



SiteConfig

SYSTEMS MANAGEMENT APPLICATION

User Manual

SOFTWARE VERSION 1.1

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World Wide Web: <http://www.grassvalley.com/support/>

Technical Support E-mail Address: gvgtechsupport@grassvalley.com

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Support Center	Toll free	In country
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	Southern Europe – Spain	+34 91 512 03 50
	Middle East, Near East, Africa	Middle East
Near East and Africa		+800 80 80 20 20; +33 1 48 25 20 20

Getting started with SiteConfig

This section contains the following topics:

- *About SiteConfig*
- *SiteConfig features*
- *About installing SiteConfig*
- *System requirements for SiteConfig control point PC*
- *Installing SiteConfig*
- *Opening SiteConfig*
- *SiteConfig main window*
- *Icons in SiteConfig*
- *Terminology used in SiteConfig*
- *TaskÅow checklist for using SiteConfig*

About SiteConfig

ProductFrame is an integrated platform of tools and product distribution processes for system installation and configuration. SiteConfig is a ProductFrame application and it is the recommended tool for network configuration and software deployment.

You can use SiteConfig as a stand-alone tool for planning and system design, even before you have any devices installed or cabled. You can define networks, IP addresses, hostnames, interfaces, and other network parameters. You can add devices, group devices, and modify device roles in the system.

As you install and commission systems, SiteConfig runs on the control point PC. It discovers devices, configures their network settings, and manages host files. SiteConfig also manages software installations and upgrades and provides a unified software package with verified compatible versions for deployment across multi-product systems.

You should use SiteConfig for network configuration and software deployment at installation and throughout the life of the system in your facility. This enforces consistent policy and allows SiteConfig to keep a record of changes, which makes the system easier to maintain and aids in troubleshooting should a problem arise.

SiteConfig displays information from a system description file, which is an XML file.

SiteConfig operates in different modes that correspond to a system's life-cycle phases: network configuration, software deployment, and software configuration. You can expand nodes and select elements in the tree view and the list view to view and modify networks, systems, individual devices, software deployment, and configuration settings.

SiteConfig features

SiteConfig provides features for network configuration and software deployment.

Network Configuration

- Creating a description of a customer facility including the networks and devices that comprise the system
- Remote hostname and IP address configuration and validation
- Remote device discovery and identification
- Host file generation and distribution
- Remote Desktop access to devices from the SiteConfig UI
- Reboot or shutdown devices remotely

Software Deployment

- Software packaging to ensure compatibility
- Remote detection and verification of installed software
- Remote installation and uninstallation of software

About installing SiteConfig

SiteConfig uses a protocol that involves sending Ethernet broadcast messages to discover and configure devices. To enable this protocol to work correctly, there must be unrestricted network access between the control point PC and the devices to be discovered.

This is achieved if control network interfaces are all connected to the same switch or to multiple switches interconnected with ISLs/trunks. If your site requires that other switches and/or routers be in the network path, you must make sure that no restrictions are in place that block SiteConfig protocols.

Also, do not install SiteConfig on a PC on which a drive from a managed device is mapped as an administrative share (C\$). For example, if you have a PC set up to run anti-virus software and for this purpose you have network drives set up on the PC mapped to C\$ shares on devices, then do not use that PC as the SiteConfig control point PC that manages those devices.

Related Links

System requirements for SiteConfig control point PC

The PC on which SiteConfig is installed must meet the following requirements:

Requirements	Comments
Operating system	Microsoft Windows (Must be a U.S. version): XP Professional Service Pack 2, Server 2003, or Vista Enterprise Service Pack 1.
RAM	Minimum 512 MB, 1 GB recommended
Graphics acceleration	Must have at least 128 MB memory
Processor	Pentium 4 or higher class, 2 GHz or greater
Hard disk space	400 MB
Microsoft .NET Framework	Version 2.0
Java JRE	1.3.1_12 and 1.4.2_05 or higher. Required for the HP Ethernet Switch configuration interface, which is used for K2 Storage Systems (shared storage).
XML	Microsoft XML 4 Service Pack 2 is required. You can install it from the msxml4sp2 file on the K2 System Software CD.

Installing SiteConfig

Connect a PC with the appropriate system requirements to the LAN on which all the devices to be managed are connected. Take into consideration the requirement that there be no routed paths to the devices.

1. Install the SiteConfig application on the PC. The SiteConfig application can be downloaded from the Grass Valley website or from the SiteConfig CD.
2. Open Add/Remove Programs on your Control Point PC and look for an entry called "SiteConfig Network Configuration Connect Kit".

The Connect Kit must be installed on the control point PC so that the control point PC can be discovered by SiteConfig and added to the system description as a managed device. This is necessary to ensure name resolution in SiteConfig's hosts file.

3. Proceed as follows:
 - If the Connect Kit is not installed, navigate to the SiteConfig install location's Discovery Agent Setup subdirectory and double-click the `DiscoveryAgentServiceSetup.msi` file. This launches the setup program and installs the Connect Kit. Follow the setup wizard to complete installation. A restart is required after installation. Then continue with the next step in this procedure.
 - If the Connect Kit is already installed, continue with the next step in this procedure.
4. If not already configured, configure the control point PC with a valid Ethernet IP address for the LAN using Windows Network Connections.

Related Links

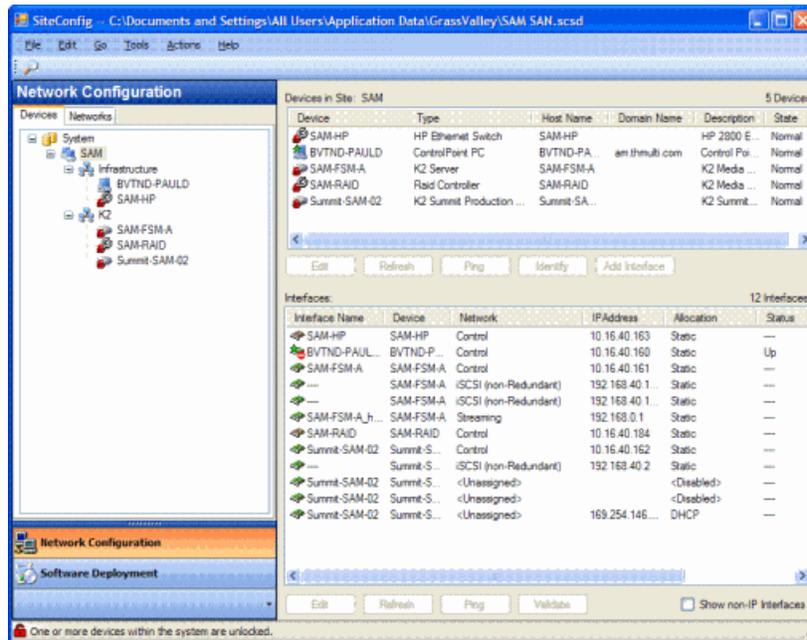
[About installing SiteConfig](#) on page 11

Opening SiteConfig

1. Use the SiteConfig shortcut on the Windows desktop or in the Start menu to open SiteConfig.
2. SiteConfig opens as follows:
 - If you have previously opened SiteConfig, the SiteConfig main window opens with the most recently used system description loaded.
 - If you have not previously used SiteConfig or if SiteConfig does not have access to a system description file, you are prompted to create a new system description or to import an existing system description.
3. Respond as appropriate.

SiteConfig main window

The SiteConfig main window is as follows:



The left side of the screen shows the tree view of the currently loaded system description. The Network Configuration and Software Deployment buttons at the bottom of the tree view activate either the network configuration workspace or the software deployment workspace.

The network configuration workspace on the left has two tabs: a Devices tab to display the tree of devices in the system and a Networks tab to show the hierarchy of networks defined in the system.

The software deployment workspace also has two tabs: a Devices tab that displays the same tree view of devices but provides information about the software roles assigned to the devices and the software currently installed on devices. The Deployment Groups tab provides the interface to manage software deployment tasks.

Select an item in the tree and the view on the right side of the screen shows details about the item selected. Select a site or group to show information about all the items that fall under the selected item.

Right-click an item to access a context menu of operations.

Icon overlays on items and tooltips provide status and warning feedback.

Icons in SiteConfig

SiteConfig object icons

The following icons identify a graphical user interface object.

Icon	Meaning
	Site. A site is a container for networks and groups of devices and may also contain sub sites
	System. A system is also a site but it is the top most site in the hierarchy
	Group. An arbitrary collection of devices
	Default device icon. Represents a single device. Icons for specific device types look different
	Unknown device. If there is no specific icon provided for a particular device type, this icon is displayed by default
	Software package. Represents a cab file that contains software installer files
	Role. A single software component representing a piece of functionality
	Managed Network Interface. The green tinge represents a "managed" network interface that SiteConfig can manage IP assignments
	Unmanaged Network Interface. Represents a NIC whose IP assignments are not currently being managed by SiteConfig either due to lack of connectivity OR that IP assignments are managed by an external entity such as DHCP

Icon overlay indicators

Configuration and connection status is indicated by overlay graphics on object icons. Unless specified otherwise, the indicators appear in the **Network Configuration | Devices** view, as follows:

Overlay graphic	Overlay description	Meaning
	Green star	Connected, configured, and communicating correctly in SiteConfig.
	Yellow star	Discovered and assigned, but SiteConfig is unable to establish direct IP communication yet is able to detect it via the NetConfig protocol
	Red circle with white bar	User attention required. Hover over the icon to view a tooltip with more information

Overlay graphic	Overlay description	Meaning
	Yellow warning triangle	Warning. Hover over icon to see tooltip information about the warning. In the Network Configuration view, the warning could be restart required or awaiting restart. In the Software Deployment view, the warning could be deployment tasks pending, restart required, or awaiting restart.
	Gray lock	Locked. Network configuration and deployment tasks are disabled unless you unlock the item. You must provide administrator credentials to unlock.
	Red lock	Unlocked. Network configuration and deployment tasks are fully enabled

Terminology used in SiteConfig

System Description

The system description is an XML file that describes a complete system. Almost all of the information displayed in SiteConfig is saved to the system description file. The file has a .scsd extension.

Site

A site is a logical collection of groups of devices and the networks to which those devices connect. A K2 SAN is an example of a site.

Group

A group is an arbitrary collection of devices that can be defined in SiteConfig to categorize sets of devices. For example, a group called "Infrastructure" can be created to contain devices like Ethernet switches, Fibre Channels switches, and Control Point PCs.

Managed Networks

Managed IP Networks are Networks on which the allocation of IP Addresses is managed by the SiteConfig application. The term "managed" is also applied to network interfaces on devices to imply that their IP addresses can be managed by the SiteConfig application. Prior to a device being discovered, all network interfaces on a device are unmanaged. When discovered, any interface that is used to connect to a managed network can be configured and set on the device via SiteConfig.

Unmanaged Networks

Unmanaged Networks are Networks on which allocation of IP Addresses is externally managed by DNS/host files or DHCP. The term "unmanaged" is also applied to network

interfaces on devices to imply that their IP addresses are not managed by the SiteConfig application. All network interfaces prior to discovery of devices are unmanaged.

NetConfig protocol

The NetConfig protocol is an Ethernet based protocol that is used by SiteConfig to discover devices on the network via broadcasts. The protocol is also used to configure networking properties like hostnames and IP addresses on individual devices.

Discovery Agent

The Discovery Agent is a Windows service that must be installed on all managed devices to allow for discovery and configuration by SiteConfig. The service is listed in Windows as the "ProductFrame Discovery Agent". The Discovery Agent is installed by the SiteConfig Network Configuration Connect Kit.

Software package

A managed software package is a collection of software installation files. The collection can include software for multiple devices and products. The software package is distributed as a *.cab file. SiteConfig requires that a valid software package be available in its software package store in order to deploy software.

Package store

A single instance of SiteConfig as it runs on a control point PC has a single package store. You must specify the location of the package store as a directory on a local or network connected drive. A software package must be in the package store in order to be available to SiteConfig software deployment features.

Deployment group

A deployment group is a group of devices to which SiteConfig can deploy software. You group the devices together based on your software deployment tasks. For example, devices that all get the same software can be combined in a deployment group. You define software deployment groups in the SiteConfig Software Deployment | Deployment Groups tree view.

Credentials

Administrator credentials are required in order to install software on a device. SiteConfig remembers a username and password and passes those credentials to the device in order to get permission to install software. If all your devices have the same administrator username and password, you can enter them in SiteConfig as global credentials and then SiteConfig uses those credentials to install software on all devices. If some devices have a different username and password than those used for global credentials, you can specify in SiteConfig the credentials for individual devices. SiteConfig then uses those credentials to install software on the individual device, rather than using the global credentials.

Roles

A role is a grouping of software functionality. A device can have one or more software roles. A software role is typically provided by one or more programs or services running on the device. For some products, a single device-type can be configured to have several different combinations of software roles, depending on the functionality that device provides to the system or systems to which it belongs.

Depending on a device's family, type, and configuration, SiteConfig automatically assigns the appropriate software roles to a device when the device is added to the system description. You can also manually modify a device's software roles.

SiteConfig knows what software should be installed for each software role, and deploys the software from a software package accordingly.

Deployment Tasks

A deployment task is a mapping between a particular software package that is part of a deployment group and a device that is part of the same deployment group.

Managed Package and Managed Software

A managed package, or managed software, consists of software that can be installed and/or uninstalled and/or reinstalled by SiteConfig.

Taskflow checklist for using SiteConfig

Use the following sequence of tasks as a guideline as you install, configure, and manage your system with SiteConfig. This checklist outlines a typical commissioning workflow for a new system.

Task	Comment
<input type="checkbox"/> Create a new system description	
<input type="checkbox"/> Create a hierarchy of sites adding networks, groups and device placeholders	Use the site wizard to add sites based on models or import a system description (.scsd) file
<input type="checkbox"/> Set the properties of each network specified for the system	Specify IP address ranges and other network details for managed and unmanaged networks
<input type="checkbox"/> Modify or add device placeholders, edit each network interface and specify the IP address to use	
<input type="checkbox"/> Discover devices	
<input type="checkbox"/> Match each discovered device to an existing placeholder or create a new device from the discovered device	If you discover a device for which you do not yet have a placeholder device prepared, you can add the device directly to the appropriate site\group without a placeholder.

Task	Comment
<input type="checkbox"/> For each device, edit each network interface specifying the necessary network information required and apply to the device	Set the control interface IP address first, then the others
<input type="checkbox"/> Set the hostname of the device	Repeat steps for all devices
<input type="checkbox"/> Add your Control Point PC to the system description	
<input type="checkbox"/> Deploy hosts files	Make sure you have completed network configuration of all network interfaces across all devices before deploying the host file to ensure completeness and validity. Deploy to the control point PC as well as to managed devices.
<input type="checkbox"/> Create a deployment group	
<input type="checkbox"/> Perform a software check on every device in the deployment group	
<input type="checkbox"/> Add one or more software packages	
<input type="checkbox"/> Run deployment tasks on devices	You must control which deployment tasks run on what devices and in what order. For example, on a K2 SAN you must deploy to servers first, then clients. If your system requires a specific sequence of software deployment and restarts, you must manage the sequence yourself. SiteConfig does not enforce this type of deployment sequence.
<input type="checkbox"/> If you have one or more K2 SAN sites defined, import the system description file into the K2 System Configuration application and configure every device.	

Chapter **2**

Working with network configuration

This section contains the following topics:

- *Working with sites and groups*
- *Working with networks*
- *Working with devices*

Working with sites and groups

About sites

Sites are containers for networks and groups of devices and may also contain subsites. When you start with a new system description, you add one or more sites in the tree view under the System node. SiteConfig provides you with a wizard to help create a site based on a model.

A site model is a template to enable simplified creation of sites. Each model specifies a set of networks that devices under that site connect to, for example, a control network, a streaming network, a storage network. The model also specifies a set of device models that typically comprise such a site, including attributes like the specific number of devices of a particular model.

You can choose to start with a site model and then add more sites to the system as appropriate. You can also choose to create a site which is entirely custom; where you specify networks, groups, devices without starting with predefined models.

When you create multiple sites, their placement in the tree view tells SiteConfig how the devices under them connect together.

Related Links

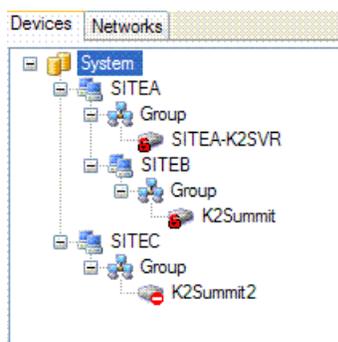
[Network configuration hierarchy](#) on page 22

About site hierarchy

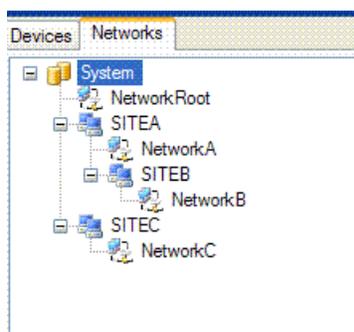
Sites are containers for networks and groups of devices and may also contain sub sites. When you build a tree view of sites and subsites, it is important to understand that you are also defining a hierarchy of networks.

