



grass valley

A **BELDEN** BRAND

ICONTROL

CUSTOMIZED, END-TO-END FACILITY MONITORING

Quick Start Guide

M226-0700-352

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www.grassvalley.com

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Introduction to iControl

iControl is a high-level Element and Network Management System for television service providers, content originators and broadcasters, used to perform wide-ranging video and audio signal, device and facility monitoring and control over a TCP/IP network.

Summary

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Overview

Grass Valley's iControl is a coordinated suite of software applications and hardware designed for the interactive control and monitoring of distributed broadcasting networks.

iControl allows operators to control and monitor the status of Grass Valley and third-party video and audio modules (converters, distribution amplifiers, probes, etc.), routing switchers, and other network equipment, all from any convenient point with IP access

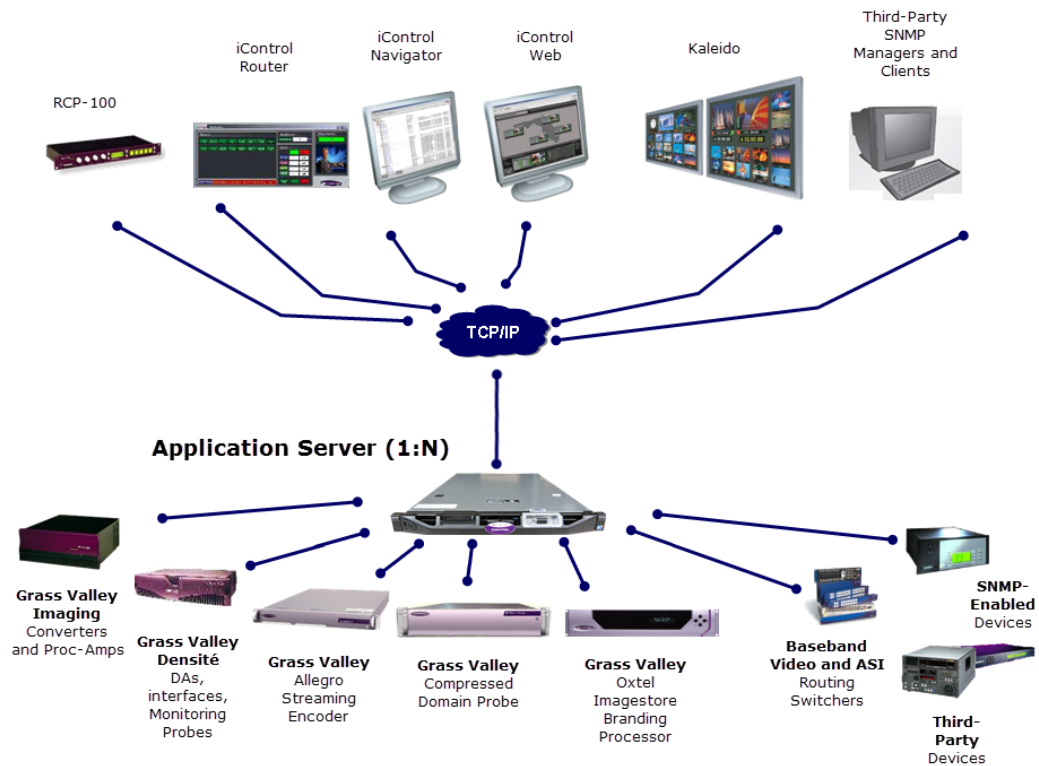
Features of the iControl system include:

- Fully integrated desktop: iControl brings together equipment, signal and facility monitoring and control for highly efficient operations
- Visual customization: Highly customized graphical representations of one or more facilities can be created to offer a highly intuitive control environment
- Third party application control: Multiple third party applications can be hosted in the iControl interface, and these can be selected manually or presented automatically for effective device control.
- SNMP support: iControl combines IP monitoring with SNMP to allow the collection of third party equipment status and offer multi-vendor interoperability.
- Media streaming: High quality streaming provides effective visual monitoring feedback
- Modularity & scalability: iControl is fully scalable and can be used to control just part of a television system or for complete management of multiple sites
- Automated responses: A *scripted macros* feature can provide automated reactions to alarm conditions and guide operators through complex diagnostics

iControl represents video networks with rich, interactive graphics that are immediately understandable and easy to operate. The system is geared towards simplifying operations so that a single user can control more channels, or a broader range of monitoring and control tasks.

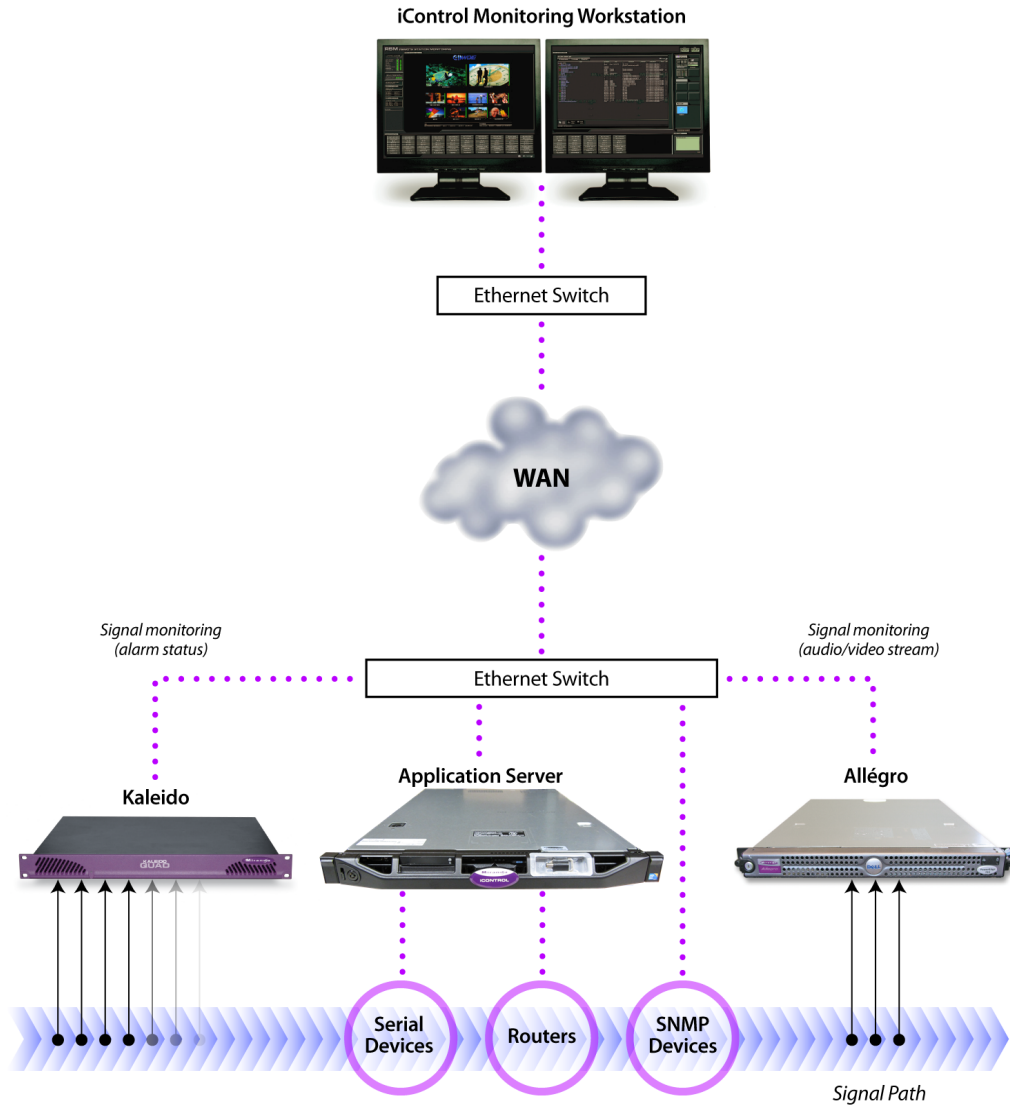
With iControl, customized views of a network can be created, complete with full motion, high quality streaming video and audio. The highly graphical nature of iControl allows operators to quickly identify and respond to alarm conditions, thereby reducing Mean Time to Repair (MTTR).

iControl leverages industry-standard SNMP protocols and integrates other third party control applications to provide a complete facility monitoring environment.



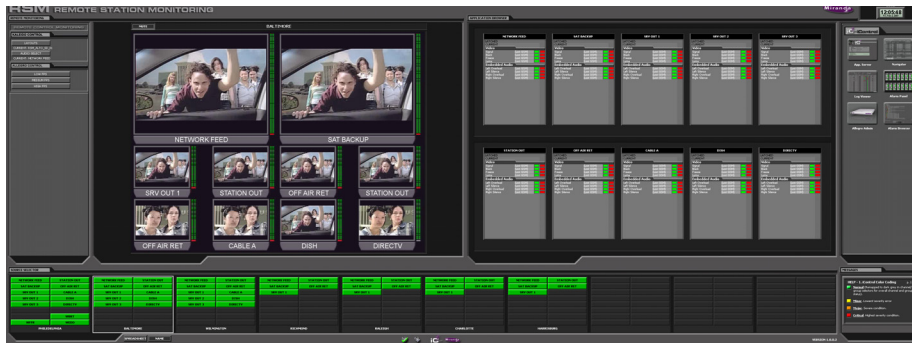
Operational Overview

The diagram below shows the relationship between the elements of an iControl system, and how they work together to provide real time monitoring of a signal path.



User Interface

Once the iControl system is up and running, monitoring data and live audio/video streams are automatically presented to operators via custom Web pages. Operators have access to current and historical information on every device and signal being monitored.



Example 1: customized iControl User Interface



Example 2: customized iControl User Interface



Example 3: customized iControl User Interface

How iControl Works

The central element of any iControl system is the iControl Application Server. The Application Server is a compact, 1 RU server that interfaces to video, audio and other hardware through a variety of configurable ports (RS-232, RS-422, ethernet), and connects to a local LAN over TCP/IP.

iControl runs in a distributed network environment. Devices to be monitored or controlled are either directly connected to the iControl Application Server, or accessible over a TCP/IP connection. Each iControl Application Server runs several device control services, as well as a lookup service.

Multiple Application Servers can coexist on a network, allowing large-scale distributed systems to be defined and controlled. Using a Web browser, multiple users can connect to any Application Server from any convenient desktop or portable computer.

Components of iControl

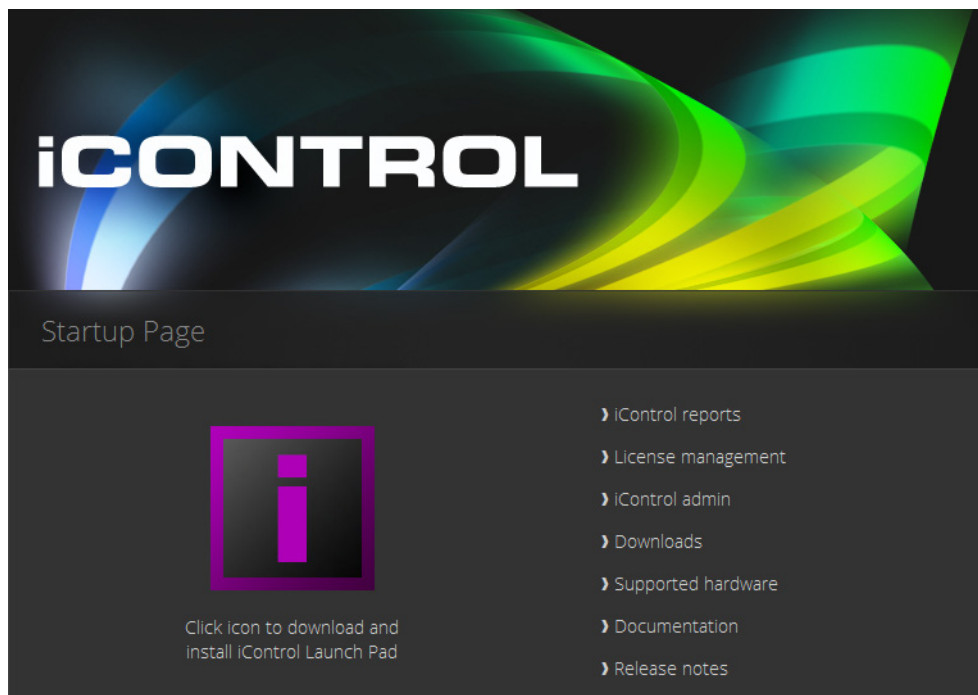
iControl consists of a set of software components, the principle ones being:

- **iC Navigator**
- **iC Router Control**
- **iC Creator**
- **iC Web**

Each of these core components can be started from **iControl Launch Pad**, which is a client-side application downloadable from the *iControl Startup* page.

There are three other core iControl components, important for system administration, and the smooth, integrated operation of iControl as a whole. You can link to pages dedicated to their functions from the *Startup* page. These other components are:

- iControl Admin
- iControl License management
- iControl Reports



iControl's Startup Page



iControl Launch Pad

For a more in-depth overview of iControl's features, please refer to Chapter 1: "Introduction to iControl" in the *iControl User Guide*.

2 Getting Started

This *Quick Start Guide* is designed to help you get iControl up and running for the first time. Follow the steps outlined in this chapter in sequence. When you are finished, your iControl system will be configured and operational.

Getting Organized

Getting an iControl system up and running involves installing, connecting and configuring a variety of hardware and software components. This manual provides a guide to successfully upgrading your existing system to the latest version (see [Installing iControl on an Application Server](#), on page 8), or else installing and activating a new iControl system in nine tasks:

- [Task 1: Installing the iControl Application Server](#), on page 24
- [Task 2: Configuring TCP/IP Settings on the Client PC](#), on page 26
- [Task 3: Configuring the Application Server](#), on page 29
- [Task 4: Configuring Client Workstations](#), on page 36
- [Task 5: Configuring the Application Server on the Network](#), on page 37
- [Task 6: Configuring GPI Outputs on a GPI-1501](#), on page 42
- [Task 7: Connecting & Configuring Devices](#), on page 48
- [Task 8: Configuring an Application Server's Date and Time](#), on page 51
- [Task 9: \[OPTIONAL\] Gaining Access to Documentation](#), on page 53

New Installation

A new iControl system, as shipped, includes one or more iControl Application Servers and related hardware accessories. It also ships with a document folder containing this Quick Start Guide, Release Notes, as well as a Welcome letter with Setup & Configuration checklists that provide a summary of the main steps that must be completed to properly set up and configure an iControl System.

