the current Dashboard

CTRL+SHIFT+S Save All Dashboards

CTRL+F4 Close the current Dashboard

ALT+F4 Exit PinPoint

CTRL+N Create a new Dashboard

CTRL+SHIFT+N Create a new Dashboard from a template

CTRL+Z Undo last change

CTRL+Y Redo last undone change

CTRL+C Copy the currently selected Dashboard components to the clipboard

CTRL+V Paste the contents of the clipboard into the current Dashboard

CTRL+X Cut the currently selected Dashboard components to the clipboard

**PGDN** Selects the next Dashboard tab (immediately to the right or the first)

**PGUP** Selects the previous Dashboard tab (immediately to the left or the

last)

**ESC** Exits full screen Monitor Mode

**Arrows Keys** Move the currently selected control in design mode by a grid unit

# **PinPoint Glossary**

Clavister Hardware Series The series of Clavister hardware appliances that run the

CorePlus operating system. These include the SG50, SG3100,

SG4200, SG4400 and SG5500.

Clavister Security Gateway A hardware device which is running the CorePlus operating

system.

Clavister Software Series Versions of the CorePlus operating system which run on

generic, non-Clavister hardware.

CorePlus A Clavister proprietary software operating system which

performs all the functions of a Security Gateway.

Dashboard A collection of Monitoring Controls that are displayed together.

Dashboard Template A pre-defined Dashboard that must have it's Monitoring Contols

associated with a Clavister Security Gateway.

Data Binding The combination of a Clavister Security Gateway and

parameters in the CorePlus running on that gateway which together uniquely define a the sources of data to be monitored

by PinPoint.

Data Source A directory created by FineTune on the administrators PC which

contains the configuration files for a Clavister Security

Gateway.

Design Mode The alternative to PinPoint Monitor Mode. In this mode,

Dashboards are created, edited and saved, and are not actively

monitoring any Clavister Security Gateways.

FineTune A proprietary Clavister software application that runs on a

separate workstation to control one or many Clavister Security

Gateways.

Generic Monitoring Control A graphical control that appears on a Dashboard for monitoring

one of more CorePlus parameters on a Clavister Security

Gateway.

Layout Control A graphical control used for making cosmetic additions to a

Dashboard. This might be the addition of a text or images, or alternatively gathering Monitoring Controls together into a

Group.

Monitor Mode The alternative to PinPoint Design Mode. In this mode, a

Dashboard becomes "live" and actively monitors the operating parameters of one or more Clavister Security Gateways. Saving

of a Dashboard can also be done in this mode.

.NET Framework A software library available as a free download from Microsoft

which is necessary for running PinPoint. Installed automatically

with PinPoint if not already installed.

Pre-defined Monitoring

Control Monitorin

A control which is specifically designed to monitor a particular aspect of CorePlus operation such as Web Content Filtering.

Security gateway A hardware device which intercepts, monitors and routes IP

traffic in order to prevent security attacks against particular

computing assets.

# **Alphabetical Index**

# Α

adding a gateway (FineTune), 22 adding a gateway (web UI), 20 adding devices, 8

# C

control properties, 12 cursor styles, 11 custom dashboards, 10

# D

dashboards, 9 data bindings, 12 design mode, 13 dynamic maximums, 12

## F

FineTune usage, 8

#### ı

installation requirements, 8

# K

keyboard shortcuts, 24

#### M

Microsoft .NET requirements, 8

# R

restart options, 9

#### S

saving dashboards, 15 slideshow mode, 14 speedometer, 11 start screen, 8

# T

templates, 16 groups, 16 text captions, 14 themes, 14

## W

web UI usage, 8