When you add a network to a particular site, it means that every item that you add under that site is connected to the network(s) defined at that site and its parent site(s). However, if you have peer sites in the tree (at the same level) and they each define one or more networks, SiteConfig does not allow the devices in one peer site to connect to a network in another peer site. SiteConfig interprets any device you add to a peer site as not being connected to the networks defined at another peer site. The exception to this are networks defined at a mutual parent site(s). If peer sites have a mutual parent site, the devices in any peer site can connect to the network in the mutual parent site. This is illustrated in the following examples:

The SiteConfig tree view of sites and devices under the System node (which is also a site) appears as follows:



The SiteConfig tree view of some networks defined at different sites within the tree view appears as follows:



The interpretation of this hierarchy is as follows:

- All devices that are under SITEA or SITEB connect to the networks defined at those sites (NetworkA and NetworkB respectively) and to the network "NetworkRoot" defined at their parent - System.
- All devices under SITEC connect to NetworkC and NetworkRoot only - not to networks defined under SITEA or SITEB.
- When you edit the network interface IP addresses on devices, the network options presented will be limited to the networks that are "in scope".

When creating sites and networks, consider the following:

- Put your control network in the top level site since there is likely just one control network for the entire system. Then when you add child sites, only add other networks that are intended for devices within that site. An example of this is a storage networking network for a K2 SAN.
- Create peer sites to isolate networks from one another. For example, on mirrored storage SANs the storage networking networks are typically isolated.

Related Links

[Network configuration hierarchy](#) on page 22

[Rules for networks](#) on page 34

Network configuration hierarchy

The following table describes the various items that can be defined in the SiteConfig tree view and what each can contain

Hierarchy	Description	Contains	Is contained by
System	The top level container. The name is free form.	Sites: multiple, free form	None
Site	An association of networks and devices. Typically used for major sub-systems, such as the K2 SAN. Can be free form, but predefined models are provided.	Sites: multiple, free form. Nesting is constrained; Groups: multiple, free form	System, Site
Group	A category of devices. Can be free form or can have specific properties and constraints relative to functionality in the site or system. A site must have at least one group in which to contain devices.	Devices: multiple, free form	Site
Device	A physical device, predefined by Family, Type, and Configuration.	Sub-device: multiple, predefined; Interfaces: multiple, predefined	Group
Sub-device	A physical component or group of components that reside in a device, such as a LUN or RANK in a RAID device, predefined by Family, Type, and Configuration	None	Device
Interface	A physical connection point, usually a network	None	Device

Hierarchy	Description	Contains	Is contained by
	adapter, predefined by Type.		

Related Links

[About sites](#) on page 20

[About site hierarchy](#) on page 20

About system descriptions

You have several options for starting and developing a SiteConfig system description, as follows:

Start with an existing system description

You can obtain a system description for a system similar to the one you are installing. Some system descriptions are provided with SiteConfig as templates for specific system types. You can import the system description into SiteConfig, and then modify it until it matches your specific system. You can define the entire system including defining sites, groups, networks, devices and even the planned IP assignments before you arrive at the installation site.

You can save your work as a system description file (*.scsd*) file and when onsite at the installation site, you can import the file into SiteConfig as your starting point.

Once you import the system description you can make changes as appropriate and proceed to discover the connected physical devices.

Start with a new system description

You can create new system description using SiteConfig on your PC before you arrive at the installation site, or as part of the commissioning process at the installation site.

Typically, if you are starting with a new system description, you use the site wizard to add one or more sites based on appropriate site models, define networks and their IP ranges, and add device placeholders. Then you discover devices and perform appropriate network configuration, followed by software deployment.

About saving system descriptions

When you make a change to a system description, SiteConfig saves the change within three seconds and updates the system description file. There is no need to save changes when you close a system description or to manually save changes while you are working on a system description.

Creating a new system description

1. Open SiteConfig and proceed as follows:
 - If a dialog box opens that gives you the choice of creating or importing a system description, it means SiteConfig does not have access to a system description file. Click **Create**.
 - If the SiteConfig main window opens, click **File | New**.

The Create New System Description dialog box opens.

2. In the Create New System Description dialog box, enter the name of the file for the system description you are creating.

It is recommended that you store the system description file in the default location, rather than browsing to store the file in a different location. SiteConfig always accesses the default location.

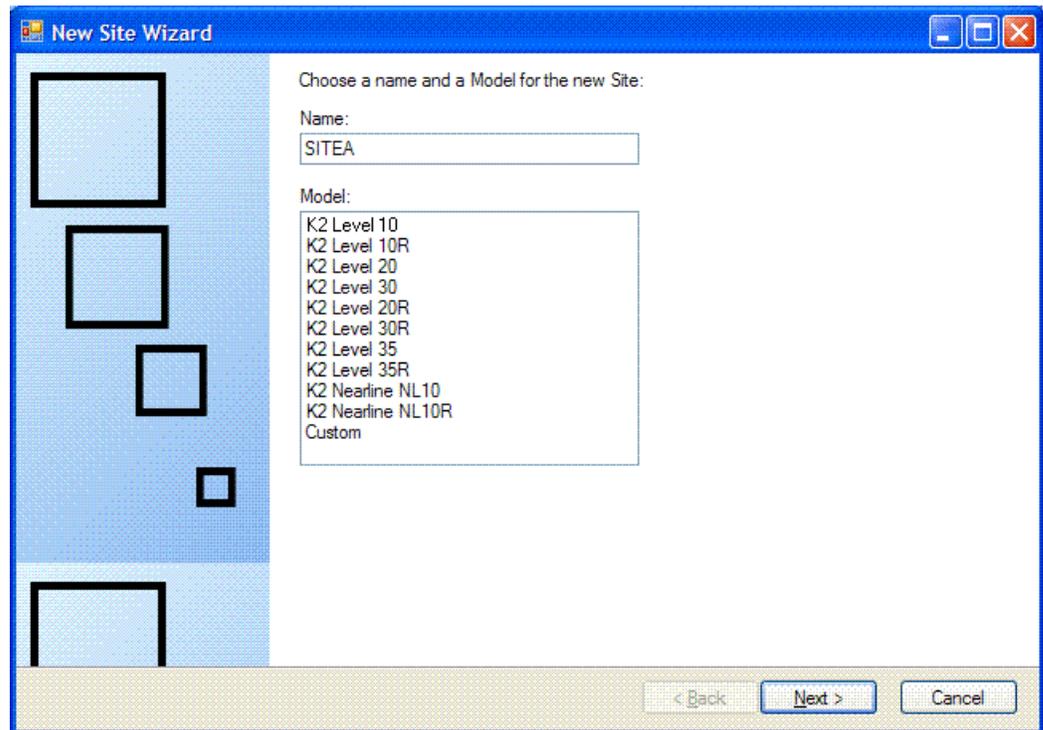
3. Click **OK**.

A blank system description loads, which displays just the top-level System node in the tree view.

4. In the **Network Configuration | Devices** tree view, right-click the **System** node or a **Site** node and select **Add Site**.

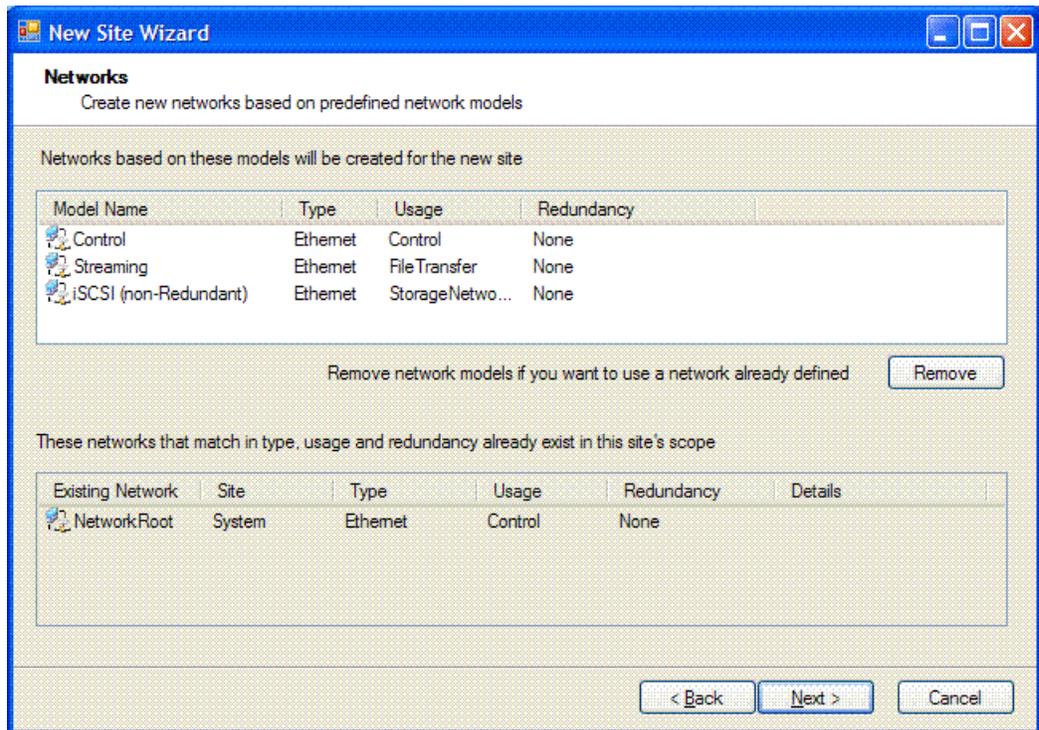
In this context, "Site" is a distinct system, such as a K2 SAN or an Aurora Browse system.

The New Site Wizard opens.



5. Enter a name for the site you are creating, considering the following:
6. Select a model on which to base your site.
7. Click **Next**.

The first Networks page opens.



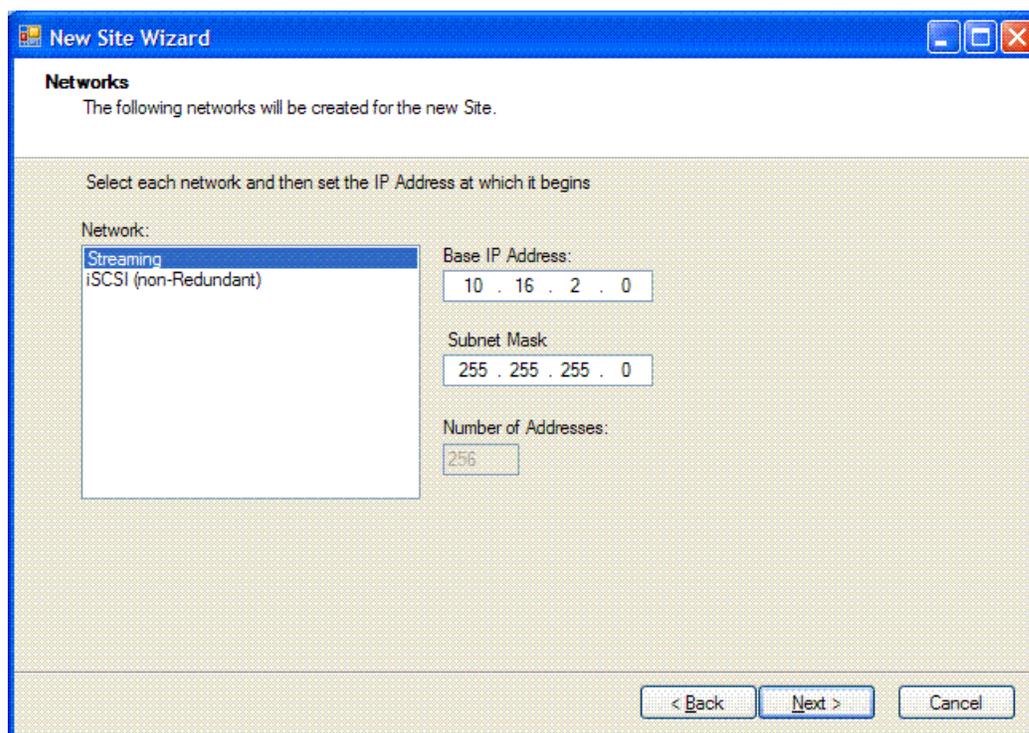
The first Networks page displays a list of networks that are defined for the selected site model. Each of these networks is based on a network model that defines the type, usage and redundancy of the network. When the New Site Wizard creates a network, it is based on this model.

8. If a network is not necessary for the site you are creating, select the network and click **Remove**.

One or more of the displayed networks might not be necessary. Since child sites inherit the networks defined at their parent(s), if the site you are creating has a parent site that already contains one of the displayed networks, then it is not necessary to include that network here.

9. Click **Next**.

The second Networks page opens.



The second Networks page shows the network models you chose to be created for this site.

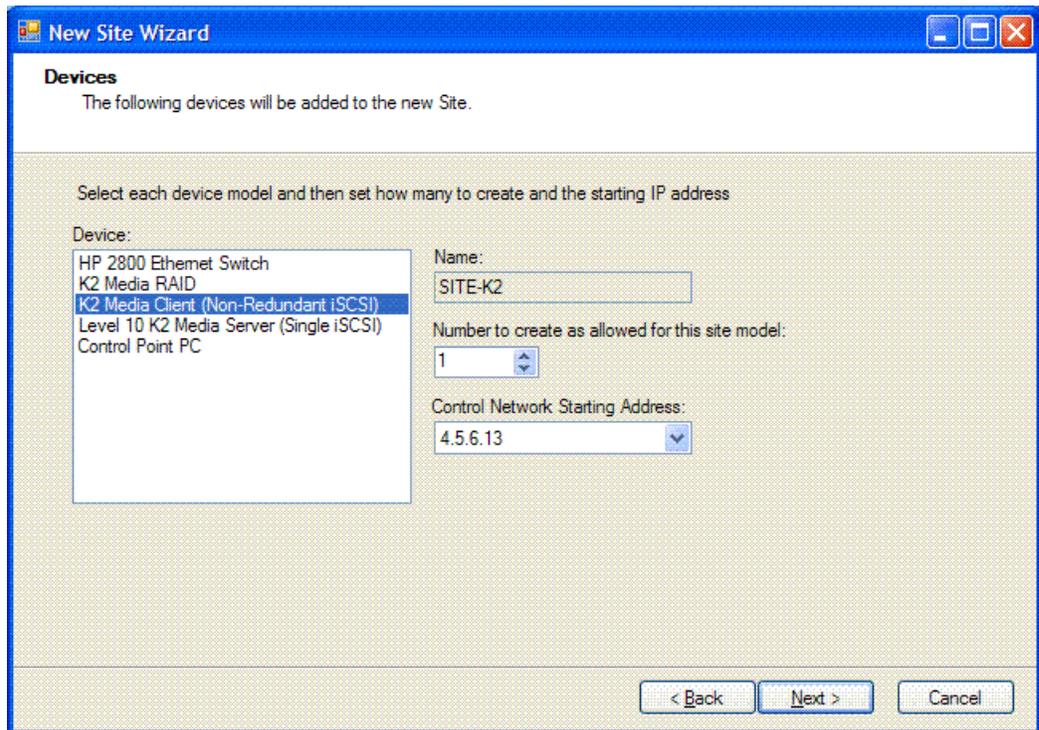
10. Select each network and specify the base IP address, subnet mask and number of addresses for the IP address range for the network.

You can assign an IP address from this network for any device you add to this site.

When you complete the wizard, SiteConfig creates new networks based on the values you specify here.

11. Click **Next**.

The Devices page opens.