Installing iControl on an Application Server

IMPORTANT:

- If you intend to upgrade an Application Server that has iControl version 1.xx, 2.xx, or 3.xx, please contact Grass Valley Technical Support for assistance (see [Contact Us](#), on page 57).
- All new systems ship with the latest version of iControl. If you are planning to install the latest version of iControl onto an Application Server already running another version of iControl, your hardware must comply with the minimum hardware requirements of the new software (see [Hardware Requirements](#), on page 20). Additionally, you must contact *Grass Valley Technical Support* to request an upgrade package (see [Contact Us](#), on page 57).
- After you upgrade an Application Server, *from iControl version 6.01 or earlier, to 6.02 or later, iControl Admin user-modified passwords are lost.*

All new systems ship with the latest version of iControl. If you are planning to upgrade your iControl system to the latest version, you will need to contact Grass Valley Technical Support to request an upgrade package (see [Contact Us](#), on page 57).

To install the latest version of iControl, perform one of the following two procedures, depending upon the version of iControl *currently* installed on your system:

- [Installing iControl on an Application Server that has Version 5.XX or earlier](#) on page 8
- [Installing iControl on an Application Server that has Version 6.00 or later](#) on page 15

Installing iControl on an Application Server that has Version 5.XX or earlier

REQUIREMENTS

Make sure you meet the following conditions before beginning this procedure:

- Your Application Server meets the minimum hardware requirements (see [Hardware Requirements](#), on page 20).
- Your Application Server is one of the following hardware models:
 - Dell PowerEdge 200
 - Dell PowerEdge 210
 - Dell PowerEdge 310
 - Dell PowerEdge 320
- At the beginning of this procedure, your Application Server has iControl version 5.XX or earlier.
- You have performed a backup operation on the configuration data of your Application Server (see the “Backing Up an Application Server” section of the “Backup and Redundancy” chapter of the *iControl User Guide*).
- You have disabled the *Autofailover* function (recommended).

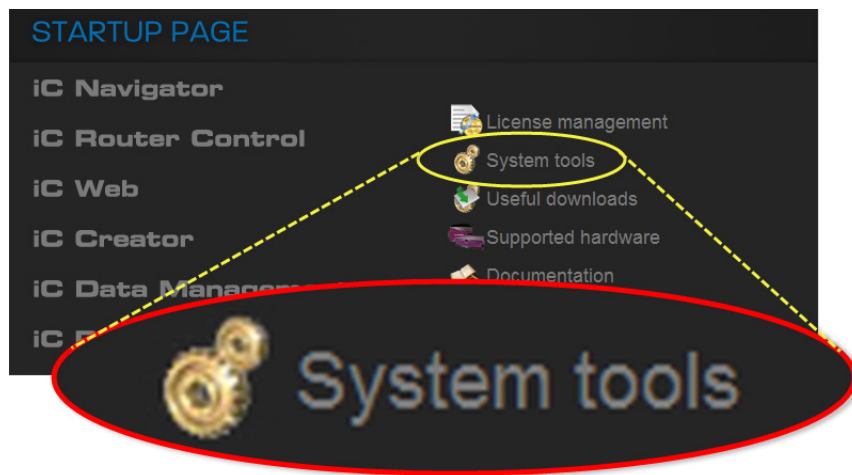
REQUIREMENTS (Continued)

Make sure you meet the following conditions before beginning this procedure:

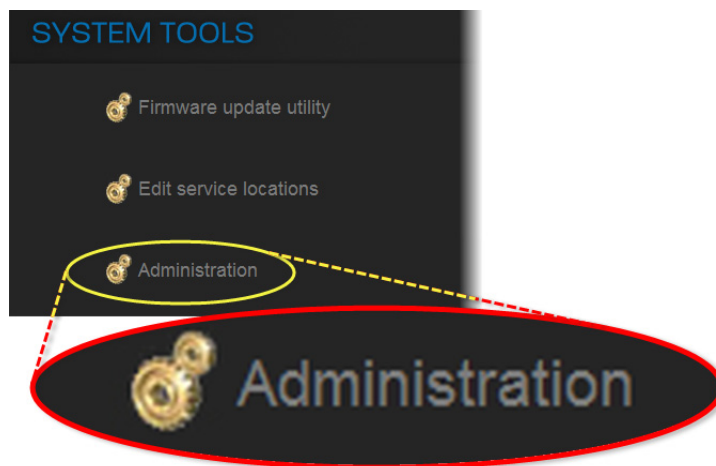
- You have available an iControl upgrade package (see [Contact Us](#), on page 57).
- You have logged on to the Application Server's iControl page.
- You have read and understood the **IMPORTANT** notes listed just prior to this procedure (see [page 8](#)).

Installing iControl on your Application Server

1. On the *Startup* page, click **System tools**.



2. Click **Administration**.



3. On the *Login to Webmin* page, enter your Login credentials.

Getting Started

Installing iControl on an Application Server that has Version 5.XX or earlier

Login to Webmin

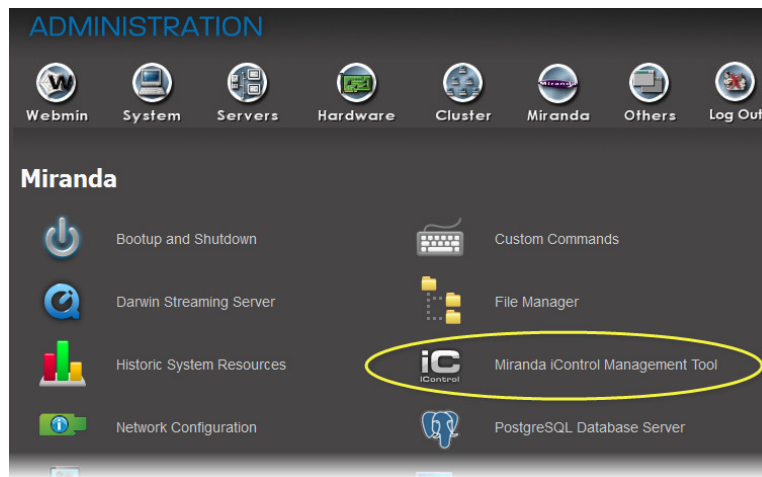
You must enter a username and password to login to the Webmin server on 10.6.0.75.

Username

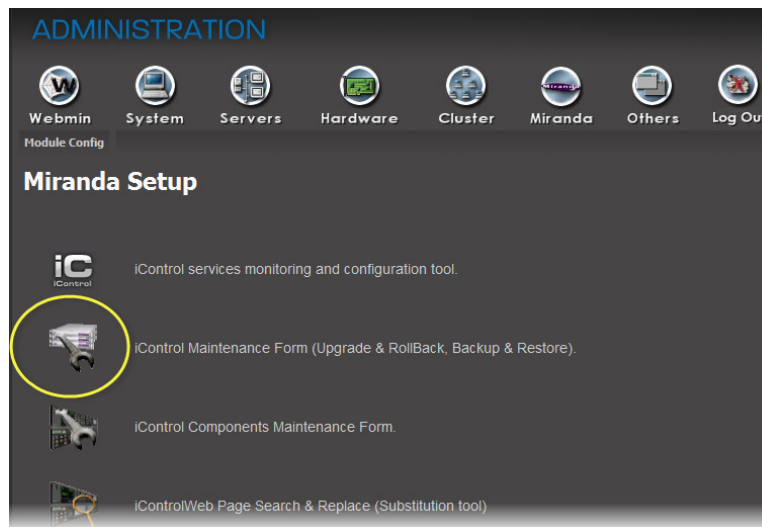
Password

Remember login permanently?

4. Click **Miranda iControl Management Tool**.

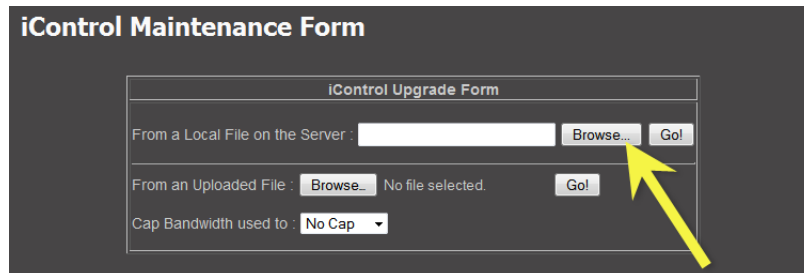


5. Click the icon beside **iControl Maintenance Form**.

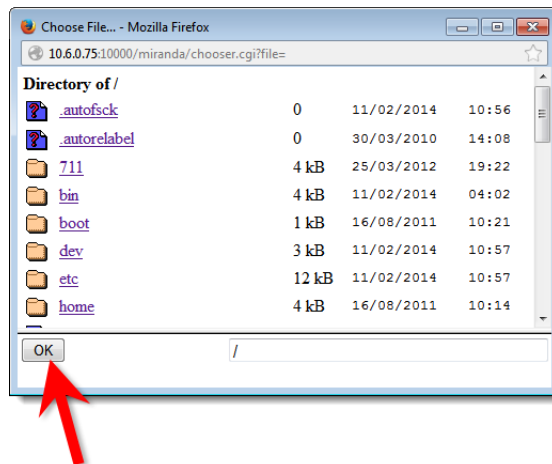


6. If your iControl upgrade package is on the Application Server, perform the following sub-steps:

- a) In the **iControl Upgrade Form** area, next to the **From a Local File on the Server** field, click **Browse**.

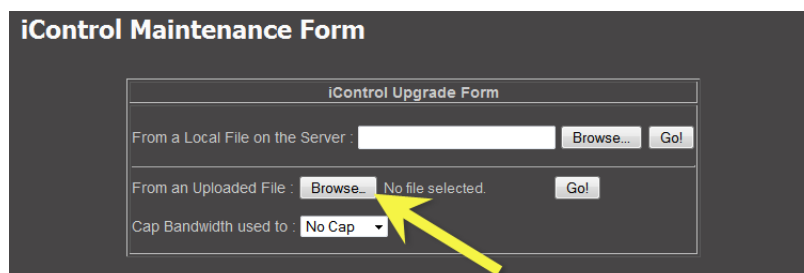


- b) Navigate to and select the desired upgrade package, and then click **OK**.



7. If your iControl upgrade package is on your local file system, perform the following sub-steps:

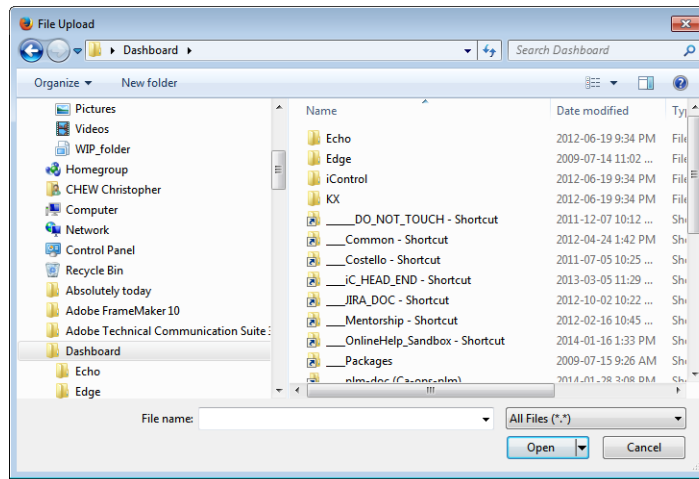
- a) In the **iControl Upgrade Form** area, next to the **From an Uploaded File** field, click **Browse**.



- b) Navigate to and select the desired upgrade package in the **File Upload** window, and then click **Open**.

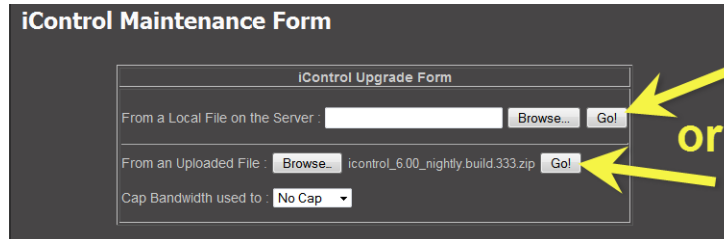
Getting Started

Installing iControl on an Application Server that has Version 5.XX or earlier

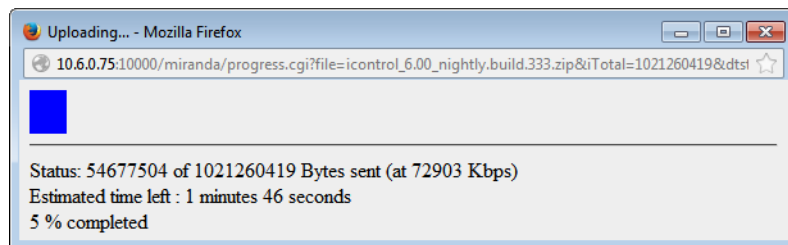


8. Once the upgrade package is selected, click **Go**.

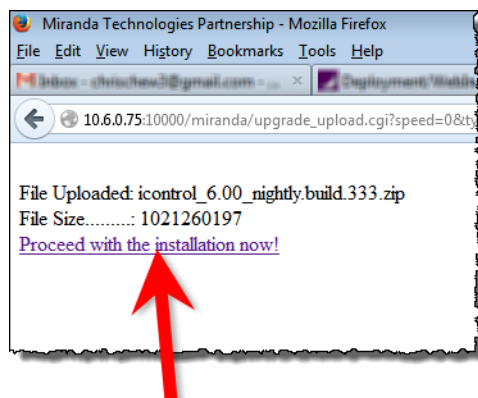
Note: If you selected an upgrade package on your Application Server, click **Go** next to the **From a Local File on the Server** field. If you selected an upgrade package on your local file system (e.g. on your PC), click **Go** next to the **From an Uploaded File** field.



SYSTEM RESPONSE: If you selected an upgrade package on your local file system, a progress window appears, indicating the status of the upload.

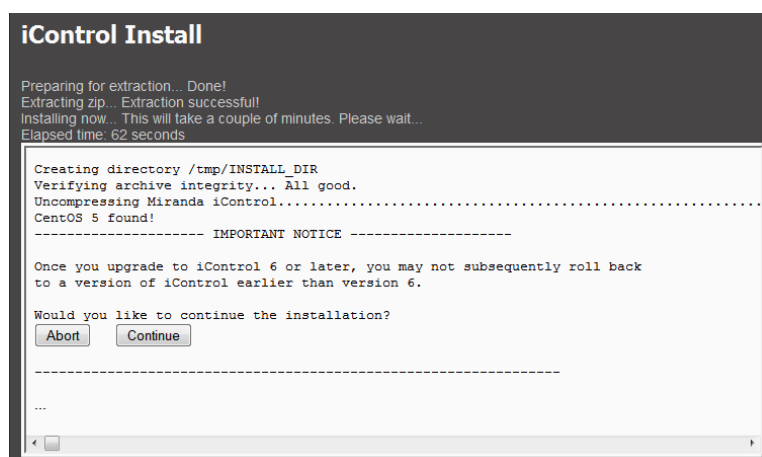


9. Click **Proceed with the installation now**.



SYSTEM RESPONSE: A warning message appears informing you that you cannot roll back to a version earlier than version 6.00, after upgrading.

- Below the message, click **Continue** if you would like to go forward with the installation. If not, click **Abort**.



SYSTEM RESPONSE: The installation continues (if you clicked **Continue**).

SYSTEM RESPONSE: After the installation is complete, the system warns you that it must reboot. Click the link to reboot.

Note: Your Web browser will not refresh on its own.

- Click the *iControl* logo at the top of the page to refresh.

Getting Started

Installing iControl on an Application Server that has Version 5.XX or earlier



The Web page of your newly updated Application Server appears in your browser.



Installing iControl on an Application Server that has Version 6.00 or later

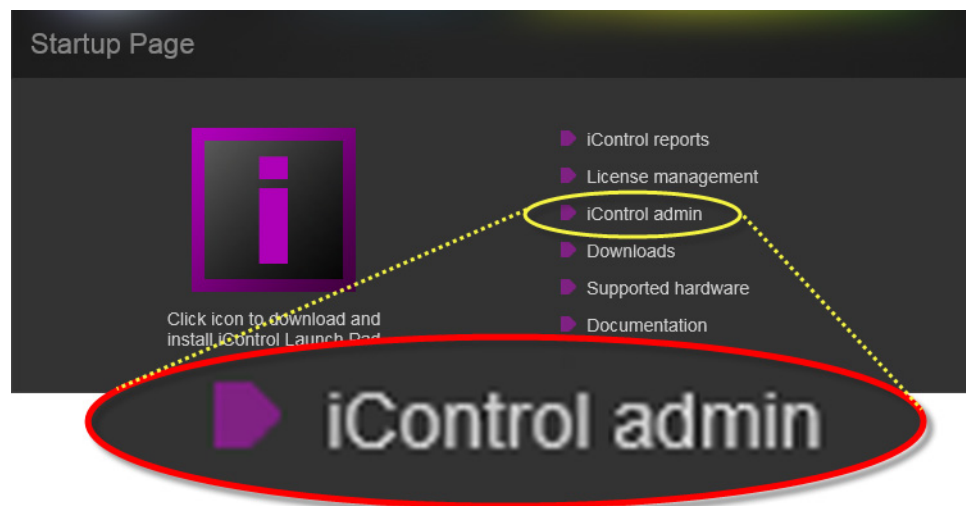
REQUIREMENTS

Make sure you meet the following conditions before beginning this procedure:

- Your Application Server meets the minimum hardware requirements (see [Hardware Requirements](#), on page 20).
- Your Application Server is one of the following hardware models:
 - Dell PowerEdge 200
 - Dell PowerEdge 210
 - Dell PowerEdge 310
 - Dell PowerEdge 320
- At the beginning of this procedure, your Application Server has iControl version 6.00 or later.
- You have performed a backup operation on the configuration data of your Application Server (see the “Backing Up an Application Server” section of the “Backup and Redundancy” chapter of the *iControl User Guide*).
- You have disabled the *Autofailover* function (recommended).
- You have available to your local file system, an iControl upgrade package (see [Contact Us](#), on page 57).
- You have logged on to the Application Server’s iControl page.
- You have read and understood the **IMPORTANT** notes listed just prior to this procedure (see [page 8](#)).

Installing iControl on your Application Server

1. On the *Startup* page, click **iControl admin**.

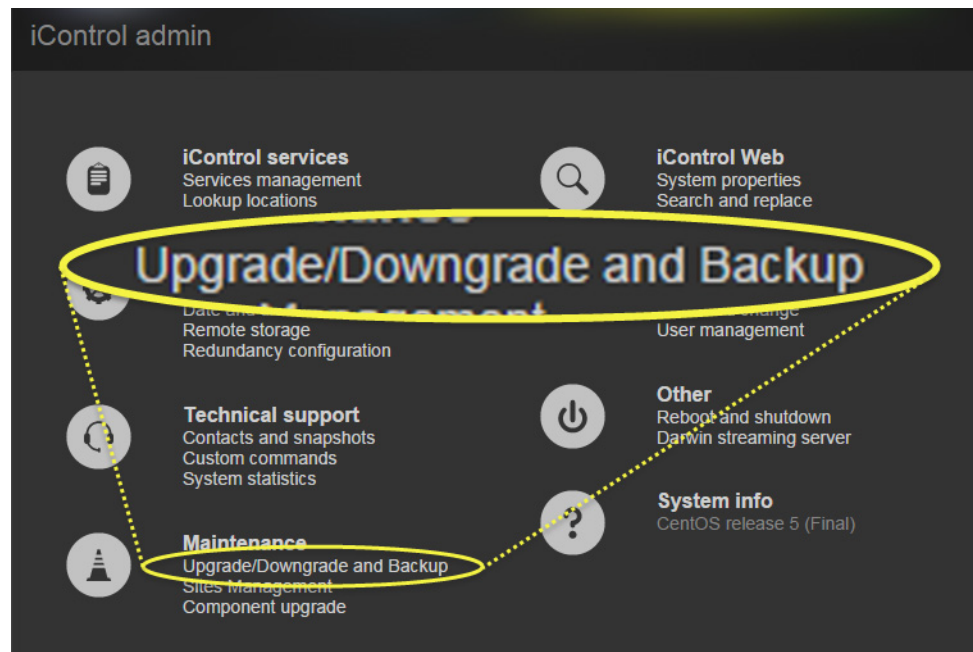


SYSTEM RESPONSE: The *iControl admin* page appears.

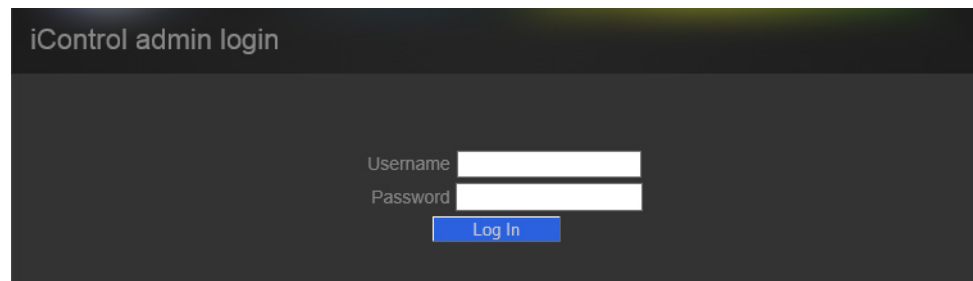
2. Under **Maintenance**, click **Upgrade/Downgrade and Backup**.

Getting Started

Installing iControl on an Application Server that has Version 6.00 or later



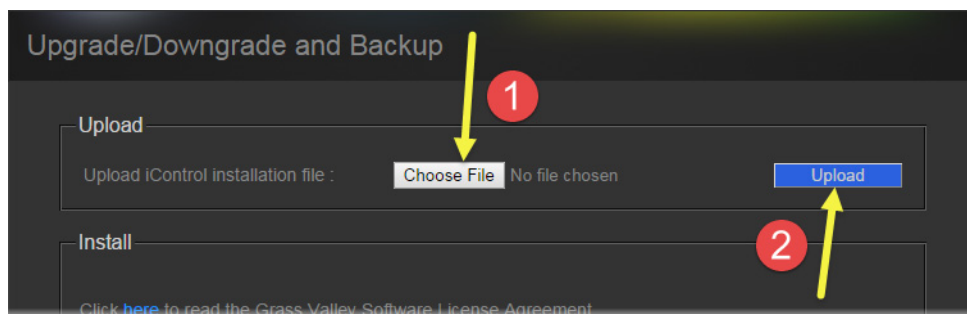
SYSTEM RESPONSE: If, during this session using iControl, you have not yet performed any functions involving the *iControl admin* page, then you will see the *iControl admin login* page appear.



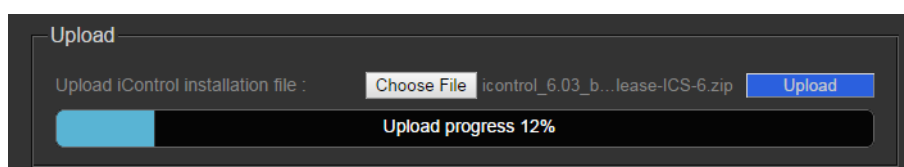
3. If prompted, enter your iControl login credentials, and then click **Log In**.

SYSTEM RESPONSE: The *Upgrade/Downgrade and Backup* page appears.

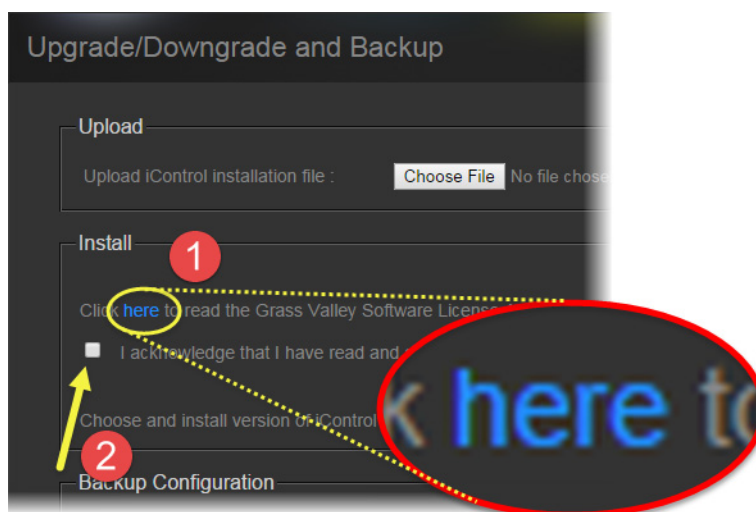
4. Upload the iControl upgrade package to the Application Server, by performing the following sub-steps:
 - a) In the **Upload** area, click **Choose File** to locate and select the iControl upgrade package you would like to install.
 - b) Click **Upload**.



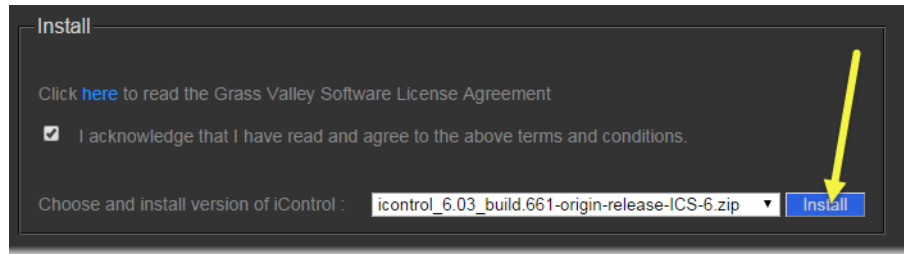
SYSTEM RESPONSE: The upgrade package is uploaded to the Application Server. A progress bar displays the upload progress.



5. When the upload is complete, read the *Grass Valley Software License Agreement* by performing the following sub-steps:
 - a) Click on the indicated link.
 - b) After you have read the license agreement—and if you agree with the terms therein—select the check box indicating you acknowledge the terms and conditions.

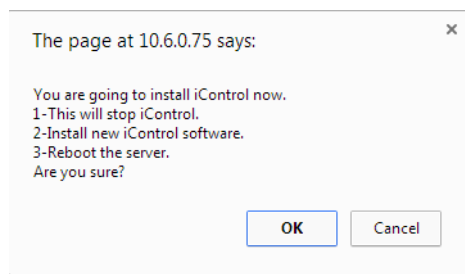


6. Select the newly uploaded package from the list in the **Install** area, and then click **Install**.



SYSTEM RESPONSE: A confirmation message appears.

7. If you agree with the details of the iControl installation process, as explained in the confirmation message, click **OK**. If not, click **Cancel**.



SYSTEM RESPONSE: If you clicked **OK**, a progress bar appears.

SYSTEM RESPONSE: After the system reboots, the *Startup* page appears, indicating the Application Server's current version at the bottom of the page.

Upgrade Compatibility Issues

IMPORTANT: Previous replication configuration data does not survive upgrade

For upgrades from an iControl version prior to 3.41 to version 6.00 or later, you will need to reconfigure and enable replication after performing the upgrade. Do this on the **Redundancy Configuration Form** using the Manual Takeover mode.

This applies to any upgrade from a version prior to iControl version 3.41 to either version 3.41 or later. It does not apply to an upgrade from iControl version 3.41 to a later version.

- The iC Navigator *Error/Warning* configuration will be lost during the upgrade procedure. These settings configure the overall status of each item in the iC Navigator list. The settings have to be noted prior to the upgrade, and then re-applied using the *Alarm Configuration* feature of iControl later.
- [Ref. #ICONTROL-10326] SNMP trap listeners that use the enterprise OID are not compatible with traps sent from iControl version 3.30 and later if they were configured in a system that had a version of iControl between 3.00 and 3.22. If you wish the previous behavior to remain in effect, please contact *Grass Valley Technical Support* for more information (see [page 57](#)).

- Clients using ASI services must migrate to CDMP services when upgrading to iControl version 3.11 or later. This requires some manual configuration, due to the nature of the ASI setup. Please contact *Grass Valley Technical Support* for more information (see [page 57](#)).
- In situations where you are running iControl version 3.40 (or earlier) and are upgrading to iControl version 6.00 or later, replication data will not survive the upgrade.