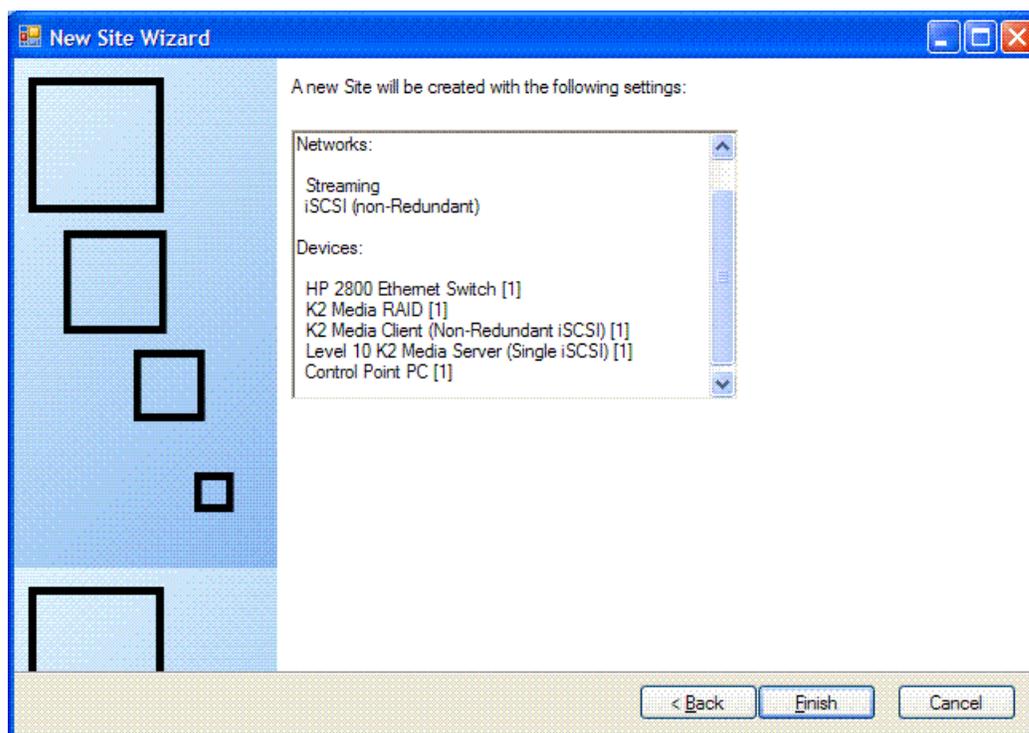
The Devices page shows you the device models that typically comprise a site based on the model you chose in the first page of the New Site Wizard. The New Site Wizard creates these devices as part of the site. You can then modify, remove, or you add devices, including device models that are not shown on this page.

12. You can select a device model and do one or more of the following:

- Specify the number of devices of that model for the site. If the control is disabled, it means that the number of devices is constrained by the site model. For example, a site model might be constrained to have one Ethernet switch only.
- Specify the starting IP address of a set of devices of that model. SiteConfig automatically assigns IP addresses from this range. If you require a different sequence of IP addresses, you can modify them on each device after the New Site Wizard completes.

13. Click **Next**.

The "...Site will be created..." page opens.



This is the last page and summarizes what the New Site Wizard adds to the tree view.

14. Click **Finish** to create the site.

The site is displayed in SiteConfig in the tree view with groups and device placeholders displayed under the site node. New networks are displayed in the tree view of networks in the Networks tab.

Location of SiteConfig files

SiteConfig uses the user profile directory, as currently configured in the Windows operating system, to store and access files. The user profile directory can be different on different control point PCs, depending on the Windows operating system installation. In the user profile directory you can find the *Application Data\GrassValley* directory, which is where SiteConfig stores its files. The complete path for a typical control point PC is as follows:

C:\Documents and Settings\All Users\Application Data\GrassValley

In this directory you can find system descriptions files, which have the *scsd* extension. You can also find other SiteConfig directories and files.

Importing a system description

Prerequisites for this task are as follows:

- The SiteConfig PC has access to the system description file you are importing.
1. Open SiteConfig and proceed as follows:
 - If a dialog box opens that gives you the choice of creating or importing a system description, it means SiteConfig does not have access to a system description file. Click **Import**.
 - If the SiteConfig main window opens, click **File | Import**.

The Import System Description dialog box opens.

2. Browse to and select a system description file (*.scsd) and click **Open**.

The current system description is closed and the system description you are importing is displayed in SiteConfig.

Importing a K2 System Configuration file

If you are using SiteConfig for the first time at a system that has already been commissioned and if the system has a K2 SAN, you can import the K2 System Configuration application's XML file into your system description.

1. Open SiteConfig and proceed as follows:
 - Click the **File | Import** menu item.

The Import System Description dialog box opens.

2. From the **Files of type** drop-down list select **K2 SAN Config (.xml)**, browse to the location of the XML file, select the file, and click **Open**.

SiteConfig creates new sites in the system description representing each K2 SAN it finds in the XML file. SiteConfig adds placeholder devices for each device in the K2 SAN. SiteConfig might popup windows asking you to resolve devices to equivalent device models in SiteConfig. Choose the appropriate device model.

Exporting (Save As) a system description

The system description export feature allows you to save a system description file in a different location and/or with a different file name.

1. Click **File | Export**.

A Export System Description dialog box opens.
2. Browse to your desired export location.
3. Enter the desired name of the system description file.

4. Click **Save**.

Merging system descriptions

Prerequisites for this task are as follows:

- Two or more system description files are accessible.
- The system description files are not identical.

Before merging system descriptions, compare their networks and plan your network integration. SiteConfig does not error check for overlapping IP address ranges, network access, or other potential problems when merging system descriptions. You might find integration easier if you reconfigure networks before merging system descriptions.

1. If you have not already done so, import one of the system description files that you want to merge.

2. Click **File | Merge**.

A Merging Into Existing System Description dialog box opens.

3. Navigate if necessary to the system description file that you want to merge, select the system description file and then click **Open**.

- If the selected system description is identical to the existing system description, SiteConfig displays an informative message and does not allow the merge.
- If the selected system description file is not identical, the system description appears as a new site in the SiteConfig tree view.

4. Identify the name of the merged system description file, as listed in the title bar of the SiteConfig main window. It is the name of the system description file last merged.

5. If you want to change the name of the merged system description file, do the following:

- a) Export the system description file and give it a different name.
- b) Import the system description file.

6. Evaluate the merged system description, including networks, device groups, and software deployment groups. Reconfigure and integrate as necessary.

7. Repeat this procedure to merge additional system description files.

About groups

Groups are a way to classify sets of devices based on common attributes. For example you can choose to create a group of devices based on their hardware type, such as Ethernet switches, or based on their functionality, such as Editor PCs.

Creating groups also allows you to perform some common operations in SiteConfig. In the tree-view you can select the group node and perform an operation, such as deploying hosts files or restarting, on all the devices in the group.

Adding a group

1. In the **Network Configuration | Networks** tree view, right-click a site node and select **Add Group**.

The group appears in the tree view.

2. Right-click the group and select **Rename**.
3. Enter the desired name for the group.

Removing items from the system description

1. In the tree view, right-click any of the following nodes:

- Site
- Network

If you have at least one device in your system that has a network interface that is connected to this network, you must reassign all network interfaces before you can remove the network.

- Group
- Device
- Sub-device
- Interface

2. Select **Remove**.

The item is removed from the system description.

Working with networks

About networks

This section describes how to use SiteConfig to define and manage the networks in a system.

When you add a network to a site in the tree view, you are defining a network to which one or more devices within that site can connect. SiteConfig can then configure networking properties on devices that you add to the site. For example, SiteConfig can set IP addresses on a device's network interface based on an IP you select from a range of IPs belonging to a network that you have defined.

You can also choose to define networks in SiteConfig that exist at a given site but are not managed by SiteConfig, such as DNS\DHCP managed networks. Having these networks defined in SiteConfig gives you the ability to describe network connectivity between devices without actually managing the network itself

About managed and unmanaged networks

The term "managed network" in SiteConfig refers to a network for which SiteConfig administers IP address assignments and other networking properties on devices. When you create a managed network, you input details such as the range of static IP addresses for the network, gateway, any DNS servers used by the network.

When you create a managed network, you can then select a device in SiteConfig and set the network's properties in the interfaces view for the device. When you use SiteConfig to discover the device, SiteConfig can then configure the network settings on the physical device.

The term "unmanaged network" refers to a network that is administered by an external entity such as DNS\DHCP or prebuilt hosts files. If a system manages IP addresses using an external entity, you can create an unmanaged network in SiteConfig to indicate that one or more devices you add to SiteConfig connects to the unmanaged network. When configuring network interfaces on discovered devices, you can specify the interface(s) that connect to an unmanaged network.

SiteConfig can toggle a network connection on a device. SiteConfig can assign the network connection to use DHCP managed addressing if you specify that the connection/interface connects to a defined unmanaged network. Or SiteConfig can assign the network connection to use static IP addresses specified by a managed network you define in SiteConfig.

If there are third party devices that provide name/IP resolution by using a prebuilt hosts file, you can create an unmanaged network and supply a hosts file to SiteConfig. SiteConfig can then merge the contents of this hosts file into the hosts file that SiteConfig maintains.

Types of networks

SiteConfig categorizes networks based on the following attributes:

- Data link layer protocol - You can specify whether a network uses Ethernet or Fibre Channel
- Usage - Specify what the network is used for, such as storage networking, control, or streaming
- Redundancy - Specify whether a particular network is the primary or backup path for a network connection. Some devices might have dual paths in the networking infrastructure to support fault tolerance by connecting one network interface to the primary path or network and another interface to the backup network. You can then use SiteConfig to specify which network interface on a device connects to the primary network and which one connects to the backup network and if it is a

managed network, SiteConfig can configure an appropriate static IP address from the choice made.

Rules for networks

When adding networks to sites, you are indicating that all devices under that site can connect to the network. If you edit the network interfaces of any device that you add to that site, SiteConfig shows you only the networks that are within "scope", which are networks defined in each immediate site parent going up the hierarchy to the System node.

Related Links

[About site hierarchy](#) on page 20

Creating or modifying a network

1. In the **Network Configuration | Networks** tree view, select a System node or a Site node.

The networks under that node are displayed in the list view.

2. Proceed as follows:
 - To add a network under the currently selected node, in the tree view right-click the node and select **Add Network**.
 - To modify a network, in the list view right-click a network and select **Details**.

The Network Settings dialog box opens.

3. Configure the settings for the network as follows:

- Type – The link layer of the protocol stack, such as Ethernet or Fibre Channel.
- Usage – The function of the network, related to the type of traffic the network carries, such as control or file transfer.
- Redundancy – Specifies if the network supports redundancy and if the network is primary or secondary.
- Name – The name of the network, as it is displayed in SiteConfig and identified in host files.
- Exclude from Host Files – If selected, SiteConfig does not write the network's hostnames and IP addresses to the host files that it copies to networked devices.
- Managed – Network settings are managed by SiteConfig.
- Base IP Address – The first (lowest) IP address in the range of IP addresses managed by SiteConfig.
- Number of Addresses – The number of IP addresses in the range managed by SiteConfig.
- Subnet Mask/Gateway IP Address – Additional network settings managed by SiteConfig.
- Unmanaged – Network settings are managed by mechanisms external to SiteConfig.

- DNS – Name resolution is provided by a DNS server for the unmanaged network.
 - IP Address Allocation via DHCP – IP addresses are assigned by DHCP for the unmanaged network.
 - Host File – Name resolution is provided by host files for the unmanaged network. If you want SiteConfig to copy the contents of the unmanaged network's host file into a managed network's host file, enter the location of the unmanaged network's host file. This allows host names of devices on the unmanaged network to be resolved on the managed network.
 - DNS Servers – Servers providing DNS for name resolution. These DNS server can be for both managed and unmanaged networks.
 - Default Interface Name Suffix – The suffix added to the end of host names to identify interfaces on this network.
4. Click **OK** to save settings and close.
 5. If you added a network, it appears in the **Network Configuration | Networks** tree view at the bottom of the list.

About hosts files and SiteConfig

SiteConfig uses the network information in the system description to define a hosts file and allows you to view the hosts file. SiteConfig can manage this hosts file on Windows operating system devices that are in the system description and that are part of a SiteConfig managed network.

When you have successfully assigned devices and applied planned network settings to interfaces, it is an indication that host table information, as currently captured in the system description, is valid and that you are ready to have SiteConfig assemble the host table information into a hosts file. Your options for placing this host table information on devices are as follows:

- If you do not want SiteConfig to manage your host table information, you can manage it yourself. This is typically the case if your facility has an existing hosts file that contains host table information for devices that are not in the SiteConfig system description. In this case, you can have SiteConfig generate a single hosts file that contains the host table information for the devices in the system description. You can then copy the desired host table information out of the SiteConfig hosts file and copy it into your facility hosts file. You must then distribute your facility hosts file to devices using your own mechanisms.
- If you want SiteConfig to manage all information in hosts files on devices, you can have SiteConfig copy its hosts file to devices. In so doing, SiteConfig overwrites the existing hosts files on devices. Therefore, this requires that all devices that have name resolution through the hosts file be configured accordingly in the SiteConfig system description.

If you choose to have SiteConfig write hosts files to devices, the process consumes system resource and network bandwidth. Therefore you should wait until you have

verified the information for all devices/interfaces in the host file, rather than updating hosts files incrementally as you discover/assign devices.

SiteConfig does not automatically deploy hosts files to managed devices as you add or remove devices. If you add or remove devices from the system description, you must re-deploy the modified hosts file to all devices.

Viewing the hosts file

However, do not attempt to use the Save As window to modify hosts files on devices managed by SiteConfig.

1. In the **Network Configuration | Networks** tree view, select a network, site, or system node.
2. Click **View Hosts file**.

A Host File Contents window opens that displays the host file contents.

Do not attempt to use this window to modify host files on devices managed by SiteConfig. Any changes you make in the Save As window are not saved in the hosts file that is defined in the system description.

3. Do one of the following to close the Host File Contents window:
 - If you want to save the hosts file to a different location, you can edit text if desired and then click **Save As** to save the hosts file to the location of your choice.
 - Click **Close**.

Related Links

[About hosts files and SiteConfig](#) on page 36

Generating host tables for devices with SiteConfig

Prerequisites for this task are as follows:

- Planned control network settings are applied to control network interfaces and devices are communicating on the control network as defined in the system description.
- Interfaces for networks that require name resolution via the hosts file, such as the FTP/streaming network, have settings applied and are communicating.
- You have viewed host names, as currently defined in the system description, and determined that they are correct.
- The control point PC is added to the system description so that it is included in the host tables generated by SiteConfig.

1. In the **Network Configuration | Networks** tree view, select a network, site, or system node.

2. Click **View Hosts file**.

A Hosts File Contents window opens that displays the contents of the hosts file as currently defined in the system description.

3. Verify the information in the hosts file.

4. Do one of the following:

- If you are managing host table information yourself, click **Save As** and save a copy of the hosts file to a location on the control point PC. Then open the copy of the hosts file, copy the desired host table information from it, and paste it into your facility hosts file as desired. Then you can use your own process to distribute the facility hosts file to devices. Remember to distribute to the control point PC so that SiteConfig and other management applications such as K2Config can resolve network host names.
- If SiteConfig is managing hosts files, do the following:

NOTE: Writing hosts files to multiple devices consumes system resource and network bandwidth. Therefore it is recommended that you wait and do this after the system is complete and fully implemented, rather than updating hosts files incrementally as you discover/assign devices.

a) In the **Network Configuration | Devices | Devices** list view, right-click a device to which you intend to write the hosts file and select **View Current Host File**.

A Host File Contents window opens that displays the contents of the hosts file that is currently on that actual device.

b) Verify that there is no information that you want to retain in the device's current hosts file that is not also in the hosts file as currently defined in the system description. If you need to save the device's current hosts file, click **Save As** and save to a different location.

c) In the **Network Configuration | Devices | Devices** list view, right-click a device or use Ctrl + Click to select multiple devices, and select **Update Host File**.

The current hosts file is overwritten with the hosts file as defined in the system description.

Related Links

[Third party devices in SiteConfig](#) on page 40

[About hosts files and SiteConfig](#) on page 36

Working with devices

About SiteConfig support on managed devices

Before SiteConfig can be used to discover or manage a device, the device must meet the following requirements:

- The device must be a Microsoft Windows operating system device.
- The device must have Microsoft .NET version 2.0 installed, as reported in the Windows Add/Remove Programs control panel.
- The ProductFrame Discovery Agent service must be running on the device, as reported in the Windows Services control panel.

Software that meets these requirements is bundled in various components and installation programs, some of which are available at your SiteConfig install location as follows:

- The *ConnectivityKit* folder contains Microsoft .NET. You can copy the contents of this folder to a device and then run *setup.exe* to install the software.
- The *DiscoveryAgent Setup* folder contains the ProductFrame Discovery Agent. You can copy the contents of this folder to a device and then run *setup.exe* to install the software.

Related Links

[Troubleshooting device discovery](#) on page 92

[Comparing files for software deployment](#) on page 77

About device phases

As you work with a SiteConfig system description to move from planning to implementation, a device moves through several phases, as follows:

- Placeholder device — This is a “virtual” device that is still in the planning phase. It is in a system description, but it has not yet had an actual, network-connected physical device assigned to it.
- Discovered device — This is a physical device that has been discovered by SiteConfig but that has not yet been assigned to a device in the system description.
- Assigned device — This is a device that has been discovered as a physical device and that has been assigned to a device in the system description. The full set of SiteConfig features can be applied to an assigned device.

Placeholder device

When you first add a device to a system description, it is only a placeholder for a physical device. Later you discover the physical device and match it to the placeholder.

You can edit network interfaces on placeholders to choose an IP address from available networks. This is stored in the system description as a "planned" configuration and when you discover and assign a physical device to the placeholder, you can then set the network settings on the actual device.

When the device is a placeholder, all interfaces on the device are displayed as "unmanaged". In the tree view an unmanaged interface is displayed with unmanaged interface icon.