After an upgrade to iControl version 6.00 or later, you must re-enter replication data including the addition of Application Servers in the Redundancy Groups, the desired replication frequencies, and the desired extra IP address.
- When upgrading from iControl version 3.20 (and later) to a newer version, the existing `WidgetLibrary` is renamed `WidgetLibraryOld`, and a new, upgraded `WidgetLibrary` is installed. Custom widgets that had been saved in the old `WidgetLibrary` become unavailable in iC Creator.

Workaround: Import custom widgets from `WidgetLibraryOld`, and save them in a location other than the new `WidgetLibrary`.
- The **iControl Maintenance Form** of the Application Server Web administration tool (Webmin) cannot be used to update from 2.xx to 6.00 or later. The update has to be performed through an SSH command line interface.
- After upgrading from iControl version 3.2x (or earlier) to version 3.30 or later, it will not be possible to view the existing log database content by using the Log Viewer. If you wish to be able to access these past records, use the Log Viewer's export feature to export the data to a CSV file before upgrading your system.
- iControl version 3.30 (and later) offers a more robust GSM configuration database. However, if the database became corrupted in version 3.2x or earlier, upgrading to version 3.41 could result in the loss of some configuration data. Make sure to perform a backup of your iControl system configuration (by using Webmin's **iControl Maintenance Form**) before upgrading.
- The RMON driver is not backward compatible between versions 3.00 (and later) and 2.7:
 - Typical alarm URI in iControl 2.7 = `//snmp:RMON/10.4.0.2/ifOperStatus101`
 - Equivalent alarm URI in iControl 3.X = `snmp://RMON:10.4.0.2/ifOperStatus101`iC Web sites using these alarms may need to be updated accordingly.
- iControl Web sites that were created with iC Creator versions 2.0 or 2.2 can only be used with version 4.10 if each individual page is opened and re-saved with iC Creator.
- As of iControl version 3.30, Imagestore alarm URIs consistently include a slash (/), whereas in the past some would have an at sign (@) in their URI. iC Web sites using alarms such as the following may need to be updated accordingly:
 - `Mot_EMS.ImageStore.ImageStore_10.6.0.37@overall_status`
 - `Mot_EMS.ImageStore.ImageStore_10.6.0.37/overall_status`
 - `Mot_EMS.ImageStore.ImageStore_10.6.0.38@commStatus`
 - `Mot_EMS.ImageStore.ImageStore_10.6.0.38/commStatus`
 - `Mot_EMS.ImageStore.ImageStore_10.6.0.38@Temperature_status`

- Mot_EMS.ImageStore.ImageStore_10.6.0.38/Temperature_status
- Mot_EMS.ImageStore.ImageStore_10.6.0.38@Version_not_compatible
- Mot_EMS.ImageStore.ImageStore_10.6.0.38/Version_not_compatible
- Mot_EMS.ImageStore.ImageStore_10.6.0.38@Voltage_status
- Mot_EMS.ImageStore.ImageStore_10.6.0.38/Voltage_status
- As of version 3.30, router configuration changes made in **Router Manager Configurator** are not compatible with earlier versions of the software. Downgrading is supported but any change to the router configuration made in version 3.30 or later will be lost during the downgrade. After downgrading, any router configuration will have reverted to what it was before the last upgrade.

Installation and Network Requirements

Hardware Requirements

iControl Clients

Grass Valley recommends the client platform meet the following system specifications for optimal performance:

iControl Client Platforms	Memory	Processor	Operating System
Minimum requirements for general usage (excluding iControl Web)	4 GB RAM	Intel Core i3 or better	Windows 10, Windows 8, or Windows 7
Minimum requirement for streaming video and using iControl Web	8 GB RAM		

Graphics Card

Optimized for NVIDIA or ATI GeForce or Radeon family with 1 GHz clock speed or faster, and minimum 128 MB memory.

Supported Servers

iControl versions 6.00 and later are **ONLY** supported on the following Application Servers:

- Dell PowerEdge R200
- Dell PowerEdge R210
- Dell PowerEdge R310
- Dell PowerEdge R320

iControl versions 6.00 and later **ARE NOT** supported on the Dell PowerEdge 750, 850, and 860 models.

Grass Valley recommends using the following table as a guideline when determining the amount of memory required for your Application Server:

Application Server Platforms	Memory
General usage with hosting of small websites, with streaming support and limited number of services	2 GB RAM
Large configurations (e.g. multiple Densité frames, RCP-200 Control Panel, Router Control, and extensive iControl Web sites)	8 GB RAM

Notes

- The Dell PowerEdge R200 is limited to 4 GB RAM.
- The Dell PowerEdge R320 ships with 8 GB RAM.
- There are some versions of Application Server — notably the PowerEdge R310 and R320, when bought as a Grass Valley Application Server — that do not have physical labels identifying their respective models. In these cases, in order to identify the model of Application Server you have, see [Determining the Model Type of your Application Server](#), on page 21.

Determining the Model Type of your Application Server

To determine an Application Server's model type

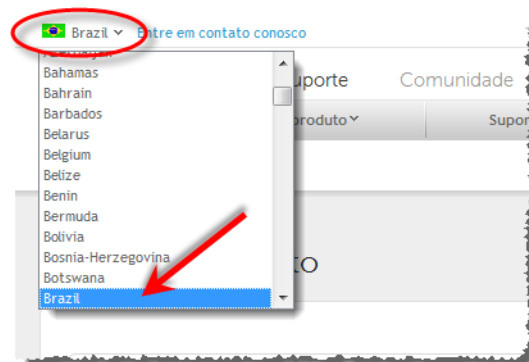
1. If the model type is not visibly labeled, look for the *Service Tag* number on a label located either on the back panel of the server or else the side.

In case both the back and side are obscured from view, you can retrieve the *Service Tag* number from the information tag located on the front panel. The information tag is a slide-out label panel which allows you to record system information such as Service Tag, NIC, MAC address and so on as per your need.

2. Go to the following website:

<http://www.dell.com/support/troubleshooting/us/en/04/TroubleShooting/ProductSelector>

Note: The above address is the URL for the US Dell website. For the Dell website supporting another country, go to the URL above, and then at the top, left corner of the browser, select the desired country from the list.



3. Type the *Service Tag* code you retrieved in [step 1](#) and then click **Submit**.

The screenshot shows the 'Product Support' page with a form titled 'Do you have your Service Tag or Express Service Code?'. Under the 'Yes' section, there is a text input field for the 'Service Tag or Express Service Code' which is circled in red. Below the input field is a checked checkbox labeled 'Save as default'. A 'Submit' button is also circled in red, with a red arrow pointing to it. Under the 'No' section, there are three radio button options: 'Automatically detect my Service Tag for me', 'Choose from My Products and Services List', and 'Choose from a list of all Dell products'. A 'Continue' button is located at the bottom right of the form. The breadcrumb 'Dell > Support > Product Support' is visible at the bottom left.

If the model type is not displayed, either you have typed the Service Tag code incorrectly or your hardware warranty has expired. If you confirm the code is correct and still do not see the model type displayed, call *Grass Valley Technical Support* (see [Contact Us](#), on page 57).

The screenshot displays the 'Product Support for External OEMR R320' page. The title is circled in red. The page features a product image of a Dell server box, a 'Warranty Information' section with a green 'View Warranty' button, and a navigation bar with tabs for 'Product Support', 'System Configuration', 'Parts & Upgrades', 'Manuals & Documentation', 'Warranty', and 'Community'. Below the navigation bar, there is a 'Drivers and Downloads' section with a gear icon and a 'View Drivers and Downloads' button. At the bottom, the 'Dell PC Diagnostics' section is partially visible.

Software Requirements

You can connect to an iControl Application Server from any client PC on your network using a standard Web browser. Once you connect to a valid Application Server IP address, you can download iControl applications to your client PC. Consequently, no other application software is needed, which greatly simplifies installation and system maintenance.

Once launched, the software will continue to run on your PC, communicating with distributed network applications that may or may not reside on the Application Server where the initial connection was made.

To run applications in the iControl suite, you must have a Web browser (Internet Explorer 10.0 or Mozilla Firefox 3.6) installed on your PC.

IMPORTANT: Client PCs do not require any version of the Java JRE installed

iControl does not require any version of the Java JRE to be installed on your client PC for iControl to function properly. If you have a Java JRE installed already, there is no impact on iControl's ability to function nor any degradation of performance.

Installation and Network Requirements

Users can access the iControl Application Server from a client PC using a standard Web browser (Microsoft Internet Explorer or Mozilla Firefox). When a client logs in and launches an iControl module, the software is automatically downloaded from the Application Server. Consequently, no other application software is needed, which greatly simplifies installation and system maintenance.

It is recommended that the iControl Application Server (as well as the associated equipment it controls) be installed on a dedicated LAN, using the existing security infrastructure. A qualified system administrator should verify that the setup follows your organization's security standards.

Software Component Compatibility

iControl is compatible with several Grass Valley software components. The versions of these software components recommended by Grass Valley for best performance and maximum functionality are listed below:

- RCP-200 Remote Control Panel version 1.7 or later
- Kaleido-X version 7.60 or later
- Densité 3+ frame controller (CPU-ETH3) version 1.0.3 or later
- GV Node frame controller (CPU-ETH3) version 1.0.3 or later
- Densité CPU-ETH2 version 2.0.4 or later
- EdgeVision version 1.21 or later
- NV9000 version 6.3.0 build 1873 or later
- SE Utilities version 6.3.0 build 136 or later

Getting Started Task Flow

Task 1: Installing the iControl Application Server

Grass Valley's Application Server is the hardware at the heart of the iControl system, providing control, monitoring, logging and interface services. The Application Server is a compact 1 RU server that interfaces to other iControl devices over TCP/IP. A user can connect to the Application Server via TCP/IP from any desktop or portable computer.

Notes

- As of the release of iControl version 5.10, all Application Servers configured with new systems are Dell PowerEdge model R320.
 - Install the faceplate after the server is placed in a rack.
-

REQUIREMENT

Before beginning this procedure, make sure you have met the hardware requirements for new installations (see [Hardware Requirements](#), on page 20).

To install the iControl Application Server

1. Place the Application Server in a standard 19" rack, using the rails, screws and washers provided. Make sure that the unit has adequate ventilation.
2. Connect power cords, and then turn the server on. The power switch is located on the front panel.
3. **[OPTIONAL]** Install the Grass Valley faceplate onto the front of the Application Server by sliding it onto the guide blocks on the side handles, then pushing it in until it clicks into place.

Notes

- An unexpected power disruption, such as might occur during a power failure, can damage the file system on an Application Server. It is strongly recommended that all Application Servers be connected to a standby power source, such as a UPS (Uninterruptible Power Supply), as a preventive measure.
-

Notes (*Continued*)

- Hardware documentation for the PowerEdge R200, R210, R310, and R320 is available from the Dell website:
 - www.dell.com/support/troubleshooting/us/en/04/Product/poweredge-r200
 - www.dell.com/support/troubleshooting/us/en/04/Product/poweredge-r210
 - www.dell.com/support/troubleshooting/us/en/04/Product/poweredge-r310
 - www.dell.com/support/troubleshooting/us/en/04/Product/poweredge-r320
-

Connecting the 8-port Break-Out Box (optional)

You can optionally purchase an 8-port Control RocketPort card (with breakout box) if required.

REQUIREMENT

Before beginning this procedure, make sure you have installed the RocketPort PCI card into the Application Server according to the appropriate hardware manual. Follow the procedure for installing an expansion card. The manuals are available from the Dell website:

- *Dell PowerEdge R200 Systems Hardware Owner's Manual*
(www.dell.com/support/troubleshooting/us/en/04/Product/poweredge-r200)
- *Dell PowerEdge R210 Systems Hardware Owner's Manual*
(www.dell.com/support/troubleshooting/us/en/04/Product/poweredge-r210)
- *Dell PowerEdge R310 Systems Hardware Owner's Manual*
(www.dell.com/support/troubleshooting/us/en/04/Product/poweredge-r310)
- *Dell PowerEdge R320 Systems Owner's Manual*
(www.dell.com/support/troubleshooting/us/en/04/Product/poweredge-r320)

To connect the 8-port breakout box

1. Plug the breakout box connector into the large port (PCI expansion slot) at the back of the Application Server.
2. Connect cables from the devices to be controlled to the serial ports on the breakout box.

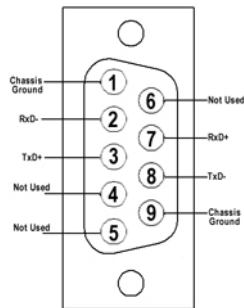
Note: It is important to assign serial ports on both the Application Server and any routers that will be participating in the iControl system to avoid conflicts that might negatively affect system performance. Refer to [Task 7: Connecting & Configuring Devices](#), on page 48 of this guide for more information.

RS-422 Pinout Assignments

When connecting an Application Server to other serial devices, such as Symphonie or Quartet frames, use a straight-through RS-422 cable. If the need arises to create a custom cable, refer to the pinout assignment diagram below.

Getting Started

Configuring TCP/IP Settings on the Client PC



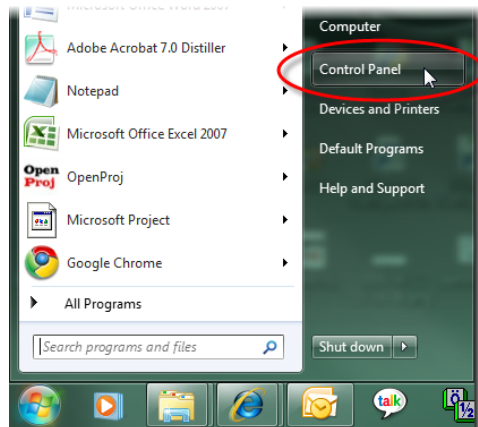
RS-422 connector pinout

Task 2: Configuring TCP/IP Settings on the Client PC

You will use a client PC to configure the new Application Server. The client PC must have network settings that will allow it to communicate with an iControl Application Server in its default state.

To configure TCP/IP settings of a client PC

1. From the **Start** menu, click **Control Panel**.



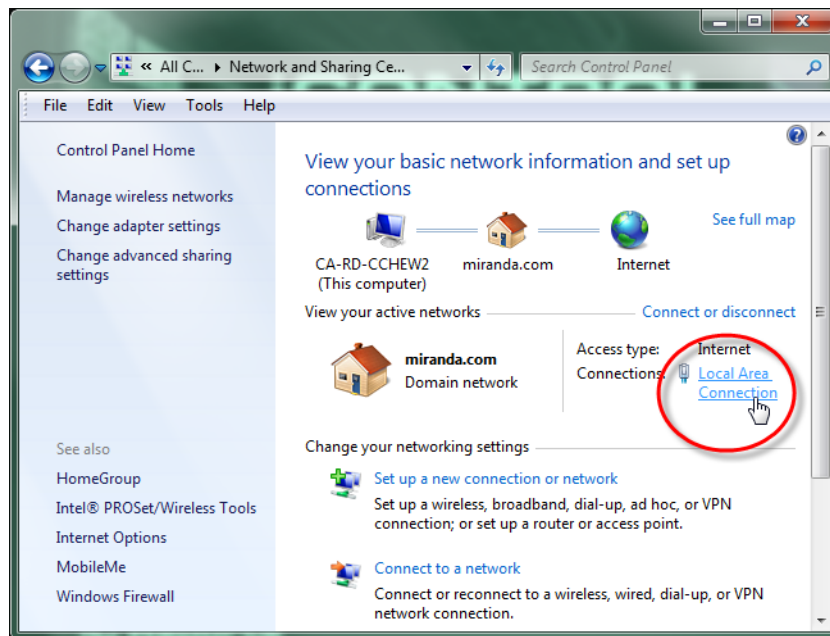
SYSTEM RESPONSE: The Control Panel appears.

2. Click **Network and Sharing Center**.

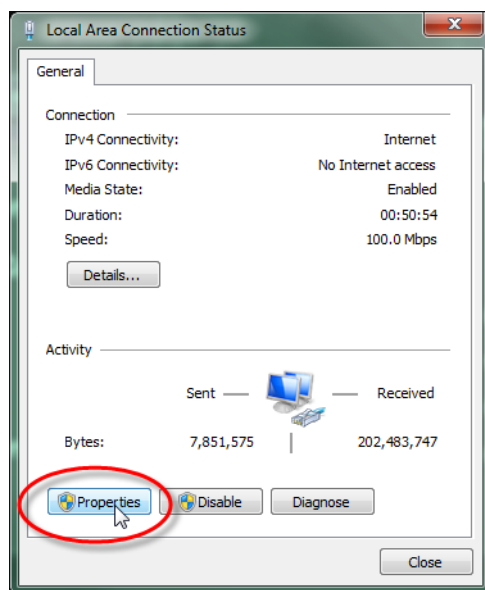


SYSTEM RESPONSE: The **Network and Sharing Center** appears.

3. In the **Access type** area, click the link that corresponds to your LAN Internet connection (**Local Area Connection** in the example shown).



SYSTEM RESPONSE: The **Local Area Connection Status** window appears.

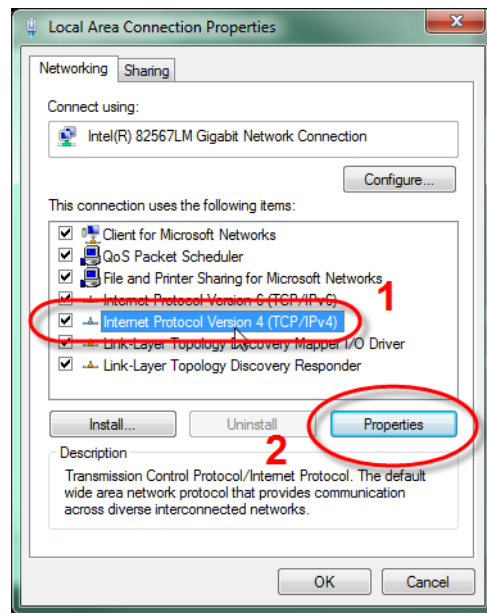


4. Click **Properties**.

SYSTEM RESPONSE: The **Local Area Connection Properties** window appears.

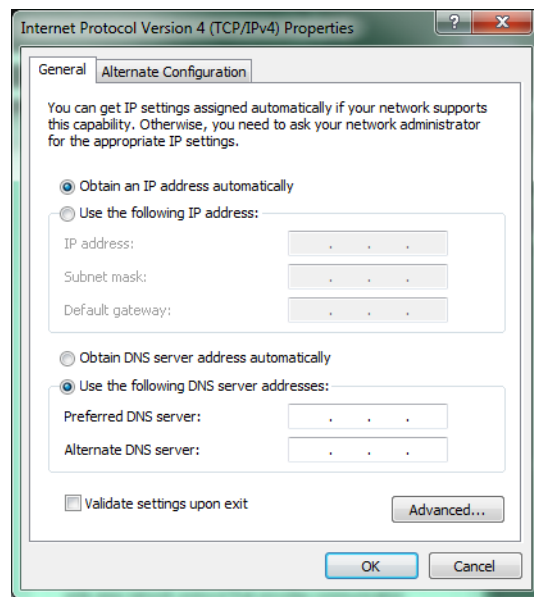
Getting Started

Configuring TCP/IP Settings on the Client PC



5. Select **Internet Protocol Version 4 (TCP/IPv4)**, and then click **Properties**.

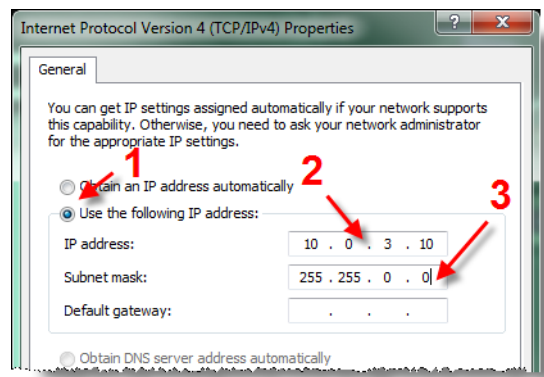
SYSTEM RESPONSE: The **Internet Protocol Version 4 (TCP/IPv4) Properties** window appears.



6. Take note of the PC's current settings.
7. Click **Use the following IP address**.
8. The default IP address of each new Application Server is 10.0.3.6. On the client PC, type an address in the same range (e.g. 10.0.3.10) in the **IP address** field.

- The default subnet mask of each new Application Server is 255.255.0.0. On the client PC, type 255.255.0.0 in the **Subnet mask** field.

Note: The default IP address and subnet mask settings for the Application Server are usually shown on a sticker on the top cover of its chassis.



- Click **OK** to apply these settings.
- In the **Local Area Connection Properties** window, click **OK**.
- Close the **Network and Sharing Center** control panel.

Note: Remember to return the PC to its original network settings once you have finished configuring the Application Server.

Task 3: Configuring the Application Server

Before you can begin operations, you must configure the Application Server and make it available on your local network. Specifically, you must:

- Connect to the Application Server from a client PC
- Log on to the Application Server's *iControl admin* page and configure the Application Server's:
 - Ethernet interface
 - Network gateway
 - Domain Name Service settings
 - Host name and IP address
- Apply your changes and perform a readiness check

Connecting to a New Application Server

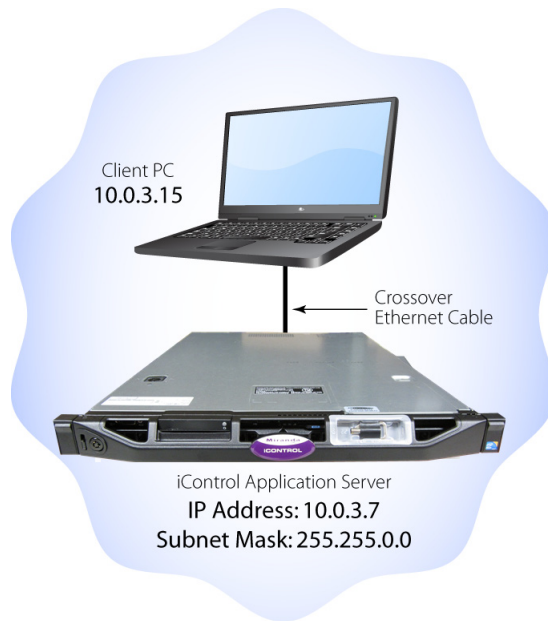
Before you can begin operations, you must configure the Application Server and make it available on your local network. The Application Server is shipped with its **eth0** port configured to a standard setting. As you perform the configuration procedures in this manual, you will reconfigure the port to integrate the Application Server into your network.

IMPORTANT: Ethernet Port Labels on the PowerEdge R210, R310, and R320

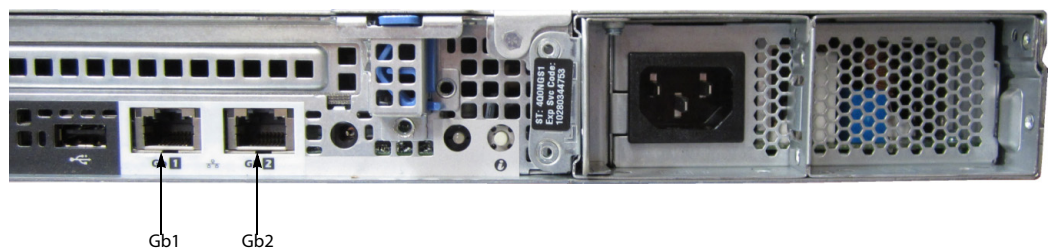
Please read the section regarding Ethernet port labels (see [page 31](#)).

To connect to a new Application Server

1. Using a crossover Ethernet cable, connect the client PC to the **eth0** port on the new Application Server.



Connection between client PC and Application Server



Rear view of R310 Application Server, showing logical ports eth0 and eth1 (physical ports Gb1 and Gb2, respectively)

Note: The default IP address and subnet mask settings for the Application Server when shipped from the factory are shown on a sticker on the top cover of the chassis above the front-panel power switch. The factory default is 10 . 0 . 3 . 6.



2. Open a browser window on the client PC.
3. In the address field, type 10.0.3.6 (this is the default IP address of the Application Server). The *Startup* page appears.

Note: If your Web browser cannot find the Application Server, make sure the PC's network settings are correct (see [Configuring TCP/IP Settings on the Client PC](#), on page 26).

Ethernet Port Labeling on the R210, R310, and R320 Application Servers

The physical Ethernet ports on the backs of the Dell PowerEdge R210, R310, and R320 are labeled as **Gb1 (or 1)** and **Gb2 (or 2)**. The physical (cabling) port called **Gb1** corresponds to logical port **eth0**. Likewise, the physical port called **Gb2** corresponds to logical port **eth1**. When speaking of port numbers, the physical port numbers will not match the logical port numbers. You must therefore map physical to logical according to the table below. For example, if a procedure instructs you to connect a cable to an Application Server's **eth0** port, you must connect the cable to the R210's physical port labeled **Gb1** or to the R310's physical port labeled **1**.

Ethernet Port Mapping on the R200, R210, R310, and R320 Application Servers

Physical Label on R200, R210, R310	Physical Label on R320	Logical Name
Gb1	1	eth0
Gb2	2	eth1

See also

For more information about determining which hardware model of Application Server you have, see [page 21](#).

Configuring the Network

To configure the network

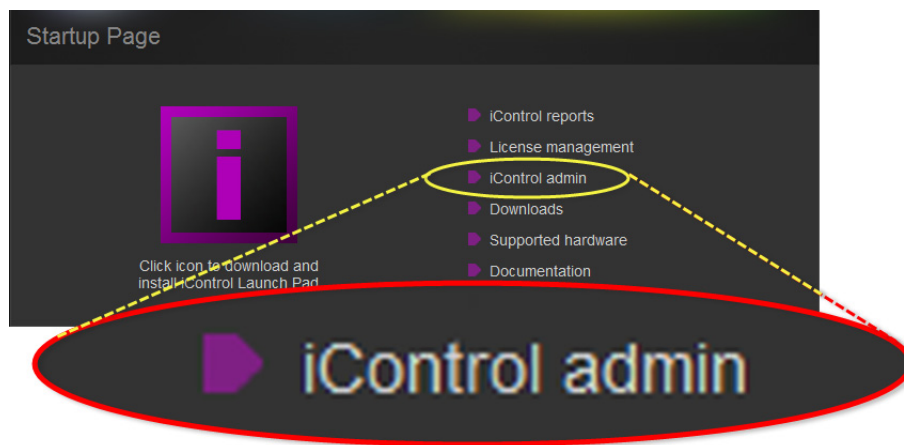
1. Open a Web browser and type the Application Server's IP address or host name.

SYSTEM RESPONSE: The *Startup* page appears.

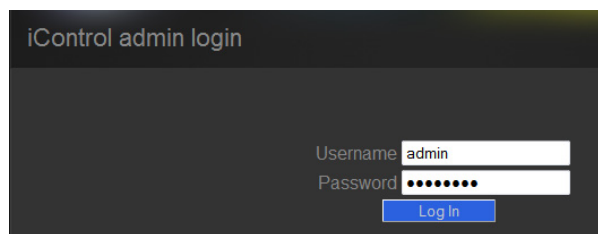
Notes

- Click the iControl logo—visible on **all** iControl pages—to return to the *Startup* page.
 - As you navigate to other Web pages on the Application Server, you can quickly return to the startup page by clicking the iControl logo in the header area.
-

2. Click **iControl admin**.



The system prompts you for a user name and password.



3. Enter a valid user name and password.

Default profile:

- User name: admin
- Password: icontrol

SYSTEM RESPONSE: The *iControl admin* page appears.

4. Under **System settings**, click **Network interfaces**.



SYSTEM RESPONSE: The *Network interfaces* page appears.

5. Under **System**, perform the following sub-steps:
 - a) In the **Hostname** field, type the host name by which you would like this Application Server to be known on your network.
 - b) If required, add DNS servers to the list of IP addresses in the **DNS Servers** list.

Network interfaces

System

Hostname: mike-appserver

DNS Servers: 10.0.2.8, 10.0.2.20

Eth0

Activate at boot-time:

IP Address: 10.6.0.75

Network Mask: 255.255.0.0

Default Gateway: 10.6.0.1

Eth1

Activate at boot-time:

IP Address: 192.168.3.6

Network Mask: 255.255.0.0

Default Gateway:

Reset Apply

6. Under **Eth0**, configure Ethernet interface settings by performing the following sub-steps:

Notes

- The Application Server is shipped with the **Eth0** port turned on, in a default configuration that permits an initial connection. The default IP address setting for the Application Server is 10.0.3.6, with subnet mask 255.255.0.0. This sub-procedure describes how to reconfigure **Eth0** to meet your local network requirements.
- You must use **Eth0** as your main network interface. The other Ethernet port (**Eth1**) is also configurable, but is intended for specialized use, such as connecting Grass Valley Densité frames and some third-party devices (e.g. SNMP devices) as long as they are on the same local subnet as **Eth1**. The **Eth1** network interface is disabled by default.