Related Links

[Icons in SiteConfig](#) on page 14

Discovered device

Clicking on the discover devices icon on the toolbar or from the **Actions | Discover Devices** menu item brings up a window that displays a list of devices that SiteConfig has discovered on the network.

If you have added a placeholder device to the tree view, you can now match the placeholder to one of the discovered devices to complete the association.

If you have matched a placeholder device to a discovered device, the device is displayed in the tree view with a green or yellow overlay icon. This indicates that there is network communication with the device. If the device is powered off or offline, no overlay icon is displayed.

Assigned device

An assigned device is a device that has been matched with a discovered device and thus can be actively managed by SiteConfig.

If an assigned device is online and connected to the control network, when SiteConfig launches it re-detects the assigned device and allows its network properties to be edited.

Third party devices in SiteConfig

You can use SiteConfig to perform network configuration tasks on third party devices that run non Grass Valley software but interact with the managed devices you have defined in the system description.

The following conditions apply in order to manage network configuration on third party devices -

- The SiteConfig prerequisites are installed
- The networks these devices connect to must also be defined in the system description
- The devices must be accessible from the SiteConfig PC via the control network

You can then add a placeholder device using the "Generic Device" model, discover the device and perform network configuration as you would on any other managed device.

Alternatively, you may not want to perform any network configuration on third party devices but you may want them added to the system description if -

- Their network interfaces connect to one or more managed networks defined in SiteConfig
- The managed networks are not excluded from the host file

In order to do this, perform the following steps -

1. Add a placeholder device using the "Generic Device" type

2. Edit the host name of the placeholder device to match the actual host name of the device
3. Click the "Add Interface" button to specify an unmanaged network interface on the device. Select the managed network and the actual IP address of the network interface.
4. Add any other network interfaces in the same manner
5. If you now view the host file generated by SiteConfig, you should now see the network interfaces added providing the network(s) are not excluded from the host file and the connected networks are not unmanaged networks (DNS\DHCP).

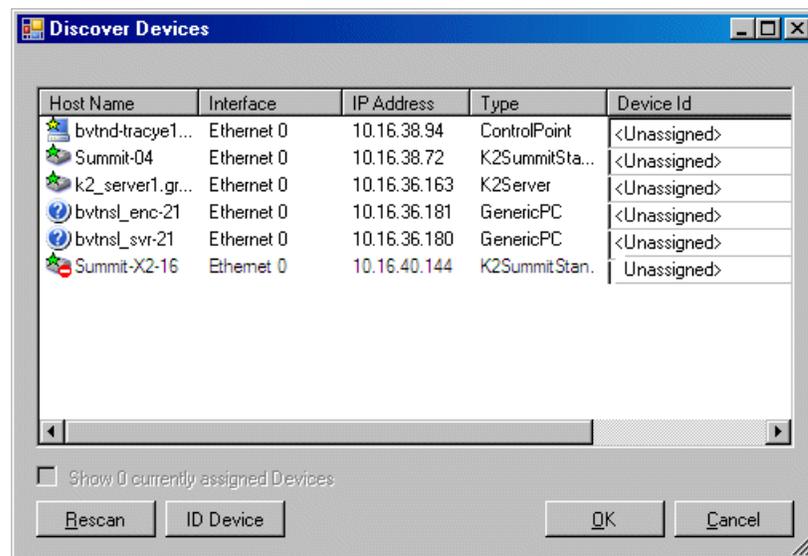
Discovering devices with SiteConfig

Prerequisites for this task are as follows:

- The Ethernet switch or switches that support the control network are configured and operational. If multiple switches, ISLs are connected and trunks configured.
- The control point PC is communicating on the control network.
- There are no routers between the control point PC and the devices to be discovered.
- Devices to be discovered are Windows operating system devices, with SiteConfig support installed.
- Devices are cabled for control network connections.

1. Open SiteConfig on the control point PC.
2. In the toolbar, click the discover devices button. 

The Discover Devices dialog box opens.



A list of discovered devices is displayed.

3. Click **Rescan** to re-run the discovery mechanism. You can do this if a device that you want to discover has its network connection restored or otherwise becomes available. Additional devices discovered are added to the list.

Assigning discovered devices

Prerequisites for this task are as follows:

- Devices have been discovered by SiteConfig
- Discovered devices are not yet assigned to a device in the system description
- The system description has placeholder devices to which to assign the discovered devices.

1. If the Discovered Devices Dialog box is not already open, click the discover devices button .

The Discover Devices dialog box opens.

2. Identify discovered devices.
 - If a single device is discovered in multiple rows, it means the device has multiple network interfaces. Use the interface listed as “Ethernet...0” for discovery.
 - If necessary, select a device in the list and click **ID Device**. This triggers an action on the device, such as flashing an LED or ejecting a CD drive, to identify the device.
3. To also view previously discovered devices that have already been assigned to a device in the system description, select **Show ... currently assigned devices**.

The currently assigned devices are added to the list. Viewing both assigned and unassigned devices in this way can be helpful to verify the match between discovered devices and placeholder devices.

4. In the row for each discovered device, view items on the Device Id drop-down list to determine the match with placeholder devices, as follows:
 - If SiteConfig finds a match between the device-type discovered and the device-type of one or more placeholder devices, it displays those placeholder devices in the list.
 - If SiteConfig does not find a match between the device-type discovered and the device-type of a placeholder device, no placeholder device is displayed in the list.
5. In the row for a discovered device, click the Device Id drop-down list and select the placeholder device that corresponds to the discovered device.

If there is no corresponding placeholder device currently in the system description, you can select **Add** to create a new placeholder device and then assign the discovered device to it.

6. When discovered devices have been assigned, click **OK** to save settings and close.
7. In the **Network Configuration | Devices** tree view, select each of the devices to which you assigned a discovered device.

Related Links

[Discovering devices with SiteConfig](#) on page 41

[Adding a discovered device to the system description](#) on page 43

Adding a discovered device to the system description

Prerequisites for this task are as follows:

- The device has been discovered by SiteConfig
- The discovered device has not yet been assigned to a device in the system description
- The site to which the device is to be assigned is in the system description.
- The group to which the device is to be assigned is in the system description.

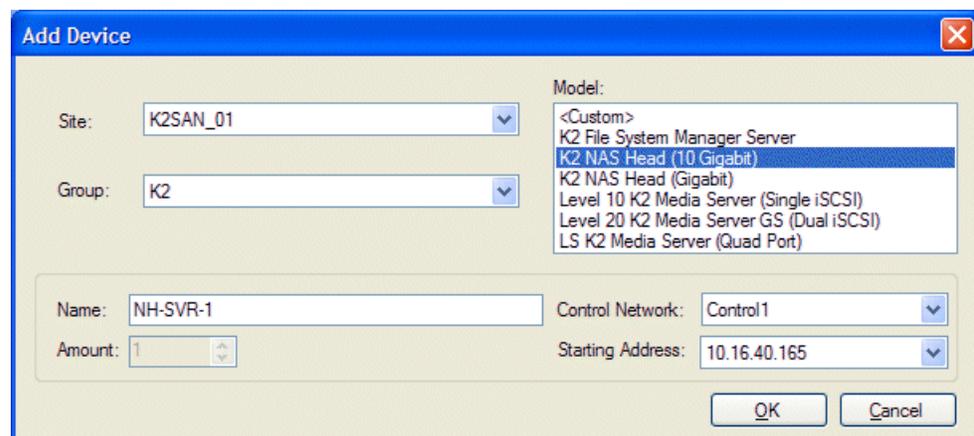
Use this procedure to add a discovered device to the system description without first creating a placeholder for the device.

1. In the SiteConfig toolbar, click the discover devices button  to open the Discover Devices dialog box.

A list of discovered devices is displayed.

2. In the row for a discovered device, click the **Device Id** drop-down list and select **Add**.

The Add Device dialog box opens.



The screenshot shows the 'Add Device' dialog box with the following configuration:

- Site:** K2SAN_01
- Group:** K2
- Model:** K2 NAS Head (10 Gigabit)
- Name:** NH-SVR-1
- Amount:** 1
- Control Network:** Control1
- Starting Address:** 10.16.40.165

3. Select the site to which you are assigning the device.
4. Select the group to which you are assigning the device.

5. Accept the default device name or modify it. If a hostname has already been set, you can enter the hostname here.
6. Select the OS platform type : x86 for a 32 bit OS, x64 for a 64 bit OS
7. Select the model of the device.
8. If there is more than one control network in the system description, select the control network.
9. Select the IP address.
10. Click **OK** to save settings and close.

The discovered device is added to the tree and SiteConfig retrieves and displays current network interface information in the interfaces view.

Related Links

[Discovering devices with SiteConfig](#) on page 41

[Assigning discovered devices](#) on page 42

Assigning the control point PC

Prerequisites for this task are as follows:

- The SiteConfig control point PC has the "SiteConfig Network Configuration Connect Kit" installed.
- The system description contains a control point PC placeholder device.
- The placeholder's control network interface is configured with the control network IP address that is currently on the actual control point PC.
- The device name of the control point PC placeholder is same as the host name of the actual control point PC.

In this procedure you discover the physical control point PC and assign it to the placeholder control point PC in the system description.

1. Open SiteConfig on the control point PC.
2. Discover devices and identify the control point PC discovered device.
3. Assign the discovered device to the control point PC placeholder.
4. In the **Network Configuration | Devices** tree view, select the control point PC.
5. In the Interfaces list view, right-click the control network interface and select **Edit**.

The Managed Network Interface Details dialog box opens.

6. Evaluate IP settings as follows:
 - If only Current settings are displayed (the Planned tab is not displayed), it means the planned settings you configured on the placeholder device are identical to those on the actual control point PC. If this is the case, no further configuration is required.
 - If both a Current tab and a Planned tab are displayed, it means the planned settings you configured on the placeholder device are not identical to those on

the actual control point PC. If this is the case, do not apply planned settings. Doing so overwrites IP settings on the actual control point PC, which stops network communication. Instead, select the **Planned** tab and click **Remove**.

NOTE: Do not click OK if planned settings (red text) are displayed.

7. When you are sure that only Current settings are displayed and that those are the current valid settings for the control point PC, click **Apply**, then **OK** to save settings and close.
8. A message informs you of a possible loss of communication. This is normal, as you are overwriting control network settings, which is the network over which you are currently communicating. Click **OK** to dismiss the message.
9. In the Device list view, observe the control point PC icon. It does not display the green star overlay for several seconds as control network settings are reconfigured and communication is re-established. When the icon displays the green star overlay, continue with this procedure.

Adding a device

Prerequisites for this task are as follows:

- The system description contains a group.

1. In the **Network Configuration | Devices** tree view, right-click a group and select **Add Device**.

If a device supports sub-devices, you can right-click the device and select **Add Sub-Device**.

The Add Device dialog box opens.

2. Configure settings for the device you are adding as follows:
 - Family, Type, Model – Based on your selection, the device is pre-defined in Product Frame, with interfaces added and networks assigned. For Model, if you select <Custom>, no interfaces are added or networks assigned.
 - Name – This is the device name, as displayed in the SiteConfig device tree view and device list view. This name can be different than the host name (network name). You can accept the default name or enter a name of your choice. Devices in the tree view are sorted alphabetically.
 - Amount – You can add multiple devices, as currently defined by your settings in the Add Device dialog box. An enumerator is added to the name to create a unique name for each device added.
 - Platform type - Select x86 if the device has a 32 bit OS, x64 if it has a 64 bit OS.
 - Control Network – If multiple control networks are available in the system description, you can select the control network for the device you are adding.
 - Starting Address – Select from the list of available addresses on the selected control network. If adding multiple devices, this is the starting address, with addresses assigned sequentially to each device added.
3. Click **OK** to save settings and close.

About device and host names

In SiteConfig, a device can have different names, as follows:

- Device name — This is a name for display in SiteConfig only. It is stored in the SiteConfig system description, but not written to the actual device. It is displayed in the device tree view and in the device list view. It can be a different name than the device's host name.
- Host name — This is the network name of the device. SiteConfig has a default naming convention for host names which you can use or override with your own host names.

In most cases it is recommended that the Device name and Host name be the same. This avoids confusion and aids troubleshooting.

The Device name can serve as a placeholder as a system is planned and implemented. During the install/commission process, when you reconcile a device's current and planned network interface settings, the Host name as configured in the system description can be overwritten by the host name on the actual device. However, the Device name configured in the system description is not affected. Therefore it is recommended that in the early planned stages, you configure the Device name to be the desired name for the device, but do not yet configure the Host name. Then, after you have applied network interface settings, you can change the Host name to be the

same as the Device name. This changes the host name on the actual device so that then all names are in sync.

SiteConfig does not allow duplicate device names or host names.

Items in the tree view are automatically sorted alphabetically, so if you change a name the item might sort to a different position.

Modifying a device name

1. In the **Network Configuration | Devices** tree view, right-click a device and select **Rename**.
2. Type in the new name.

Note that this does not change the hostname on the physical device. If you want the hostname to match the device name, you must also modify the hostname.

Modifying a host name

1. In the **Network Configuration | Devices | Device** list view, right-click a device and select **Edit**.

The Edit Device dialog box opens.

2. In the Host Name field, modify the host name or do one of the following:
 - Click the **Set to Device Name** button to set the hostname to match the device name
 - Click **Set to Default** to allow SiteConfig to choose an auto-generated name
3. Set a domain name for the device if this applies to your system. This does not add the device to the domain, it only specifies the fully qualified domain name for this device.
4. Click **OK**.

SiteConfig changes the hostname on the physical device.

Making the host name the same as the device name

1. Verify that the current device name, as displayed in the SiteConfig tree view, is the same as your desired host name.
2. In the **Network Configuration | Devices | Device** list view, right-click the device and select **Edit**.

The Edit Device dialog box opens.

3. If the host name is currently different than the device name, click **Set to Device Name**.

This changes the host name to be the same as the device name.

4. Click **OK**.

Pinging devices from the control point PC

You can send the ping command to one or more devices in the system description over the network to which the control point PC is connected. Typically this is the control network.

1. In the **Network Configuration | Networks** tree view, select a network, site, or system node.
2. In the Devices list view, select one or more devices. Use **Ctrl + Click** or **Shift + Click** to select multiple devices.
3. Right-click the selected device or devices and select **Ping**.

The Ping Devices dialog box opens and lists the selected device or devices.

The Ping Devices dialog box reports the progress and results of the ping command per device.

Identifying a device

SiteConfig can help you identify a physical device in a rack of equipment by having the device provide a visual cue like flashing the front panel LED or ejecting the CD tray. The visual cue might not be available on all devices.

If the visual cue for a particular device is to flash the front panel LED, you can modify the duration that SiteConfig will continuously flash the LED. The default is 10 seconds but may be overridden in the **Tools | Options | Network Configuration** window.

1. In the discover devices dialog, after you have discovered devices, select a device from the list and click the **ID Device** button and then look for a visual cue on the racks that your equipment is mounted on. This will help you match a placeholder to a discovered device or help you add a new device.
2. Select a device from the tree and in the devices view on the right, click the **Identify** button.

Moving a device to a different group

In the **Network Configuration | Devices** tree view, select a device and drag it to another group.

After moving a device, make sure it accesses networks correctly. For example, each site typically has its own networks, so if you move a device between groups in different sites, you will likely need to reassign networks.

About planned and current IP configuration

If you add a device to the system description before discovering the actual device, you are working with the placeholder device. If you chose a device model, SiteConfig displays a list of the network interfaces that the model defines in the interfaces view.

You can edit all the network interfaces for the placeholder. You can select a network from which to assign an IP address and also a specific IP address from that network, if the interface connects to a managed network. You can also set a hostname for the device. Since you have not matched the placeholder to a discovered device, all settings are called "planned" settings and are saved in the system description only.

When you discover a device and match it to a placeholder, SiteConfig retrieves all the current network configuration from the device. For each network interface defined in the plan, SiteConfig matches it to the corresponding network interface retrieved and display. SiteConfig displays a planned tab that indicates the settings that do not match with the current settings.

You can now either choose to do one of the following:

- Keep the current settings. To do this you remove planned settings, which allows SiteConfig to accept the current settings.
- Have SiteConfig apply the planned settings to the device. When this occurs, the settings currently configured on the actual network interface are overwritten, so you should compare planned settings and current settings and verify that the planned settings are correct.

Always set your control interface IP address before your other network interfaces.

SiteConfig also generates a planned tab if settings were modified outside of SiteConfig. A red icon overlay with tooltip provides contextual information.