IMPORTANT: Ethernet Port Labels on the R210, R310, and R320 Application Servers

Please read the section regarding Ethernet port labels (see [page 31](#)).

a) Select the **Activate at boot** option.

Note: If you do not select the **Activate at boot** check box, the **Eth0** interface resets to its previous values the next time the system restarts.

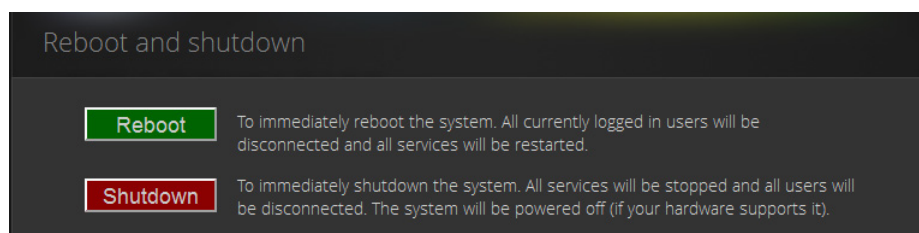
- b) In the **IP Address** field, type the IP address you would like to use for this iControl Application Server.

Note: Typically the IP addresses for all devices on a LAN will begin with the same two data groups, and the remaining two will be assigned by the system administrator.

- c) Type an IP address in the **Network mask** field that corresponds to your desired network configuration.
- d) In the **Default Gateway** field, type the desired gateway address.

Note: Ask your system administrator for the IP address of the network gateway that this Application Server will use. If a gateway is *not* being used, then leave the **Default Gateway** field empty.

7. Click **Apply**.
8. On the *iControl admin* page, click **Reboot and shutdown**, under **Other**. The *Reboot and shutdown* page appears.



9. Click **Reboot**.

IMPORTANT: You may lose communication to the Application Server

If your PC is on a different subnet than the Application Server's new address, you will lose communication with the Application Server once you reboot.

SYSTEM RESPONSE: The Application Server restarts with the network parameters you have established.

10. Disconnect the client PC that was used to configure the Application Server. Remember to restore the previous network settings on the PC.
11. Connect the Application Server to its designated network. Use a standard Ethernet cable plugged into the Application Server's **Eth0** port (see [Installing the iControl Application Server](#), on page 24).

IMPORTANT: Ethernet Port Labels on the R210, R310, and R320 Application Servers

Please read the section regarding Ethernet port labels (see [page 31](#)).

Task 4: Configuring Client Workstations

IMPORTANT: Client PCs do not require a Java JRE to be installed

iControl does not require any version of the Java JRE to be installed on your client PC for iControl to function properly. If you have a Java JRE installed already, there is no impact on iControl's ability to function nor any degradation of performance.

IMPORTANT: iControl supports only Windows 10, Windows 8, or Windows 7 client platforms

Client PCs *must* have Windows 10, Windows 8, or Windows 7 installed. Windows XP is no longer supported.

Any Windows 10, Windows 8, or Windows 7 workstation with access to an Application Server can be used to operate iControl, without the need for special client-side software. You must, however, configure local DNS settings.

Configuring DNS Settings

Application Servers use the Darwin Streaming Server to stream video thumbnails from some network devices to iControl applets running on client PCs. For example, when you open a video card's control panel from iC Navigator, the control panel displays a thumbnail representation of the current video signal.

In order for such streaming to work properly, a client PC's internal Domain Name Service (DNS) must be able to resolve the host name (and reverse resolve the IP address) of the Application Server from which the applet was launched.

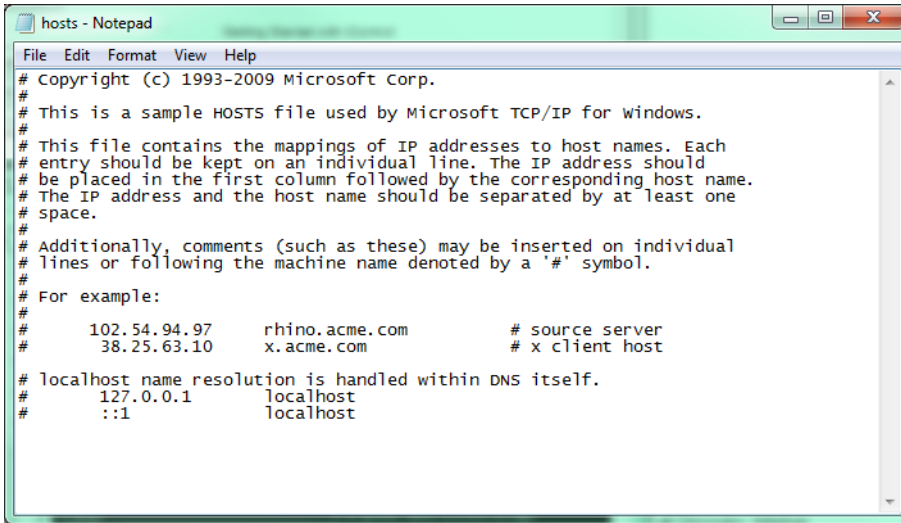
In order to avoid slower streaming performance, you should make sure that each client PC has all available Application Servers and Allégro-1 systems listed in its DNS configuration file.

To configure DNS settings

1. On the client PC, open the hosts file (no extension) in a text editor. In Windows, the hosts file is located in C:\WINDOWS\System32\drivers\etc.
2. For each Application Server and Allégro-1 that the PC will be accessing, add a line of the form:

AAA.BB.CC.DD HostName.yourDomain.com

where AAA.BBB.CC.DD is the IP address of the Application Server or Allégro-1.



```
File Edit Format View Help
# Copyright (c) 1993-2009 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#       102.54.94.97       rhino.acme.com       # source server
#       38.25.63.10      x.acme.com          # x client host
#
# localhost name resolution is handled within DNS itself.
#       127.0.0.1        localhost
#       ::1             localhost
```

3. Save and close the hosts file.

Connecting to the Application Server

At this point, you should verify that the iControl Application Server is available on your network.

To connect to the Application Server

1. From a workstation on the same subnet, open a Web browser window and type the IP address¹ of the newly-configured iControl Application Server. You should see the iControl Startup page.
2. Alternatively, you can use the ping command by performing the following sub-steps:
 - a) On the **Start** menu of the client PC, point to **All Programs**, and then to **Accessories**, and click **Command Prompt**.
 - b) Type the following:

```
ping AAA.BBB.CCC.DDD
```

where AAA.BBB.CCC.DDD is the Application Server's new IP address.

SYSTEM RESPONSE: A small window should briefly appear with a message similar to the following:

```
Reply from AAA.BBB.CCC.DDD: bytes=32 time<1ms TTL=62
```

Task 5: Configuring the Application Server on the Network

Once the Application Server is plugged into and available on your network, you will need to configure additional settings to permit it to operate in that environment. Specifically, you will need to configure Lookup Services to make sure that all devices on the network are visible to iControl. You may also need to configure the iControl Services Gateway.

1. Return to the Network Configuration page by clicking the Return arrow at the bottom of the Routing and Gateways page.

Configuring Lookup Services

iControl uses a lookup service for discovery over a network. By default, each iControl Application Server runs a lookup service that registers and makes available information about the devices on its network. It will also register with all lookup services that are running on other Application Servers on the same subnet.

If you have multiple Applications Servers and/or multiple subnets in your iControl network, you will need to configure these lookup services.

REQUIREMENTS

Make sure you meet the following conditions before beginning this procedure:

- You have opened the *Services management* page.
- You have familiarized yourself with the behavior of the *Lookup location* page.

To turn a lookup service on or off

1. On the *Services management* page, click **Configure RMID**, near the bottom of the page.

Service Name	Description	Status	Mode	Log	Actions
iControl Services Gateway	iControl Services Gateway Server for third-party API to interface with any iControl card services. Required for RCP-100 client and to change line scope from iControl Web player	Stopped	Auto	● / ● / ●	show log
Daemon Health Monitor	Process that monitors and restarts daemon processes	N/A	N/A	N/A	show log

Apply Reset iControl Stop iControl Start

Number of Densite Managers: 1 Apply

This is used for load balancing in large systems. We recommend a maximum of 150 streams per Densite Manager.

Click [here](#) to take a look at the system's configuration

Configure ports Configure RMID

SYSTEM RESPONSE: The *RMID configuration* page appears.

RMID configuration

Select if you want the Lookup Service to start after the RMI Daemon.

Start Lookup Service with RMID

Do not start Lookup Service with RMID

Accept

2. Click **Start Lookup Service with RMID** if you want this Application Server to run the Lookup Service.

IMPORTANT: The lookup service should only be activated on a maximum of two Application Servers per subnet.

3. Click **Do not start Lookup Service with RMID** if you do not want this Application Server to run the Lookup Service.
4. Click **Accept**.

Note: The Kaleido-K2 has its own built-in lookup service which must be turned off before it is added to an iControl network.

Specifying Service and Alarm Discovery Locations

In order to operate iC Web on client PCs on a subnet other than the one used by the iControl Application Server, you must add the IP address of an Application Server running a lookup service.



To do this...	...do this...
Add locations for service and alarm discovery	<ol style="list-style-type: none"> 1. Type the IP address and (optionally) the name of an Application Server that is running a lookup service. 2. Click Add lookup. <p>The new lookup location appears in the Service and alarm discovery table.</p>

(Continued)

To do this...	...do this...
Delete a service and alarm lookup entry	<ol style="list-style-type: none">1. In the Service and alarm discovery table, find the IP address corresponding to the Application Server you would like to remove.2. In this row, click Delete. <p>The specified IP address is removed from the table.</p>

Specifying Alarm Publication Lookup Locations

In a basic iControl configuration, services such as the Densité Manager or the Imagestore Manager will automatically detect—and begin publishing alarm status information to—the GSM(s) on their own subnet.

Note: The current version of iControl has a built-in feature called *multi-GSM* that eliminates the need for specifying alarm publication lookup locations. The procedures below are being kept in this User Guide to support legacy iControl installations. Please consult with Grass Valley Technical Support before making any modifications to your Lookup Locations (see [Contact Us](#), on page 57).

If, however, you wish to have these services connect to GSMs running on Application Servers on other subnets, you must explicitly specify the GSM locations. You do this by typing the IP address of the target Application Server (on the remote subnet) in the iControl Lookup locations page of the Application Server running the Densité, Imagestore, or other service on the local subnet.

On the Application Servers in the different subnet, you need to specify the IP address of the lookup service where a GSM is registered in the other subnet.

Adding an Alarm Publication Lookup Location

REQUIREMENT

Before beginning this procedure, make sure you have opened the *Lookup location* page for the Application Server that is running the Densité, Imagestore, or other service you wish to publish to remote GSMs (see [page 710](#)).

To add an Alarm publication lookup location

1. On the *Lookup location* page, under **Alarm publication**, type one of the following:
 - the IP address of an Application Server on a remote subnet that is running a GSM
 - the IP address of an Application Server on a remote subnet that is running a lookup service

Note: Use of the **Name** field to indicate the Application Server's host name is optional.

2. Click **Add lookup**.

SYSTEM RESPONSE: The address appears in the **Alarm publication** lookup table.

Alarm publication

For services such as Densité Managers to publish their alarms in other GSMs that are NOT located in the same subnet, include the IP addresses of the Application Servers hosting the lookup services where these GSMs are registered.

- Details/Examples

IP address:

Name (optional):

Current lookup entries are:

IP address	Name	
10.6.0.75		<input type="button" value="Delete"/>

- Restart the specific service (e.g. Densité Manager) that you wish to publish to the remote GSM, or restart iControl to publish all services to the remote GSM (see [Starting & Stopping iControl Services](#), on page 701).

Deleting an Alarm Publication Lookup Location Entry

REQUIREMENT

Before beginning this procedure, make sure you have opened the *Lookup location* page on the Application Server hosting the Densité or ImageStore services you no longer wish to be visible outside the subnet (see [page 710](#)).

To delete an Alarm publication lookup location entry

- On the *Lookup location* page, in the **Alarm publication** lookup table, find the IP address corresponding to the Application Server whose entry you would like to delete.
- In this row, click **Delete**.

SYSTEM RESPONSE: The specified IP address is removed from the **Alarm publication** lookup table.

Configuring the iControl Services Gateway

The iControl Services Gateway is software that enables external devices to access resources (via XML) on an iControl network. You should activate the iControl Services Gateway on an Application Server if any of the following situations apply:

- an RCP-100 or RCP-200 remote control unit is being used as a client on the Application Server
- the **Line Selection** function of the **Line Scope** option for the VCP and SCP series of video probes is being used in iC Web
- decoded VBI or CC from VCP or SCP probes is to be displayed in iC Web
- third-party applications are being used to control Densité or Imaging cards via iControl

REQUIREMENT

Before beginning this procedure, make sure you have opened the *Services management* page.

To activate the iControl Services Gateway

1. On the *Services management* page, locate the **iControl Services Gateway** row in the list of services.

The screenshot shows the 'Services management' interface. It contains a table with the following data:

Service Name	Description	Start time	AutoStart	Start/Stop /Restart	Log
Audio/Video Fingerprint Analyzer	Provides support for distributed and multi-point content fingerprint analysis (e.g. lip-sync detection)	Sun Dec 22 07:50:32 2013	<input checked="" type="checkbox"/> Auto	● / ● / ●	show log
Bridgetech VBC service	Start Bridgetech VBC service.	Stopped	<input type="checkbox"/> Auto	● / ● / ●	show log
	CDMP Service . Supports				
VTR Scheduler Service	VTR Scheduler Module which is used to schedule a VTR	Stopped	<input type="checkbox"/> Auto	● / ● / ●	show log
Virtual Service	Virtual Service Manager for building virtual panels such as procamps	Stopped	<input type="checkbox"/> Auto	● / ● / ●	show log
iControl Services Gateway	iControl Services Gateway Server for third-party API to interface with any iControl card services. Required for RCP-100 client and to change line scope from iControl Web player	Stopped	<input type="checkbox"/> Auto	● / ● / ●	show log
Daemon Health Monitor	Process that monitors and restarts daemon processes	N/A	N/A	N/A	show log

Below the table are buttons: Apply, Reset, iControl Stop, iControl Start. At the bottom, there is a dropdown for 'Number of Densite Managers' set to 1, and buttons for 'Configure ports' and 'Configure RMID'.

2. In the **Auto Start** column, select the **Auto** check box.
This is to ensure that the iControl Services Gateway will restart automatically if the Application Server is rebooted.
3. In the **Start/Stop/Restart** column, click the left-most button (corresponding to **Start**).
4. Click **Apply**.
SYSTEM RESPONSE: After a few seconds, the Web page will reload, and the row corresponding to iControl Services Gateway will be green (indicating that the service is active).

Task 6: Configuring GPI Outputs on a GPI-1501

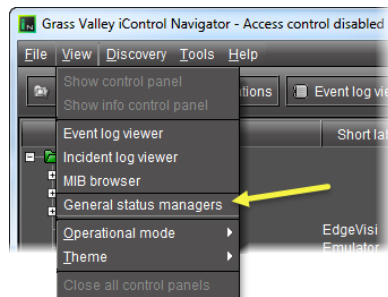
This procedure allows you to configure the GPI outputs on a GPI-1501 to respond to alarms triggered on another card on the iControl network.

REQUIREMENT

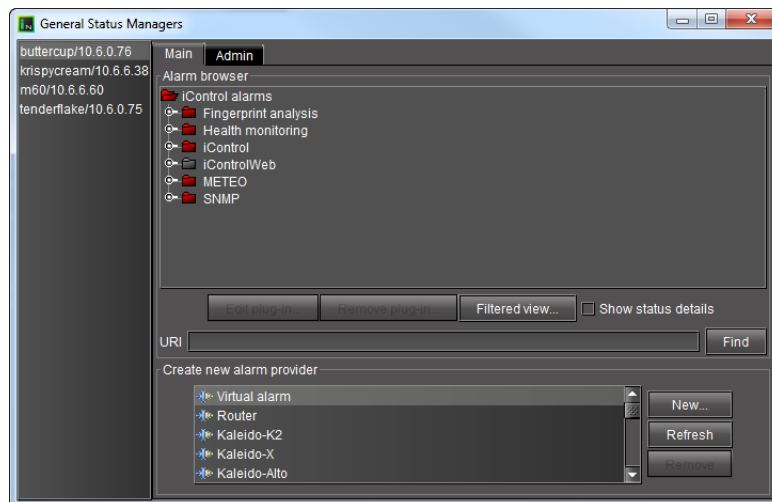
Before beginning this procedure, make sure you have opened iC Navigator.

To configure GPI outputs on a GPI-1501

1. In iC Navigator, on the **View** menu, click **General status managers**.



SYSTEM RESPONSE: The **General Status Managers** window appears.



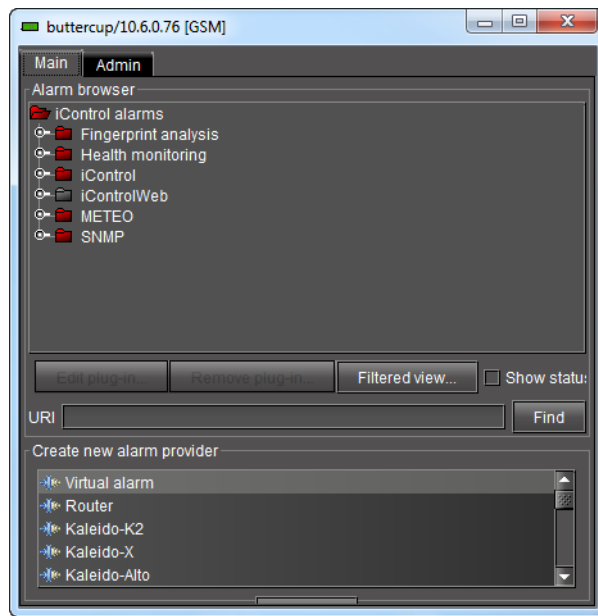
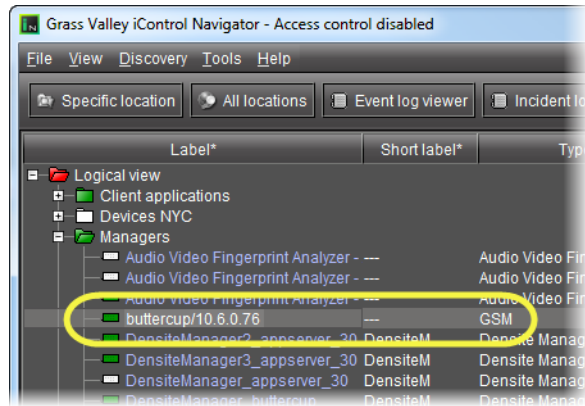
2. Select one of the GSMs from the list in the left pane of the window.

SYSTEM RESPONSE: The Alarm Browser (under the **Main** tab) displays the devices and services associated with the selected GSM in a hierarchy of folders, subfolders, and alarms.

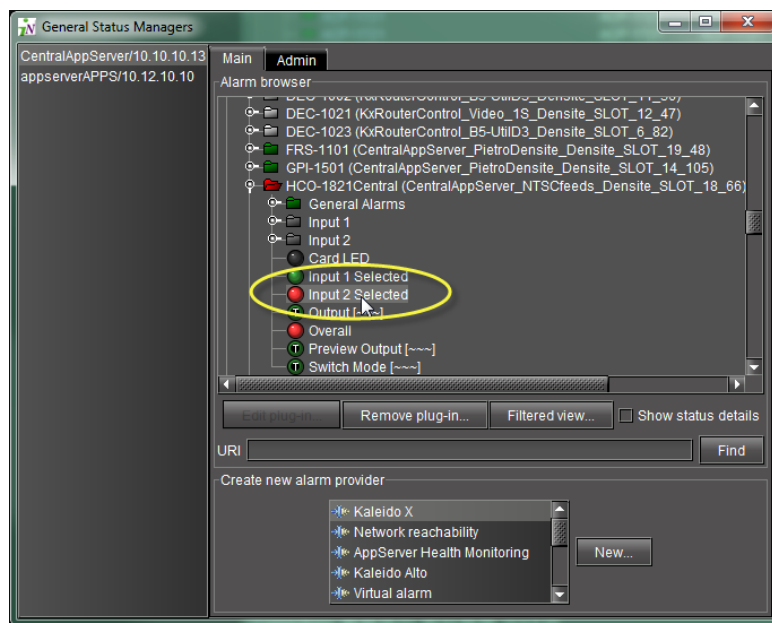
Note: You can, alternatively, open the Alarm Browser for a specific GSM by double-clicking its name in the iC Navigator window. This opens the Alarm Browser in a smaller window.

Getting Started

Configuring GPI Outputs on a GPI-1501

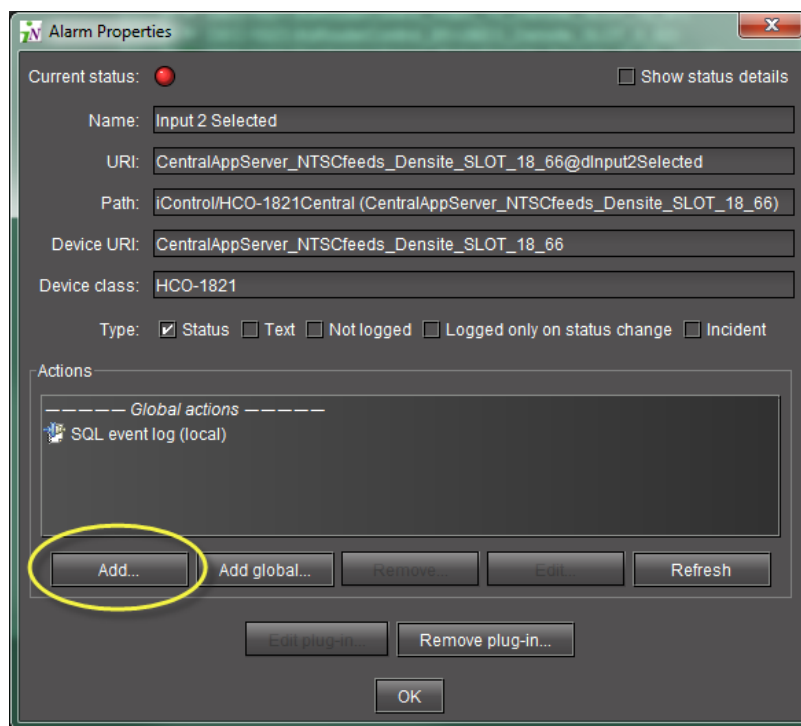


3. Use the vertical scroll bar to find the alarm for which you would like to trigger a GPI output on a GPI-1501 card.



4. Double-click the alarm.

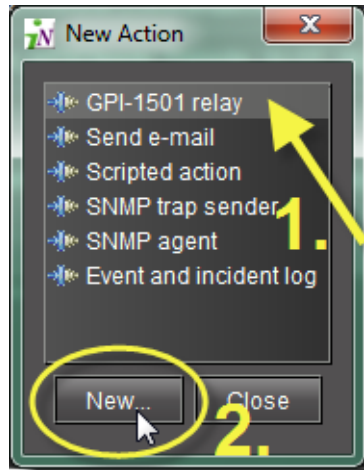
SYSTEM RESPONSE: The **Alarm Properties** window appears.



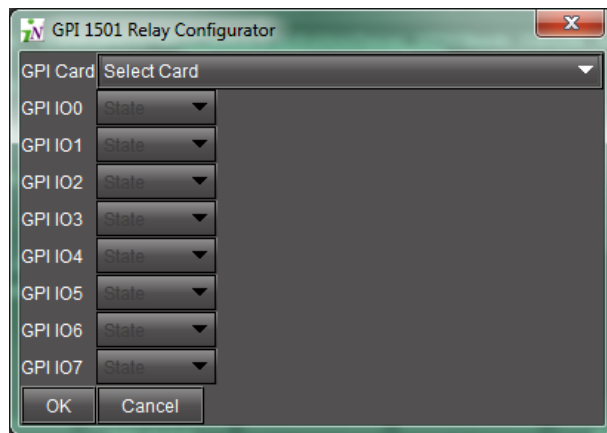
5. Click **Add**.

SYSTEM RESPONSE: The **New Action** window appears.

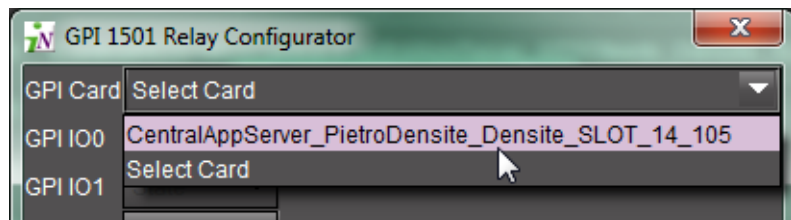
6. Click **GPI-1501 relay** to select it.
7. Click **New**.



SYSTEM RESPONSE: The **GPI-1501 Relay Configurator** window appears.



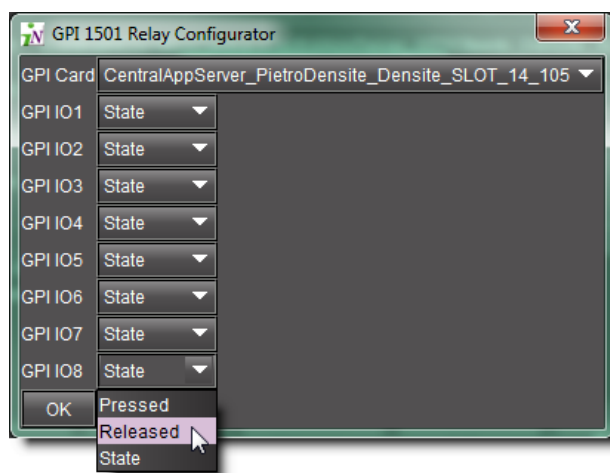
8. In the **GPI Card** list, select the GPI-1501 card whose GPI outputs you would like to control from this alarm.



Note: Only configurable GPIs that are configured as OUT on the GPI-1501 card itself can be operated in this manner.

SYSTEM RESPONSE: The eight output relays on the selected card are shown. The names of the GPIs are set in the GPI I/O Config panel of the GPI card itself.

- You may program one or more GPI outputs on this card or on other cards to respond to this alarm.



Each GPI out on this GPI-1501 card can be programmed to respond to a different alarm from a different card. The eight output relays on the selected card are shown. The names of the GPIs are set in the GPI I/O Config panel of the GPI card itself.

- **Pressed** = high
- **Released** = low

Notes

- If you leave it at State, the GPI is not programmed to respond to this alarm, and can be assigned to a different alarm.
 - You can use the labels to identify the alarm source once it is set.
-

- Click **OK** when done, or **Cancel** to leave the status unchanged

SYSTEM RESPONSE: This new event appears in the **Actions** window in the **Alarm Properties** panel.

Note: You can edit or delete the event by selecting the GPI-1501 action and clicking **Edit** or **Remove**, respectively.

See also

For more information, see the *Densité Series GPI-1501 General Purpose Interface I/O Module Guide to Installation and Operation (M906-9900-100)*.

Task 7: Connecting & Configuring Devices

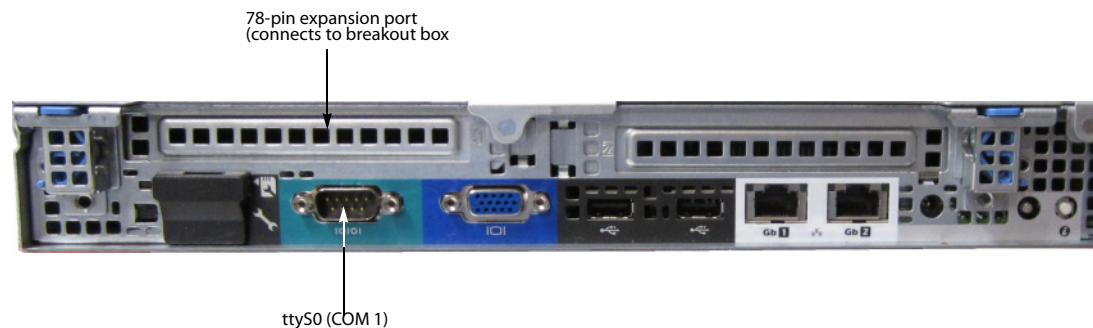
The iControl Application Server communicates with devices in your network over both serial and TCP/IP connections. Once these connections are made physically (using the appropriate cabling), the corresponding ports must be configured.