Viewing device interfaces

1. In the **Network Configuration | Networks** tree view, select any node.

Icon overlay indicates connectivity status or warning (red icon with bar)

Interface Name	Device	Network	IPAddress	Allocation	Status	Type
XSAN-SVR1	XSAN-SVR1	Control	10.16.40.10	Static	Up	Ethernet 0
XSAN-SVR1_he0	XSAN-SVR1	Streaming	192.168.99.10	Static	Down	Ethernet 1
....	XSAN-SVR1	iSCSI (non-Redundant)	192.168.91.3	Static	Up	iSCSI 0
....	XSAN-SVR1	iSCSI (non-Redundant)	192.168.91.1	Static	iSCSI 1

Interface name in hosts file

Network to which the interface connects

4 Interfaces

Edit Refresh Ping Validate Show non-IP Interfaces

The devices under that node are displayed in the device list view and the interfaces on the devices are displayed in the interface list view.

2. To view interfaces that do not use Internet Protocol (IP), such as Fibre Channel interfaces, as well as interfaces that do use IP, select **Show non-IP Interfaces**.
3. To view only interfaces that use IP, deselect **Show non-IP Interfaces**.
4. To view only the interfaces on a single device, select the device in the tree view or in the device list view.

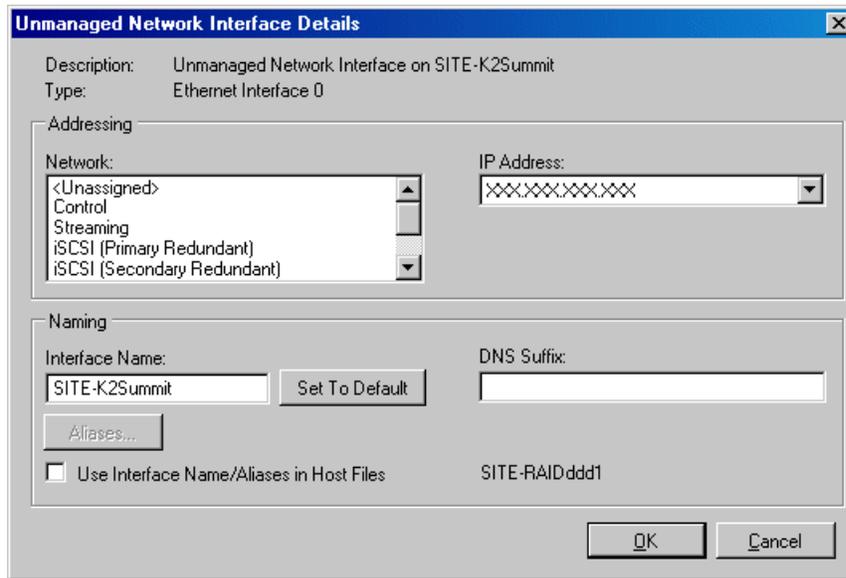
About IP configuration of network interfaces on devices

You can perform IP configuration of network interfaces when working with a placeholder device prior to discovery. When you add a device and choose a particular model, the model defines the number, type and usage characteristics of network interfaces to expect on such a device.

You can view and edit each network interface and set up IP configuration selecting an appropriate IP from the network to which each interface connects. The process for editing IP configuration varies, depending on the device's phase.

Placeholder device IP configuration

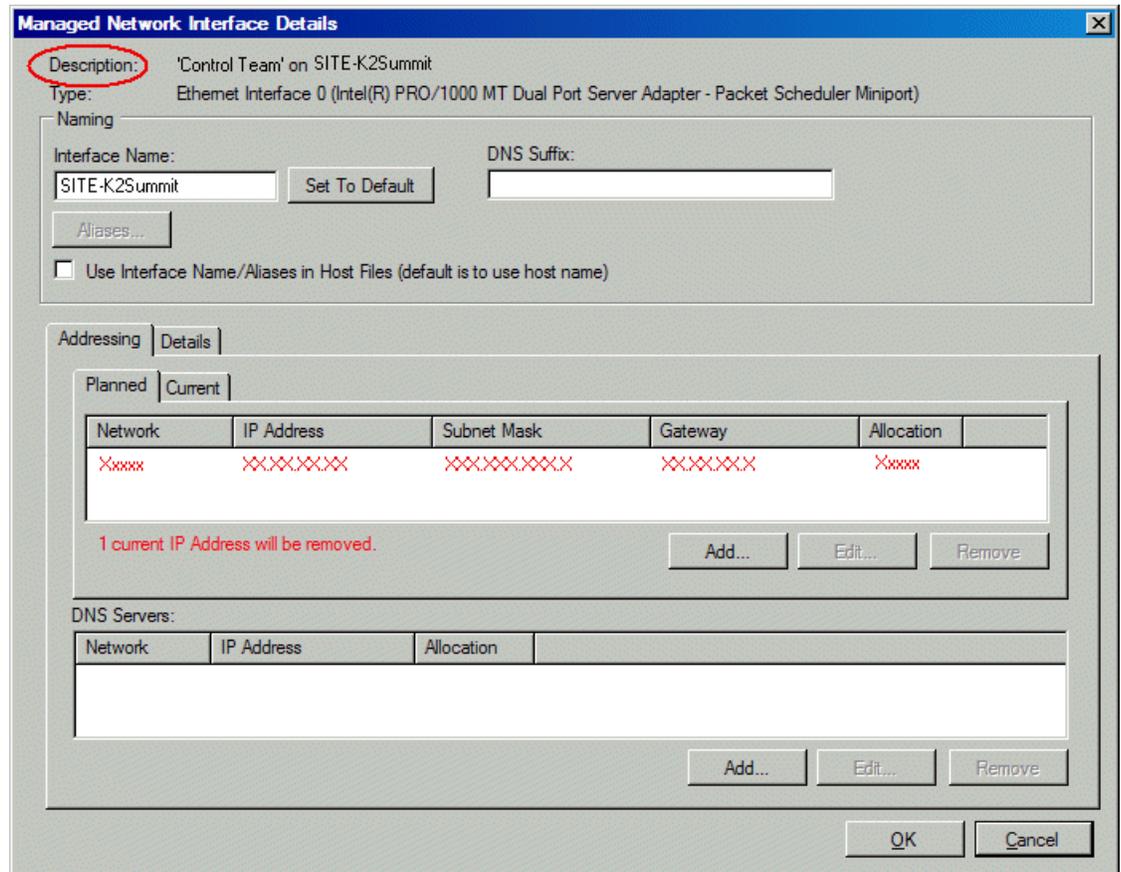
On a placeholder device, you edit network interfaces using the Unmanaged Network Interfaces dialog box.



The Unmanaged Network Interfaces dialog box allows you only to save changes to the system description.

Discovered device IP configuration

On a discovered device, you edit network interfaces using the Managed Network Interfaces dialog box.



The Managed Network Interfaces dialog box allows you to edit and save changes to the device.

Managing IP configuration on a newly discovered device

Use the following process if you have matched a placeholder device to a discovered device for the first time.

NOTE: Pay close attention to icon overlays on the network interface icons. A red icon with a white bar indicates a potential problem that you need to resolve. Hover over the icon to see a tooltip with text that describes the problem.

1. Identify the network interface that displays a yellow or green icon. This is typically the control network interface. Edit the IP configuration of this interface.
2. Edit and configure the other interfaces.

Related Links

[About IP configuration of network interfaces on devices](#) on page 50

Managing IP configuration on a discovered device

Use the following process on a discovered device to which you have already applied planned network settings.

NOTE: *Pay close attention to icon overlays on the network interface icons. A red icon with a white bar indicates a potential problem that you need to resolve. Hover over the icon to see a tooltip with text that describes the problem.*

1. Select an interface and double-click or click on the **Edit** button.

If SiteConfig cannot communicate with the device, the Unmanaged Interface Details dialog box opens which allows you only to save changes to the system description.

If you are working with a device that has been discovered and currently communicating with SiteConfig, the Managed Interface Details dialog box opens which allows you to edit and save changes to the device.

A green star overlay icon over a network interface indicates that SiteConfig can directly communicate with that interface over the network. This is typically the control network interface. A yellow icon overlay indicates limited connectivity to the interface, such as if no IP address has been assigned to the control network interface.

2. To refresh network settings from the device, click the **Refresh** button.

SiteConfig retrieves current network configuration from the device and can indicate problem interfaces by changing the icon overlay to a red icon with a white bar. An example of this type of problem is if IP addresses do not match values in the system description. Edit the interface to check if there is now a planned tab indicating a mismatch.

3. To ping an interface on the control network from the SiteConfig PC, select the interface and click the **Ping** button.

The ping operation works only for the control interface since that is the network to which the SiteConfig PC is connected.

4. For other interfaces like iSCSI (storage networking), you can click the **Validate** button.

The Validate operation causes a proxy device that has a network interface on the network to ping the interface and report the result.

Related Links

[About IP configuration of network interfaces on devices](#) on page 50

Modifying a managed network interface

Prerequisites for this task are as follows:

- The physical device you are configuring has been discovered and is assigned to a device in the SiteConfig system description.
- SiteConfig has communication with the device.
- The device is defined in the system description with an appropriate network interface.

1. In the Interfaces list view determine the interface to configure, as follows:

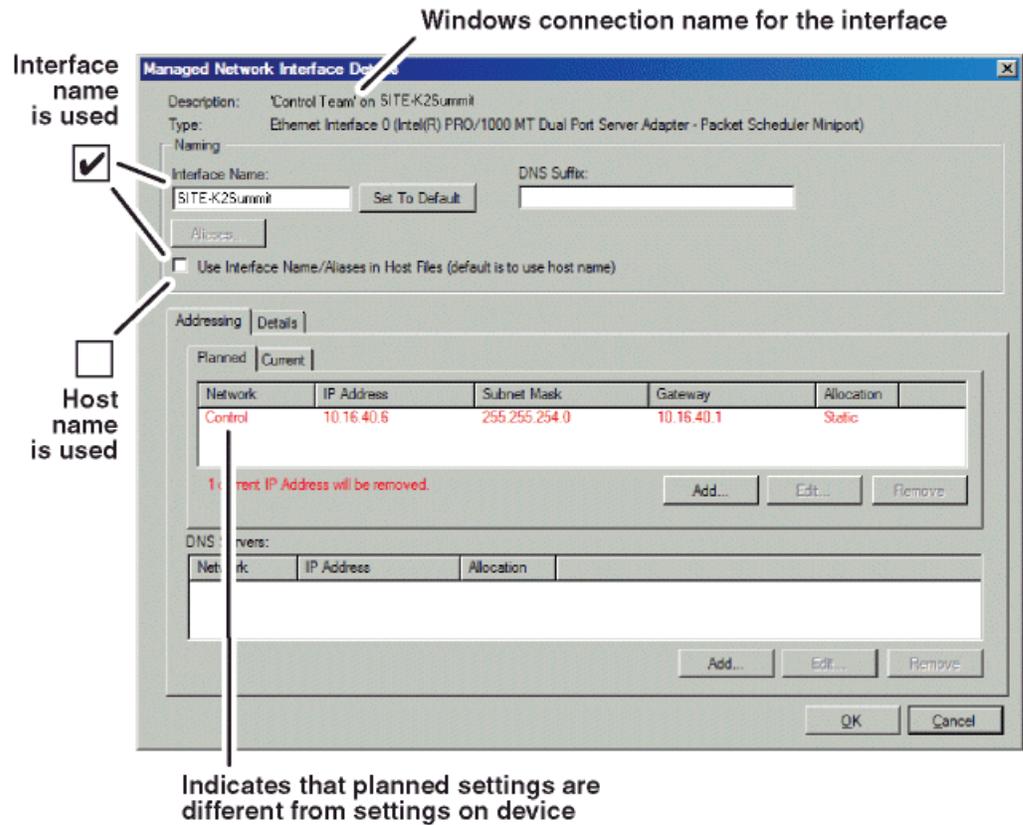
- Identify the interface with which SiteConfig is currently communicating. This should be the control network interface.
- Verify that the interface over which SiteConfig is currently communicating is in fact the interface defined for the control network in the system description. If this is not the case, you might have the control network cable connected to the wrong interface port.
- Configure the control network interface first before configuring any of the other interfaces.
- After you have successfully configured the control network interface, return to this step to configure each remaining interface.

2. In the Interfaces list view, check the icon for the interface you are configuring.

If the icon has a red stop sign overlay, it indicates that current settings and planned settings do not match or that there is some other problem. Hover over the icon to read a tooltip with information about the problem.

3. In the Interfaces list view, right-click the interface you are configuring and select **Edit**.

The Managed Network Interface Details dialog box opens.



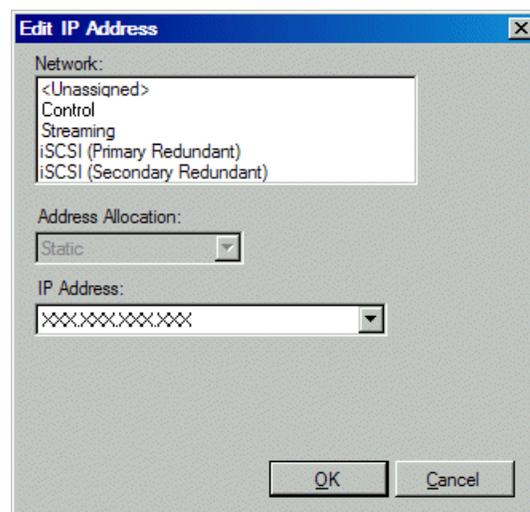
4. Identify the interface on the discovered device that you are configuring.
 - Identify Ethernet LAN adapters by their "Description" name. This is the Windows connection name. SiteConfig reads this name from the device and displays it at the top of this dialog box. This is the most accurate way to identify the network adapter on the discovered device that you are configuring.
 - Identify iSCSI adapters by their "Type".
5. Configure naming settings as follows:

Setting	Description
Interface Name	Specify the name of the interface as you would like it entered in the hosts file. The control interface name defaults to the host name. Ensure that no other interface has the same interface name as the control network interface name.
Set To Default	Returns the interface name to SiteConfig default convention, based on the root Site name and device-type.
DNS Suffix	If applicable, enter a DNS suffix to add to the interface name.

Setting	Description
Aliases	Click if you want one or more alias names for this network interface to be added to the hosts file. For each alias you specify the hosts file contains an additional entry.
Use Interface Name/Aliases in Host Files	Select if you want to use the specified interface name and one or more aliases, if specified, in the hosts file. If not selected, the default behavior occurs, which is to use the device host name in the hosts file. <i>NOTE: If the network to which this interface is assigned is configured to "Exclude from Host Files" in the Network Settings dialog box, then this setting has no affect. The interface is excluded from the hosts file, regardless of settings here.</i>

6. Evaluate settings on the Planned tab and change if necessary.
 - Compare settings on the Planned tab with settings on the Current tab.
 - If you want to keep the current settings as reported in the Current tab, click **Remove** to remove the planned settings.
 - If you need to have multiple IP addresses for the same interface, click the **Add** button and specify your IP addresses.
7. To modify planned settings, do the following:
 - a) Select the network settings and click **Edit**.

The Edit IP Address dialog box opens.



- b) Edit IP address settings as follows:

Setting	Description
Network	Select the network for the interface
Address Allocation	Select DHCP or Static, as appropriate for the network.
IP Address	Select the IP address for the interface

The networks listed in the Edit IP Address dialog box are those currently defined in the system description, with available settings restricted according to the network definition. If you require settings that are not available, you can close dialog boxes and go to the **Network Configuration | Networks** tab to modify network settings, then return to the Edit IP Address dialog box to continue.

8. When you have verified that the planned settings are correct, click **OK**, then **Yes** to apply settings to the device and close.
9. After configuring control network settings, do the following
 - a) If a message informs you of a possible loss of communication, click **OK**.

This message is normal, since this is the network over which you are currently communicating.

- b) In the Device list view, observe the device icon and wait until the icon displays the green star overlay before proceeding.

The icon might not display the green star overlay for several seconds as settings are reconfigured and communication is re-established.

- c) In the Interface list view, right-click the interface and select **Ping**.

The Ping Host dialog box opens.

If ping status reports success, the interface is communicating on the control network.

Related Links

[About IP configuration of network interfaces on devices](#) on page 50

Modifying an unassigned (unmanaged) interface

Prerequisites for this task are as follows:

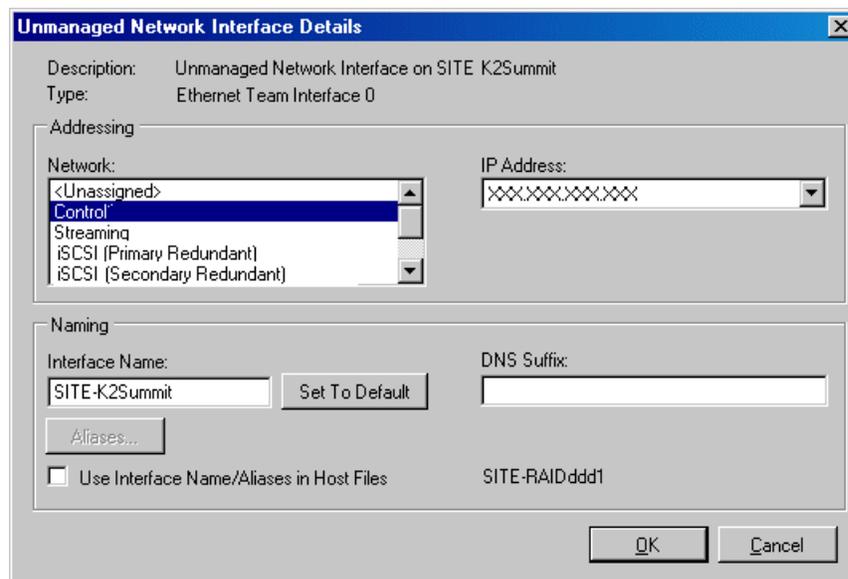
- The system description has one or more placeholder devices.

- The placeholder device has a one or more unmanaged network interfaces.
1. In the **Network Configuration | Devices** tree view, select a placeholder device.

The interfaces for that device are displayed in the interfaces list view.

2. In the interfaces list view, right-click an interface and select **Edit**.

The Unmanaged Network Interface Details dialog box opens.



3. Configure the settings for the interface as follows:
 - Network – This list includes the networks in the system description, as well as an <Unassigned> network. Select the network for the interface. If you select <Unassigned>, the interface can be on a network that is not included in the system description and therefore not managed by SiteConfig.
 - IP Address – A list of the available IP addresses for the selected network. Select the IP address for the interface.
 - Interface Name – The network name of the interface, as follows:
 - On the Control network, the network name of the interface must be the host name of the device.
 - On other networks (not the Control network) the network name of the interface shall not be the host name of the device. Some networks, such as the iSCSI network, do not allow interface names, and so naming controls are disabled.

NOTE: In the networks view, you can specify that a particular network be excluded from the hosts file. This means that any network interfaces you

assign to such a network are automatically excluded from the hosts file even if you checked the Use Interface Name/Aliases in Host Files checkbox. If you uncheck this box, it will default to using the host name as the interface name. Be careful that you do not specify two interfaces with the same host name.

- Set to Default – Sets the name of the interface to SiteConfig’s default convention, based on the current host name of the device.
 - Use Interface Name/Aliases in Host Files – Enables the Aliases button. Tells SiteConfig to use this interface name in the hosts file. See note above.
 - Aliases – Allows you to assign multiple network names to the adapter, such that they are managed by SiteConfig’s host file management features.
 - DNS Suffix – For communication on some networks, a suffix, such as *mycorp.com*, must be added to host names.
4. Click **OK** to save settings and close.

Related Links

- [About IP configuration of network interfaces on devices](#) on page 50
- [About managed and unmanaged networks](#) on page 33

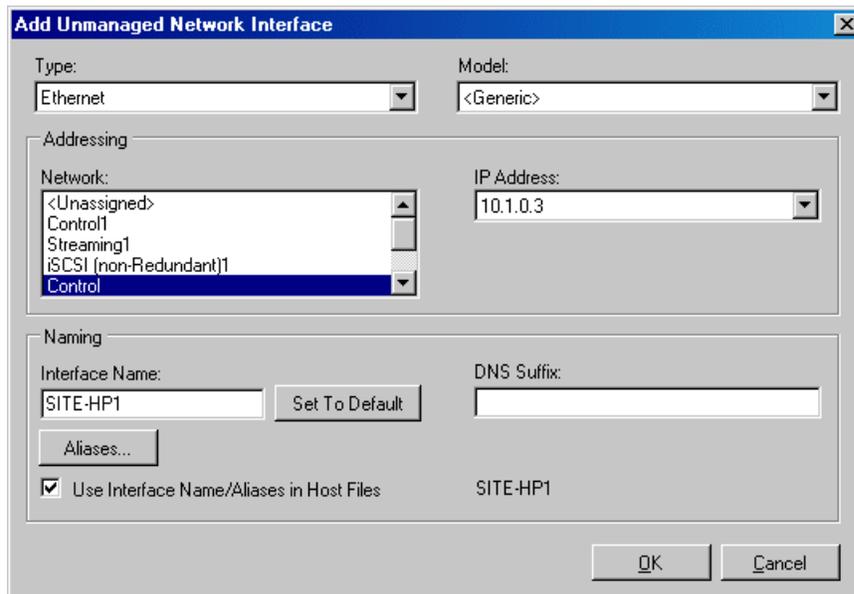
About adding an interface

You can add an interface to a placeholder device to describe a network interface not automatically created when you chose a device model. Another scenario for using this feature is to add devices that are not managed by SiteConfig but are part of the system. In this case you can add a placeholder device to the system description and then add one or more interfaces describing its network connectivity. Once defined, SiteConfig can add this information to the hosts file.

Adding an interface

1. In the **Network Configuration | Devices | Device** list view, right-click a device and select **Add Interface**.

The Add Unmanaged Network Interface dialog box opens.



2. Configure settings for the interface you are adding as follows:

- Type – Select the type of interface you are adding.

The interface types listed, such as Ethernet or Fibre Channel, are those currently defined in the system description.

- Model – Select the model for the interface. Select <Generic> if the model of the interface you are adding is not listed.

The models listed can include specific manufacturer product models for the interface, as defined in the system description, as well as a <Generic> model.

- Network – Select the network for the interface.

The networks listed include those in the system description, as well as an <Unassigned> network. If you select <Unassigned>, the interface can be on a network that is not included in the system description and therefore not managed by SiteConfig.

- IP Address – Select the IP address for the interface.

The list of IP addresses is available only for networks that support IP addresses. It is a list of the available IP addresses for the selected network.

- Interface Name – Accept the default name or enter a different name.

This is the network name of the interface. For example, on the Control network, the network name of the interface is the host name of the device. Some networks, such as the iSCSI network, do not allow interface names, and so naming controls are disabled.

- Set to Default – Click to set the name of the interface to SiteConfig’s default convention.

- Use **Interface Name/Aliases in Host Files** – Click to enable the Aliases button.
This checkbox is available only for networks that use host files.
- **Aliases** – Click to assign multiple network names to the adapter.
This button is available only for networks that use host files. Names entered as aliases are managed by SiteConfig’s host file management features.
- **DNS Suffix** – Enter a DNS suffix, if required by the selected network.
For communication on some networks, a DNS suffix, such as *mycorp.com*, must be added to host names. The DNS Suffix field is available only for networks that can use DNS.

3. Click **OK** to save settings and close.

About locking a device or group

You can lock a device or all the devices in a group so that they can not be accessed by SiteConfig for management operations. These management operations are found throughout SiteConfig, including the Network Configuration view and the Software Deployment view. When a device is locked, some SiteConfig controls, such as Edit buttons, are disabled.

When you are not actively managing devices with SiteConfig, it is recommended that you lock the devices.

On some devices, a restart is required for the lock/unlock operation to take effect.

For K2 Summit Production Clients, the lock feature enables the write filter, which prevents persistent changes to the system drive.

Unlocking a device or group

Prerequisites for this task are as follows:

- The device or all the devices in the group are communicating correctly in SiteConfig. This is indicated by the green star icon overlay.
 - The device or all the devices in the group are currently locked. This is indicated by the gray lock icon overlay.
1. In either the **Network Configuration | Devices** tree view or the **Software Deployment | Deployment Groups** tree view, identify the device or the group of devices that you intend to unlock.
 2. Right-click the device or the group and select **Unlock**.
A “...may require restart...” message appears.
Not all device-types require a restart for the unlock process.
 3. Click **Yes** to allow SiteConfig to restart the device or devices.

The Set Administrative Credentials dialog box opens.

4. Enter a username and password with administrator level privileges on the device or devices and click **OK**.

The Unlocking Devices window opens and displays progress.

5. When the Unlocking Devices window reports that the unlock process completed successfully, click **Close**.

The device or devices are now unlocked. For K2 Summit Production Clients, this also disables the write filter, which enforces the restart.

Related Links

[About locking a device or group](#) on page 61

Locking a device or group

Prerequisites for this task are as follows:

- The device or all the devices in the group are communicating correctly in SiteConfig. This is indicated by the green star icon overlay.
- The device or all the devices in the group are currently unlocked. This is indicated by the red lock icon overlay.

1. In the **Network Configuration | Devices** tree view or the **Software Deployment | Deployment Groups** tree view, identify the device or the group of devices that you intend to lock.
2. Right-click the device or the group and select **Lock**.

A "...may require restart..." message appears.

Not all device-types require a restart for the lock process.

3. Click **Yes** to allow SiteConfig to restart the device or devices.

The Locking Devices window opens and displays progress.

4. When the Locking Devices window reports that the lock process completed successfully, click **Close**.

The device or devices are now locked. For K2 Summit Production Clients, this also enables the write filter, which enforces the restart.

Related Links

[About locking a device or group](#) on page 61

About credentials in SiteConfig

SiteConfig requires administrative privileges on devices in order to perform most of the network configuration and deployment tasks. If you add a device based on a known device type, SiteConfig knows the default administrator login and password to use.

Then, when you use remote desktop or perform software deployment to the device, SiteConfig automatically uses these credentials. These credentials are called "global" credentials for the device since the same credentials are used on all devices of that type in the system.

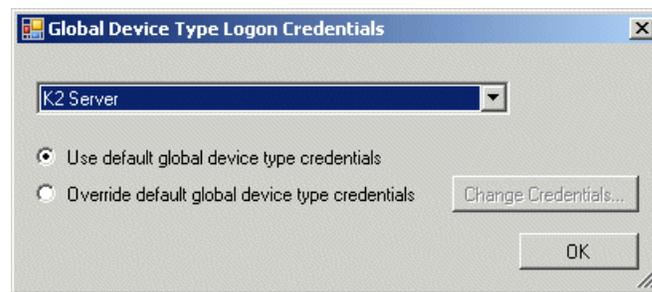
You can choose to override the default credentials for a given device type. For example, if you have specified a different administrator account or a different password on the devices when commissioning the system, then you want SiteConfig to use these modified credentials.

It is possible to also override the default credentials for a single device.

Setting global credentials

1. Click **Tools | Options | Security**.

The Global Device Type Logon Credentials dialog box opens.



2. Select a device type from the drop down list and do one of the following:
 - Select the **Use default global device type credentials** option.
 - Select the **Override default global device type credentials** option.

You can specify the credentials to use by clicking the **Change Credentials...** button and entering the administrator account name and password to use. SiteConfig then uses these credentials for all devices of that type in the system.

Setting credentials for a specific device

Use this procedure to tell SiteConfig to use either the global credentials for the device type on a selected device OR to override global credentials and use a specific account name and password for the selected device.

1. In the tree view, right-click a device and select **Credentials**.

The Remote Target Credentials dialog box opens.



2. Proceed as follows:
 - If you previously applied credentials to the device that were different than the global credentials and now you want to apply the global device type credentials, select **Use Global Credentials**.
 - If you want to apply credentials to the device that are different than the device-type credentials, select **Override Global Credentials**.

The Set Device Logon Credentials dialog box opens.

3. Enter the user name and password for the device and click **OK**. To test the credentials, right-click on the device and choose **Remote Desktop** to start a session to the device.

Accessing a device via Remote Desktop

You can access a device via Remote Desktop if you have configured its network properties to allow communication over the control network.

- To initiate a Remote Desktop session, right-click on a device in the tree view and select **Remote Desktop**.

SiteConfig opens a Remote Desktop session to the device in a new window and automatically logs on using either the global credentials or the overridden credentials (if any).

If Remote Desktop does not log on to the device, check the credentials being used and check network connectivity to the device.

- Click the **visible dialog pending user input** link next to a deployment task.

This link appears if a deployment task is underway and a dialog box pops up on the device that requires your input. In this case SiteConfig can automatically launch a Remote Desktop session to the device.

Closing and restarting SiteConfig

SiteConfig automatically saves changes to the system description as you perform tasks. When you close and reopen SiteConfig, it loads the last system description file you were working with when you closed the application.

At startup, SiteConfig also rediscovers all devices on the network, essentially performing the same operation that occurs when you use the Discover Devices dialog. It also refreshes its network configuration information on all previously discovered devices.

To close SiteConfig, click on the **File | Exit** menu item or close the main window.

SiteConfig saves the system description and closes.

Chapter **3**

Working with software deployment

This section contains the following topics:

- *Understanding software deployment concepts*
- *Working with devices and software deployment groups*
- *Working with managed software packages*
- *Working with software deployment tasks*

Understanding software deployment concepts

About deployment groups

Deployment groups contain a set of devices that receive the software contained in a software package. Each device within the system can only belong to one deployment group. In order to deploy software to devices using SiteConfig, you must add one or more deployment groups to the "All Deployment Groups" node. Once you create a deployment group, you must then choose one or more devices to belong to that group based on criteria you determine. Some examples of different ways you can create deployment groups are -

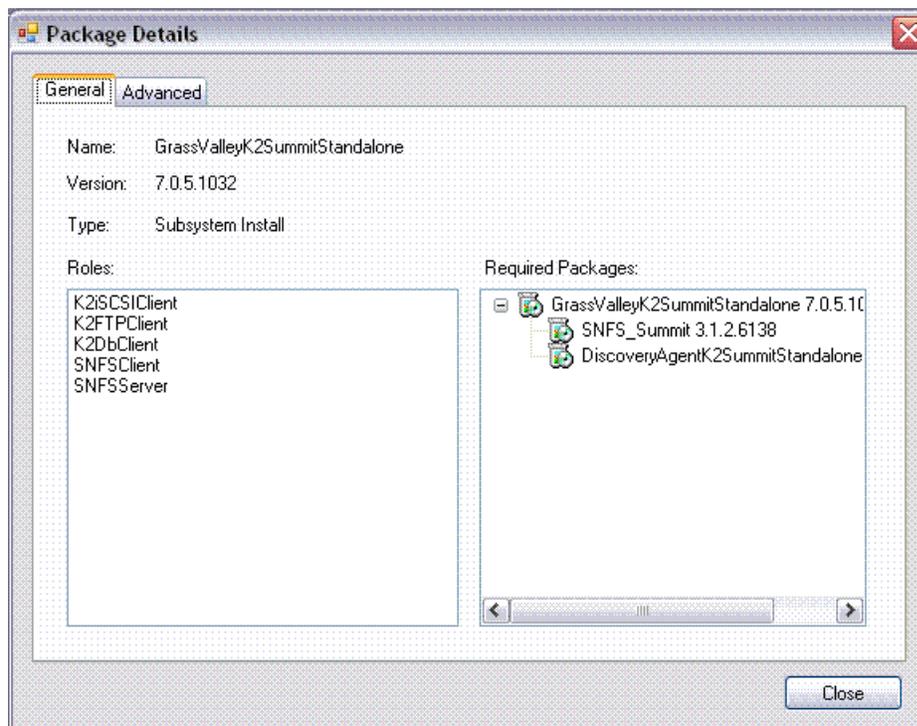
- Devices of the same type. For example, a group of all K2 Media Servers in a K2 SAN
- Devices that might need to have the same versions of a package deployed. For example, all K2 Media Clients on a K2 SAN
- Devices that have software deployed from the same product family. For example, all Aurora devices
- If you have several packages that are compatible with each other, you can create a deployment group of all devices that must be upgraded together to maintain compatibility
- You can also create a deployment groups based on how you manage the sequence of software deployment. For example, you can create a group for your servers so that they can be upgraded first with software packages, then a separate group for clients so that you can add the client software packages and upgrade separately.
- You can create a deployment group to test a particular version of a software package on a set of devices.

Once you create a deployment group, you then add software packages to the group. SiteConfig identifies all devices within that group to which packages are deployed. This identification is based on the roles specified for the device in SiteConfig and the roles specified in the packages.

The Default deployment group is a special group for devices. This deployment group allows SiteConfig to automatically carry out software deployment operations on devices that do not belong to any other deployment group. When you initiate a Check Software operation, SiteConfig matches software packages in the package store with software on devices. If a device that does not belong to a deployment group has a match, SiteConfig automatically places the device in the Default deployment group. In addition, you can add managed packages and deploy software to devices in the Default group. SiteConfig generates appropriate deployment tasks for devices in this group when you initiate the Check Software operation and when you add packages to the Default group. However, SiteConfig does not allow you to add devices to this group. This is because you should set up your own deployment groups based on your own logical grouping of devices within your system.

About managed software and tasks

Managed software is software that can be installed, uninstalled, and reinstalled by SiteConfig. A managed package is a *.cab file that contains one or more installers (*.msi files) for managed software that can be deployed to a device. It also contains a description of the roles deployed by the installer and types of devices that can have the software deployed to them. In order to see what a managed package contains, you can select any package listed within the Managed Packages area in **Software Deployment | Deployment Groups** and click the **Details** button. The Package Details dialog box opens:



From this dialog, you can view which software installs are contained within the managed package and whether or not there are any software dependencies. You can also see the software roles that this package contains. Deployment tasks are generated if the following two conditions are fulfilled:

1. A match between one or more of the roles in the managed package and one or more roles added to any device within the deployment group.
2. A match between the type of device that the managed package specifies and the types of devices contained within the deployment group.

Deployment tasks may also be generated if you perform a Check Software on a device. SiteConfig attempts to match the device's installed software with software that has

been either added to the package store or to a deployment group. If the software matches, SiteConfig considers the software to be managed software.

Related Links

[About roles](#) on page 71

Requirements for software managed by SiteConfig

In order for SiteConfig to be able to deploy software, the software must be authored as an MSI (Windows Installer Database) file. If the software is installed on a Windows operating system device, you can determine if the software is an MSI file. Open the Add/Remove Programs control panel and look for the software. If the software appears in Add/Remove Programs, it is MSI software. Non-MSI software does not appear in Add/Remove Programs.

About managed and unmanaged software

You can create a managed software package out of installed software on a device. You might want to do this when you want to uninstall a software product via SiteConfig that currently doesn't have a matching managed package in your package store. When you do this, SiteConfig takes the software installation files saved on the device that are not already packaged as a *.cab file, copies them over to the control point, packages them as *.cab, and adds them to the deployment group. You can then uninstall and install that managed package. If uninstalling, once the deployment task completes uninstalling, the task is no longer displayed.

It is recommended that you only create managed software packages for Grass Valley products and only when release notes or product documentation instruct you to do so for specific products. Creating managed packages is not guaranteed to work for third party software.

Related Links

[Creating managed packages from installed software](#) on page 78

About the package store

The SiteConfig package store is a directory for storing software packages. When you add a software package to a deployment group, SiteConfig copies the package file to the package store. A software package must be in the package store in order for it to be installed by SiteConfig. When you remove a software package from a deployment group, the package file remains in the package store, so that you can add it to a deployment group later. By default, the location of the package store is as follows:

```
C:\Documents and Settings\All Users\Application  
Data\GrassValley\SiteConfigPackageStore
```

This directory should not contain anything other than the managed packages that are added here via SiteConfig. Additionally, you should not modify any of these packages

in any way as SiteConfig expects their structure to be in a specific format. Either of these actions can cause undesired results from the application.

About roles

A role is a grouping of software functionality. A device can have one or more software roles. A software role is typically provided by one or more programs or services running on the device. For some products, a single device type can be configured to have several different combinations of software roles, depending on the functionality that device provides to the system or systems to which it belongs.

Depending on a device's family, type, and model, SiteConfig automatically assigns the appropriate software roles to a device when the device is added to the system description. You can also manually modify a device's software roles.

SiteConfig knows what software should be installed for each software role, and deploys the software from a software package accordingly. SiteConfig matches managed package roles with device roles in order to generate appropriate deployment tasks for the actual software deployment activities.

Related Links

[About managed software and tasks](#) on page 69

About managing deployment tasks

Deployment tasks are managed from within the Tasks area within **Software Deployment | Deployment Groups**. There are several properties of deployment tasks that you should consider:

- Some deployment tasks may be dependent upon other deployment tasks. Checking or unchecking a task may check or uncheck other tasks for the same device if they are coupled together due to a package dependency. For example, for K2 products, if you uncheck SNFS, SiteConfig automatically unchecks K2 system software also. SiteConfig might need to enforce the installation of these dependencies before the installation of the main product or you could encounter deployment failures.
- Upgrades are performed by completely uninstalling a previous version of the software before installing the next version. So if an upgrade is occurring, you will see one task for uninstalling the older product and another task for installing the newer product. Uninstall tasks always execute first. If an uninstall requires a restart, then the install for the same product will not continue until you have restarted the device from SiteConfig.
- You control the sequencing of device restarts. If an uninstall or an install requires a restart of the device, then SiteConfig indicates that a restart is required within the Details column in the Tasks area. You can click on the "restart required" link to restart the device. Automatic restarts do not occur in response to an install or an uninstall.
- Only one deployment task executes at a time on any one device.

- Multiple devices at the same time can each have a deployment task executing on them during a deployment session.
- A deployment session occurs while a deployment task is deploying software to a single device or while a multiple deployment tasks are deploying software to multiple devices.
- Once you start a sequence of deployment tasks, you cannot add more until the deployment session is complete.

About software deployment tasks

A deployment task is a mapping between a particular software package and the roles that one or more devices contain that are part of the same deployment group. Each deployment task contains information about the software package, version, the action that it performs and the status of that action. The status icons and status indicators for a deployment task are as follows:

Icon \ Status	Meaning
	The install or the uninstall task is currently in the planned state.
	The install or the uninstall task is currently in the completed state.
	Warning indicator. This means that you must do something before the task can transition to complete. If the install or uninstall requires a restart of the device, the task remains in this state until you initiate a restart of the device.
	The install or the uninstall has either failed or been aborted. Check the details column within the Tasks area for more information about the failure. An install error log might be available.
	The install or uninstall is currently in the pending state. This means that the task is either waiting for a connection to the device or it is waiting for other executing tasks to complete on the device.
	The install or uninstall is currently in the executing state.
	The install or uninstall is currently in the aborting state. Once the install/uninstall has completely stopped executing on the device, this task transitions to the red aborted icon.
	The install or uninstall is currently waiting on input from you. Check the Details column of the Tasks area for more information. This can mean that a visible dialog is pending on the remote target. To allow the install or uninstall to continue, you must initiate a remote desktop session from SiteConfig into the remote device and interact with the dialog box.
Visible dialog pending. User input required	Appears as a hyperlink in the Details column. Click on the link to launch a remote desktop session to the device. Provide user input as required for any dialogs visible on the screen

Icon \ Status	Meaning
Restart required	Appears as a hyperlink in the Details column. Click on the link to restart the device
Failed	Appears as a hyperlink in the Details column to indicate a failed task. Click on the link to view descriptive text about the failure.

About deployment options

For some deployment tasks you must configure software deployment options before SiteConfig can begin a software deployment operation. Look within the Details column in the Tasks area for a "Deployment options required" message. This indicates a task for which you must configure software deployment options. To configure the necessary deployment options, highlight the applicable task and click the **Options** button or double-click on the task itself. This brings up a wizard similar to what you use when you manually deploy software. Once you've configured your deployment options, then you can start a deployment.

Related Links

[Configuring deployment groups](#) on page 74

[Setting deployment options](#) on page 81

Workflow for software deployment

Use the following sequence of tasks as a guideline as you deploy software.

Task	Comment
<input type="checkbox"/> Make sure that all of your devices are correctly configured in SiteConfig Network Configuration .	—
<input type="checkbox"/> In Software Deployment Deployment Groups add and configure your deployment groups.	—
<input type="checkbox"/> Check Software on each device to which you are deploying software.	—
<input type="checkbox"/> Select a deployment group to which you are deploying software and add a software package to the deployment group.	Deployment tasks are displayed.
<input type="checkbox"/> Set any necessary deployment options.	—
<input type="checkbox"/> Deploy the software.	—

Related Links

[Working with network configuration](#) on page 19

[Configuring deployment groups](#) on page 74

[Checking all currently installed software on devices](#) on page 76

[Adding a software package to a deployment group](#) on page 78

[Setting deployment options](#) on page 81

[Installing software](#)

[About software deployment tasks](#) on page 72

Working with devices and software deployment groups

Configuring deployment groups

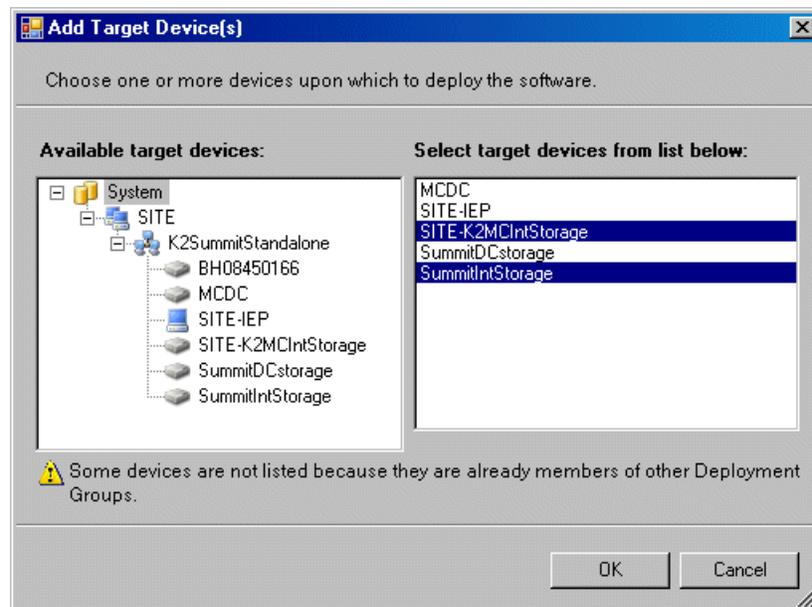
Prerequisites for this procedure are as follows:

- The device is assigned in the SiteConfig system description and network connectivity is present.
1. In the **Software Deployment | Deployment Groups** tree view, right-click the top node and select **Add Deployment Group**.

A deployment group appears in the tree view.

2. Right-click the deployment group, select **Rename**, and enter a name for the deployment group.
3. Right-click the deployment group and select **Add Target Device**.

The Add Target Device(s) wizard opens.



4. In the Available Target Devices tree view, select the node that displays the devices that you are combining as a deployment group.
5. In the right-hand pane, select the devices that you are combining as a deployment group.

To select multiple devices, you can drag through the devices, use Ctrl + Click, or use Shift + Click.

6. Click **OK**.

The devices appear in the Deployment Groups tree view under the deployment group. Before you perform a software deployment, you must check software on the devices that will be receiving new software. If you have already added packages to the group, on the Deployment Groups tab you will also see deployment tasks generated for every device with roles that match the package contents.

Related Links

[About deployment options](#) on page 73

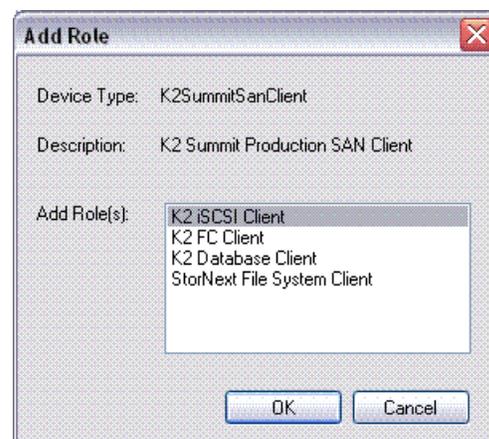
About adding a software role to a device

If you've added a role to a device that is part of a deployment group, you might see new deployment tasks generated if there is a package that is part of that deployment group that contains that role. You may only add roles to a device that are allowed for that particular device type.

Adding a software role to a device

1. In the **Software Deployment | Devices** tree view, right-click the device and select **Add Role**.

The Add Role dialog box opens.



The Add Role dialog box displays only those roles that SiteConfig allows for the selected device type.

2. Select the role or roles that you want to add to the device. Use Ctrl + Click or Shift + Click to add multiple roles.
3. Click **OK** to save settings and close.

The new role or roles appear under the device in the tree view.

Related Links

[About managed software and tasks](#) on page 69

[About roles](#) on page 71

About removing a software role

If you remove a role from a device that is part of a deployment group, SiteConfig can remove Install/Planned deployment tasks if that device no longer contains any roles that are specified in the managed package. Removing a role from a device does not uninstall software that no longer fulfills the set of roles that belong to a device. That means that an Install/Complete task does not transition to Uninstall/Planned if a role is removed.

Removing a software role from a device

1. In the **Software Deployment | Devices** tree view, expand a device's node to expose the roles currently assigned to the device.
2. Right-click the role you want to remove and select **Remove**.

The role is removed from the device in the tree view.

Related Links

[About managed software and tasks](#) on page 69

[About roles](#) on page 71

Checking all currently installed software on devices

Prerequisites for this task are as follows:

- The device is assigned in the SiteConfig system description and network connectivity is present.
- SiteConfig is able to log in to the device using the username/password credentials assigned to the device.
- The SiteConfig control point PC does not have a network drive mapped to an administrative share (such as C\$) on a device on which you are checking software.

1. In the **Software Deployment | Deployment Groups** tree view, right-click the top-most node for the group or any individual device and select **Check Software**.

NOTE: *If you have access problems, verify that the administrator account on the device has credentials as currently configured in SiteConfig. By default credentials on the device should be administrator/adminGV! for Aurora devices and Administrator/adminK2 for K2 devices.*

The Check Software dialog box appears. SiteConfig searches for software on the selected device or devices and gathers information. Progress is reported.

2. When the check is complete for the selected device or devices, close the Check Software dialog box.

An updated list of all currently installed software is displayed in the **Software Deployment | Devices | Installed Software** list view. If software is a SiteConfig managed software package, information is displayed in the Managed Package and Deployment Group columns.

Related Links

[About deployment groups](#) on page 68

[About managed software and tasks](#) on page 69

[About installing SiteConfig](#) on page 11

[Requirements for software managed by SiteConfig](#) on page 70

Comparing files for software deployment

Prerequisites for this task are as follows:

- The software meets requirements for a managed software package.
- The device has SiteConfig support installed
- The device is assigned in the SiteConfig system description and network connectivity is present.
- SiteConfig is able to log in to the device using the username/password credentials assigned to the device.

The purpose of this feature is to allow you to check the integrity of your installed product. You can verify that every file that was part of the install is the expected version, that there are no missing files, and that none of the files were changed or modified after they were installed.

1. Perform a Check software within **Software Deployment | Devices**.

A list of software products that are currently on the device is displayed.

2. Select one of the software products in the list.
3. Click the **Details** button.

The Installed Software Components dialog box opens

4. Select the product within the list and click **Check Files**.

The File Check Progress dialog box is displayed while SiteConfig scans for the product information on the remote device.

After the progress dialog closes, the File Comparison Results dialog box opens. Any file errors are displayed at the top of the list. File errors can include version incompatibility between the files that are installed and the files that the installer should have installed, missing files, and modified files.

5. Click **OK** when finished.

Related Links

[Troubleshooting device discovery](#) on page 92

[About SiteConfig support on managed devices](#) on page 38

[Requirements for software managed by SiteConfig](#) on page 70

Working with managed software packages

Adding a software package to a deployment group

1. In the **Software Deployment | Deployment Groups** tree view, select a deployment group.
2. Click the **Add** button.

The Add Package(s) dialog box opens.

3. Do one of the following to select the software package:
 - Select from the list of packages then click **OK**.
 - Click **Browse**, browse to and select the package, then click **Open**.
4. If one or more EULAs are displayed, accept them to proceed. If you do not accept a EULA, the associated software is not assigned to the deployment group.

SiteConfig adds the package to the deployment group.

The package appears in the Managed Packages list for the selected deployment group. SiteConfig creates new software deployment tasks for the package and displays them in the Tasks list view.

Creating managed packages from installed software

1. In the **Software Deployment | Devices** tree view, right-click the top-most node for a site and select **Check Software**.

The Check Software dialog box appears. SiteConfig searches for software on the selected device or devices and gathers information. Progress is reported.

2. In the Installed Software area, select any product that doesn't already have a corresponding managed package and click **Manage** .

Related Links

[About managed and unmanaged software](#) on page 70

[Requirements for software managed by SiteConfig](#) on page 70

Managing the package store

Use this procedure to view all packages in the package store and delete old packages that are not needed.

- You have one or more packages added to your package store

When you add packages to any deployment group, they are saved to a special folder called the package store. These packages remain in the package store even after you have installed or uninstalled the software that they contain. They are also not deleted from the package store when you remove them from the deployment group.

In order to manage the space occupied by packages, you should periodically remove from the package store any package(s) that are not necessary anymore. This deletes all package files from folders in the package store.

You cannot delete any packages that currently have pending deployment tasks in any deployment group. You must also remove them from all deployment groups that list them as managed packages.

1. Click **Tools | Options | Software deployment | Manage package store**

The manage package store dialog opens and displays a list of all the packages in the package store. The dialog displays the name of the package, the size of the package including all the files that belong to the package and whether or not the package can be deleted.

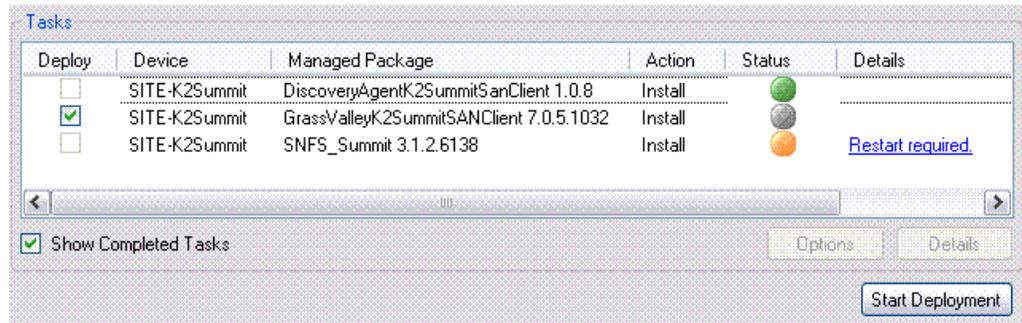
2. Select a package that is not grayed out and click **Delete**.

Package files are deleted from the package store. The managed package files are removed from the manage package store dialog.

Working with software deployment tasks

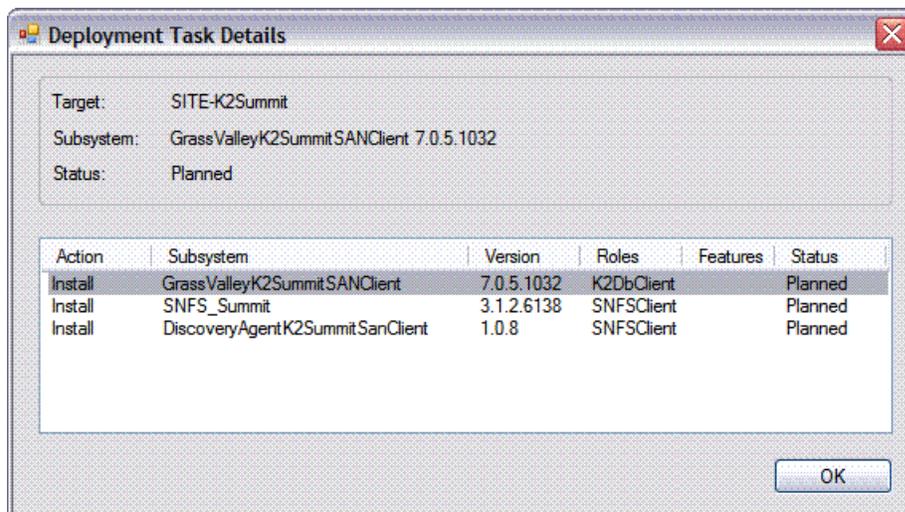
Displaying software deployment tasks

Deployment tasks are displayed in the Software Deployment Tasks area. Select nodes from the Deployment Group tree view to change tasks displayed in the Tasks area.



- To display only tasks that have yet to be installed or uninstalled, de-select **Show Completed Tasks**.
- To display all tasks, including completed tasks, select **Show Completed Tasks**.
- To display more details about a task, click the **Details** button.

The Deployment Task Details dialog box opens.



Details displayed include the following:

- The roles associated with the task
- Other tasks upon which the task depends
- The current state of the task

Configuring software deployment tasks

Prerequisites for this task are as follows:

- The task or tasks that you intend to deploy must be planned. SiteConfig does not allow you to deploy a completed task.
 - If deployment options are required for a task, the options must be set.
1. For a planned task that you want executed the next time you deploy software, select the **Deploy** checkbox.
 2. For a planned task that you do not want executed when you next deploy software, de-select the **Deploy** checkbox.

Related Links

[Setting deployment options](#) on page 81

Setting deployment options

Pre-requisites for this procedure are as follows:

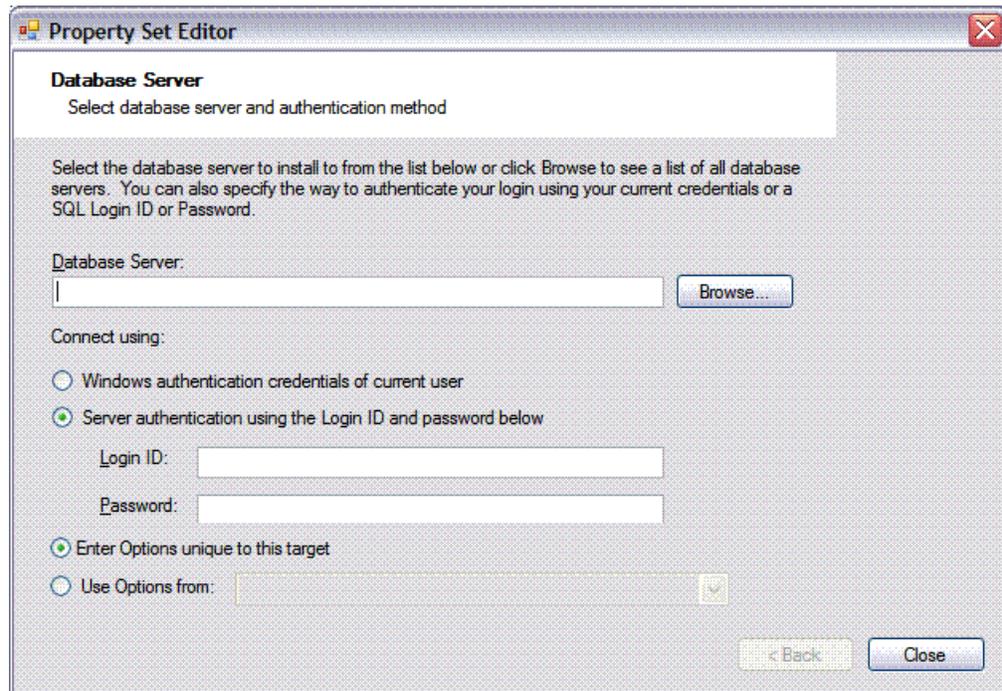
- A software package has been assigned to the deployment group and applicable deployment tasks are now displayed in the Tasks area.
1. In the **Software Deployment | Deployment Groups** tree view, select a deployment group.
 2. In the Tasks list view, view tasks and determine if you must set deployment options.

Tasks that need to have deployment options set display in the Details column a message stating "Deployment options required."

If you select a task that needs to have its deployment options set, the Start Deployment button is disabled and the message is displayed next to the button.

3. Do one of the following to set deployment options:
 - Double-click the task.
 - Select the task and click the **Options** button.

A wizard opens.



Options are displayed, similar to those in a standard software installation wizard when you install software manually.

4. Work through the wizard to set options.

Related Links

[About deployment options](#) on page 73

Uninstalling software

Prerequisites for this task are as follows:

- The software that you are uninstalling is a SiteConfig managed software package.

Use this task to uninstall software when you are not upgrading the software. When uninstalling software as part of an upgrade, SiteConfig provides a taskflow that is different than the steps provided here.

1. In **Software Deployment | Deployment Groups**, select a Device node, a Deployment Group node, or the All Deployment Groups node.

The corresponding software deployment tasks are displayed in the Tasks list view.

2. Right-click one or more deployment tasks that are in the Install/Complete state and select **Uninstall**. You can multiple-select tasks using Ctrl + Click, Ctrl + Shift + Home, or Ctrl + Shift + End.

3. Check these tasks in the Deploy column in the Tasks area.
4. Click the **Start Deployment** button.

SiteConfig runs deployment tasks and uninstalls software on the devices. Progress is reported in both the Status and Details columns.

5. Perform manual steps if they are indicated by either the Status or Details columns, such as the following:
 - a) Dismiss one or more dialog boxes on a device. You can directly click on the link in the Details column indicating a visible dialog is pending and a Remote Desktop session will be initiated.
 - b) Restart the device.
6. Monitor progress as indicated by both the Status and Details column. When finished, the Status column indicates complete.

Related Links

[About managed software and tasks](#) on page 69

[Upgrading software](#) on page 83

Upgrading software

Prerequisites for this task are as follows:

- The devices that you are upgrading are in a deployment group.
- For the software you are upgrading, you have added a newer version of that managed software package to the deployment group.
- You have recently done the SiteConfig "Check Software" operation on the devices you are upgrading.

When you upgrade software, SiteConfig enforces an uninstall of the current version of software before installing the upgrade version. SiteConfig can do the uninstall/install in a single deployment session. If you are upgrading multiple software components, SiteConfig enforces any dependencies by sequencing deployment tasks. SiteConfig provides uninstall deployment tasks and install deployment tasks to indicate the taskflow.

1. In the **Software Deployment | Deployment Groups** tree view, select the device or the group of devices for which you are upgrading software.

The corresponding software deployment tasks are displayed in the Tasks list view.

2. For the software you are uninstalling, select the **Deploy** check box in the row for the uninstall task.
3. Unselect the **Deploy** check box for all other deployment tasks for all other software.
4. For the software you are installing, select the **Deploy** check box in the row for the install task.

If a message instructs you to upgrade the Discovery Agent, find the *.cab file in the location on the control point PC to which SiteConfig is installed, add it to the deployment group, and deploy the Discovery Agent software as well.

NOTE: If there are dependencies, SiteConfig can enforce that some tasks be deployed together.

5. Click the **Start Deployment** button.

Deployment tasks run and software is uninstalled. Progress is reported and next steps are indicated in both the Status and Details columns.

Deployment tasks run and software is installed. Progress is reported and next steps are indicated in both the Status and Details columns.

6. When the Status or Details columns indicate next steps, proceed as follows:
 - Perform manual steps if indicated, such as dismissing a dialog box on the device and/or restarting the device.
7. Monitor progress as indicated by both the Status and Details column. When finished, the Status column indicates complete.

Upgrading the Discovery Agent

The SiteConfig Network Configuration Connect Kit, also known as the Discovery Agent, is a SiteConfig prerequisite that must be installed on all managed devices. When you install the SiteConfig application on your control point PC, a subfolder called Discovery Agent Setup is created under your install folder that contains the Discovery Agent package. You are required to add and deploy this package to all your deployment groups to keep this software updated. Use this procedure to deploy the Discovery Agent software.

Prerequisites for this task are as follows:

- There is at least one deployment group with devices
- A check software operation has been performed either on the device or the deployment group that you are upgrading

When you install a new version of SiteConfig, that version might come with an updated Discovery Agent package. If you plan to perform deployment operations on any deployment group and add a package that generates deployment tasks, SiteConfig displays text indicating that you are required to add the Discovery Agent package to the deployment group.

SiteConfig does this if it detects that there is no Discovery Agent in the deployment group or if there is a different version of the package in the group.

You must add the package to the group before the Start Deployment button will be enabled to allow you to run deployment tasks.

1. Click **Add Package**
2. Click **Browse** in the add package dialog and browse to the Discovery Agent Setup folder under your SiteConfig install location on the SiteConfig PC.
3. Select the *DiscoveryAgent_<version>.cab* file and click **Open**.

SiteConfig generates deployment tasks to uninstall the existing version and installs the selected version and enables the **Start Deployment** button.

4. Check the uninstall and install deploy tasks for the Discovery Agent and click the **Start Deployment** button when you are ready to deploy.

SiteConfig runs the deployment tasks.

Chapter **4**

SiteConfig application setup

This section contains the following topics:

- *Location of SiteConfig files*
- *Setting the SiteConfig package store location*
- *About system description backups*
- *Backing up the system description*

Location of SiteConfig files

SiteConfig uses the user profile directory, as currently configured in the Windows operating system, to store and access files. The user profile directory can be different on different control point PCs, depending on the Windows operating system installation. In the user profile directory you can find the *Application Data\GrassValley* directory, which is where SiteConfig stores its files. The complete path for a typical control point PC is as follows:

```
C:\Documents and Settings\All Users\Application Data\GrassValley
```

In this directory you can find system descriptions files, which have the *scsd* extension. You can also find other SiteConfig directories and files.

Setting the SiteConfig package store location

Prerequisites for this procedure are as follows:

- The control point PC has access to the directory that you want to define as the package store location.

1. Click **Tools | Options | Folders**.

The Browse For Folder dialog box opens.

2. Browse to the location that you want to set as your package store, and then click **OK**.

The configured location is now registered with SiteConfig as its package store.

About system description backups

You can configure SiteConfig to automatically write a system description file to a backup location whenever a system description closes, which occurs as follows:

- When you import a system description
- When you create a new system description
- When you close SiteConfig

The first time that SiteConfig creates a backup file of a system description, it creates a directory for it. The directory is named the same as the system description file name. Then, whenever SiteConfig writes the backup file, it writes it to the directory and adds a time/date suffix to the file name, so that the backup file does not overwrite previous backup files. You can configure the number of backup files that you want to retain. When SiteConfig detects that the configured number of backup files are present in the directory, it deletes the oldest backup file when it saves a new backup file.

You should specify a network drive or other remote location as the location to which the backup files is saved. In the event of a local system fault in which you lose the

main system description file, you can then import a recent backup file from the remote location for recovery purposes.

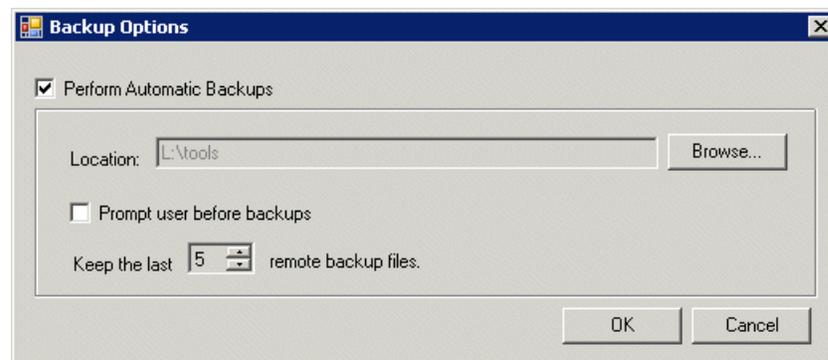
Related Links

[Backing up the system description](#) on page 89

Backing up the system description

1. Open SiteConfig on the control point PC.
2. Click **Tools | Options | Backup**.

The Backup Options dialog box opens.



3. Select **Perform Automatic Backups**.
4. Click **Browse** and specify the location to which the system description backup files are saved.
5. If you want SiteConfig to ask “Do you want to...backup?” when a system description closes, select **Prompt before creating backup file**.
6. Set the number of backup files that you want SiteConfig to save.

Related Links

[About system description backups](#) on page 88

Chapter 5

Troubleshooting

This section contains the following topics:

- [Viewing logs](#)
- [Troubleshooting device discovery](#)
- [Troubleshooting software deployment](#)

Viewing logs

SiteConfig stores information in several logs.

Viewing the application log

1. From the SiteConfig menu, select **Tools | Logs | Application**.
2. If desired, save log information as follows:
 - To save the entire log to a text file select **File | Save Log**.
 - To save one or more entries in the log right-click entries and select **Copy**. Log entries are copied to your clipboard. You can paste the entries into a text editor.
3. To view the xml version of the log file navigate to *C:\Documents and Settings\All Users\Application Data\GrassValley\SiteConfigLogs* and open the file *ApplicationLogFile.xml*

Viewing the deployment log

1. From the SiteConfig menu, select **Tools | Logs | Software Deployment**.
2. You can save one or more entries in the log by right-clicking selected entries and selecting **Copy**.

This copies entries to your clipboard and you can paste the text into any editor such as Notepad.
3. To view the xml version of the log file navigate to *C:\Documents and Settings\All Users\Application Data\GrassValley\SiteConfigLogs*. and open the file *DeploymentLogFile.xml*
4. You can enable verbose logging when troubleshooting a deployment issue. Turn on verbose logging for software deployment by checking the **Tools | Options | Software Deployment | Enable Verbose Logging** menu item.

In the case of a SiteConfig application crash, you can view the *FatalException.Log* that resides in the SiteConfig application install directory.

Viewing failed install logs

Click on the blue **Failed** link that is displayed in the Details column within the Tasks area in Software Deployment. You can save the logs to a text file.

Troubleshooting device discovery

Use this procedure if you have trouble discovering devices or if SiteConfig does not display a green or yellow overlay icon over the device icon in the tree view.

Related Links

[Comparing files for software deployment](#) on page 77

[About SiteConfig support on managed devices](#) on page 38

If you are unable to discover a device

Try the following if you are unable to discover a new device you have just added to your system description.

- In the discover devices window, click the **Rescan** button to refresh the list of discovered devices
- Check if the ProductFrame Discovery Agent service is running on the device.

If you have previously discovered and configured a device

Use the following information if you are having problems with a device that you have previously discovered and for which you have successfully configured network properties.

SiteConfig should re-discover the device at application startup and display a green or yellow overlay icon over the device icon in the tree or on the control network interface. If SiteConfig does not display these overlay icons, it indicates a problem.

- Try pinging the device

The ping dialog indicates success or failure. If it fails to ping, check if the device is online and if network connectivity to the control network is functional.
- Open the discover devices window and check the **Show currently assigned devices** checkbox and then click the **Rescan** button.

SiteConfig attempts to rediscover all devices and you should see the missing device appear in the list if this is successful.
- Check if the ProductFrame Discovery Agent service is running on the device. Restart the service and try rescanning.

Troubleshooting software deployment

Use the following information if a software deployment task fails.

Related Links

[Viewing logs](#) on page 92

If an executing deployment task fails...

Enable verbose logging for the deployment log and retry the deployment task. When it fails, click on the "failed" link to bring up the detailed install log and look for errors.

If a deployment task does not start...

1. Check connectivity to the device by pinging
2. Check the credentials used to manage the device. Open a remote desktop session from SiteConfig. If this fails, verify the administrator account credentials used by SiteConfig.

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