Configuring Serial Ports

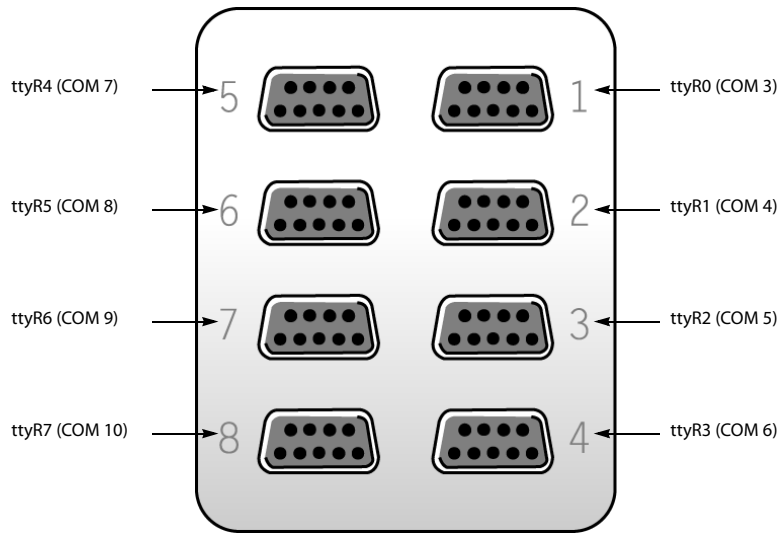
In its standard configuration, the iControl Application Server has two built-in RS-232 ports (one internal, one external). An 8-port expansion card with breakout box optionally can be purchased to accommodate eight RS-422 serial ports.

Port Designation		Protocol
TTY	COM	
R0	3	RS-422
R1	4	
R2	5	
R3	6	
R4	7	
R5	8	
R6	9	
R7	10	

Port Designation		Protocol	Connector Location
S0	COM 1	RS-232	rear panel
S1	COM 2	RS-232	internal



Dell PowerEdge R310 with optional 8-port serial expansion card



RocketPort 8-port serial breakout box

Note: The numbers stamped into the breakout box case (if any) do **not** correspond to the port number.

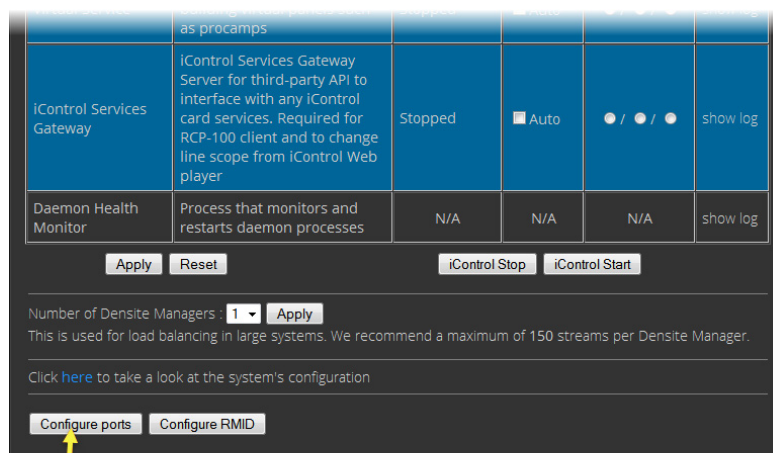
Configuring Serial Ports for a Specific Application Server

REQUIREMENT

Before beginning this procedure, make sure you have opened the *Services management* page.

To configure serial ports for an Application Server

1. On the *Services management* page, near the bottom, click **Configure Ports**.



SYSTEM RESPONSE: The *Serial ports configuration* page appears, showing all available ports and their current assignments. Some ports may be assigned, even if this is the first time the Application Server has been configured.

- Choose an assignment for each active port from its drop down menu.

Port Assignment	Description
None	Configures the port to communicate with standard RS-422 devices (usually used for routers)
Imaging Connection Manager	Configures the port to communicate with Grass Valley's Symphonie or Quartet frames and their Imaging series cards
VTR Controller	Configures the port to communicate with a VTR
Tandberg Alteia	Configures the port to communicate with a device using the Alteia Remote Control Protocol

Note: It is good practice to activate only the required ports, since the Application Server will unnecessarily monitor active ports that are not in use.

- When you have finished assigning ports, click **Accept**.

SYSTEM RESPONSE: The *Services management* page reappears, with new rows in the list of services for each of the newly assigned ports.

SYSTEM RESPONSE: If more than one port has been assigned to an Imaging Connection Manager or VTR Connection service, there will be a new row for each, identified by the port number. Only one row for the Tandberg Alteia service will be created, even if more than one port has been assigned to that service.

A green background indicates a service that is running. Blue indicates a service that is stopped.

Service Name	Description	Status	Autostart
Imaging Connection Manager ttyR1	communicator. Module which finds imaging services and frames	Stopped	<input checked="" type="checkbox"/> Auto
RMI daemon	RMI Server Daemon	Running	<input checked="" type="checkbox"/> Auto
Router Manager Service	Router Manager Service is responsible for all routers connected to a local machine	Running	<input checked="" type="checkbox"/> Auto
Tandberg Alteia	Alteia	Running	<input checked="" type="checkbox"/> Auto
VTR Control Module ttyR2	VTR. Module which is used to control a VTR	Stopped	<input checked="" type="checkbox"/> Auto
VTR Control Module ttyR3	VTR. Module which is used to control a VTR	Stopped	<input checked="" type="checkbox"/> Auto
Daemon Health Monitor	Process that monitors and restarts daemon processes	N/A	N/A

Buttons: Apply, Reset, Control Stop, Control Start

New rows in list on Services management page

- In the **AutoStart** column, select the Auto check box for each of the services corresponding to the newly assigned serial ports.

This will cause the services to start automatically if the Application Server is rebooted.

- In the **Start/Stop/Restart** column, click **Start** for each of the services corresponding to the newly assigned serial ports.
- Click **Apply**.

SYSTEM RESPONSE: The page reloads with the ports you have activated showing a green background.

Task 8: Configuring an Application Server's Date and Time

An Application Server's *Date* and *Time* reflects the time set in the operating system.

You may choose to peg the server's time to the time of another server. The other server must either be running an NTP (Network Time Protocol) server, or have the time protocol enabled in the *inetd* super-server daemon.

Note: For your system to use NTP for synchronization you must have the `ntpd` NTP client program installed.

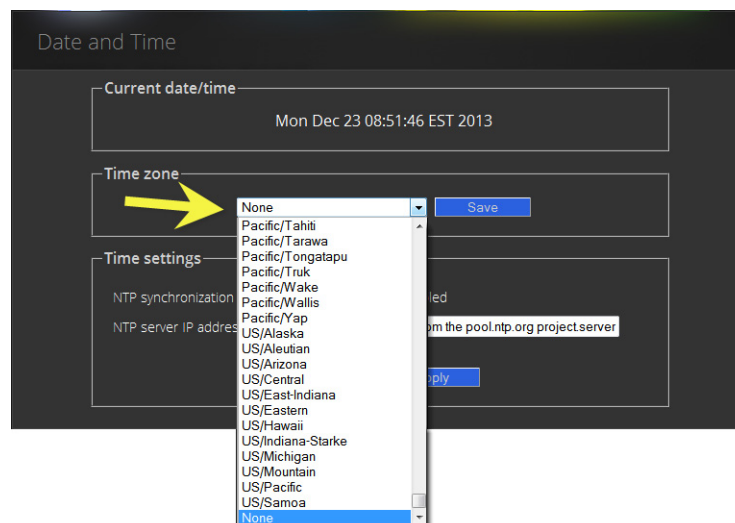
REQUIREMENTS

Make sure you meet the following conditions before beginning this procedure:

- The remote Application Server whose time you would like to synchronize to, is online and functioning.
- On the Application Server whose time you would like to configure, you are logged on to iControl and you have navigated to the *Date and Time* page.

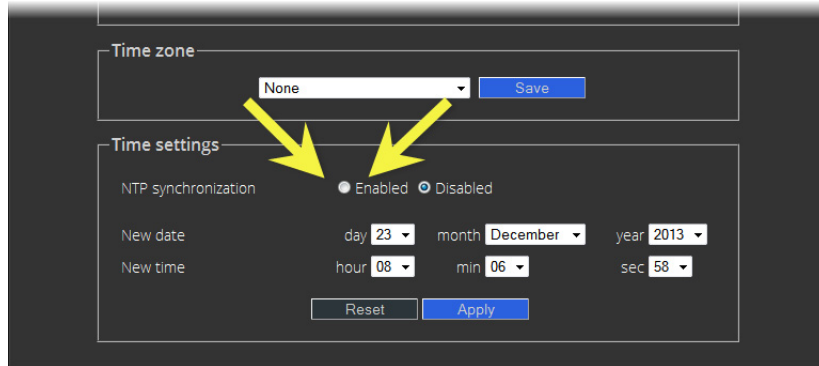
To synchronize an Application Server's system time to that of another server

- On the *Date and Time* page, in the **Time zone** area, select the desired time zone from the list, and then click **Save**.

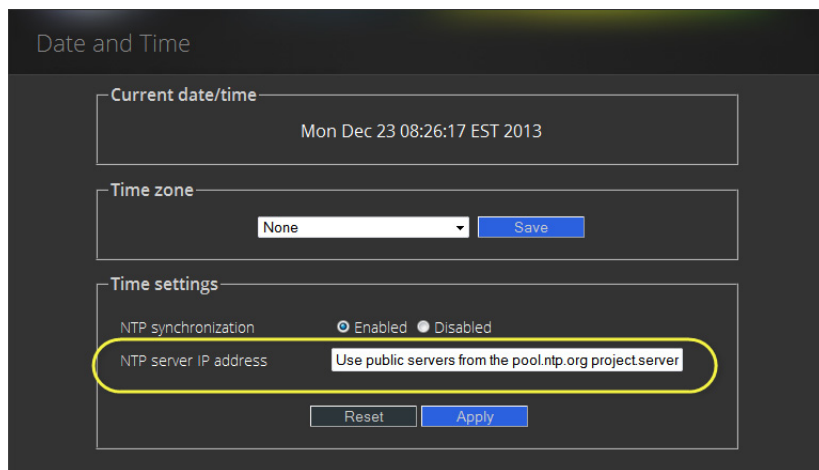


2. If you would like to synchronize your Application Server's time to a remote NTP server, perform the following sub-steps:

a) In the **Time settings** area, enable **NTP synchronization**.

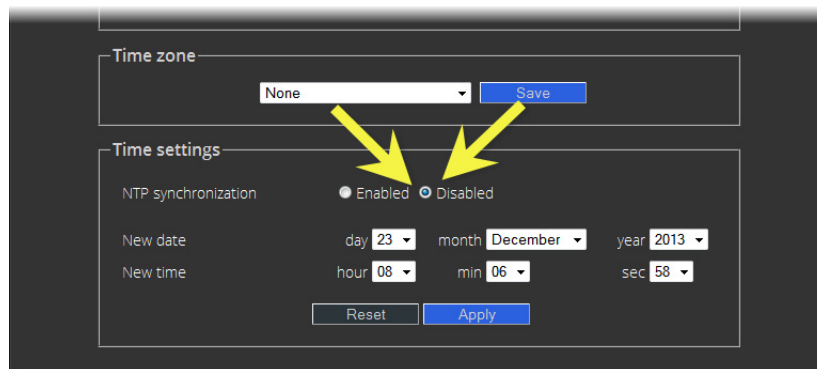


SYSTEM RESPONSE: The **NTP server IP address** field appears.

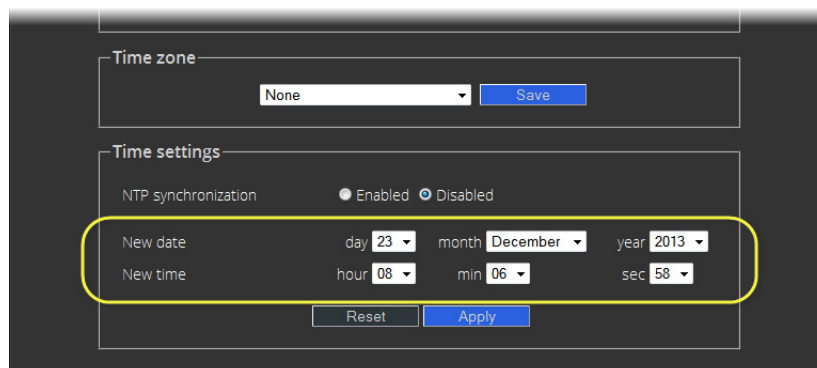


b) Type the IP address of the NTP server in the **NTP server IP address** box, and then click **Apply**.

3. If you would **NOT** like to synchronize to a remote NTP server, perform the following sub-steps:
 - a) In the **Time settings** area, disable **NTP synchronization**.



- b) Configure the desired date and time for this Application Server.



- c) Click **Apply**.

Task 9: [OPTIONAL] Gaining Access to Documentation

About Our Documentation Deployment Methods

Grass Valley makes its iControl documentation suite available to clients in two different formats, PDF and online (HTML) help, depending on the document in question. All documents are available in PDF format from the iControl Documentation page as well as from the iControl Documentation CD which is included in the purchase of iControl. Additionally, you may gain access to up-to-the-minute latest versions of PDF documents from the Grass Valley Technical Support portal (see [Contact Us](#), on page 57).

In addition to the PDFs, we make a subset of the documentation suite available as online help (html). Documents that are available in html format are:

- iControl User Guide
- iRouter User Guide
- iControl Solo User Guide

All online help is sourced directly from the Grass Valley Technical Support portal, and so it will always display the latest information. The **HTML** links visible on the iControl Documentation page and the **Help** (or **?**) buttons/menus available from the Navigator, iRouter, and iC Solo client-side applications all link to the html online help on the portal. When clicking these links, you will need to log in to the portal *only once every 24-hour period* using your Grass Valley Support account profile.

Accessing Documentation from iControl's Documentation Page

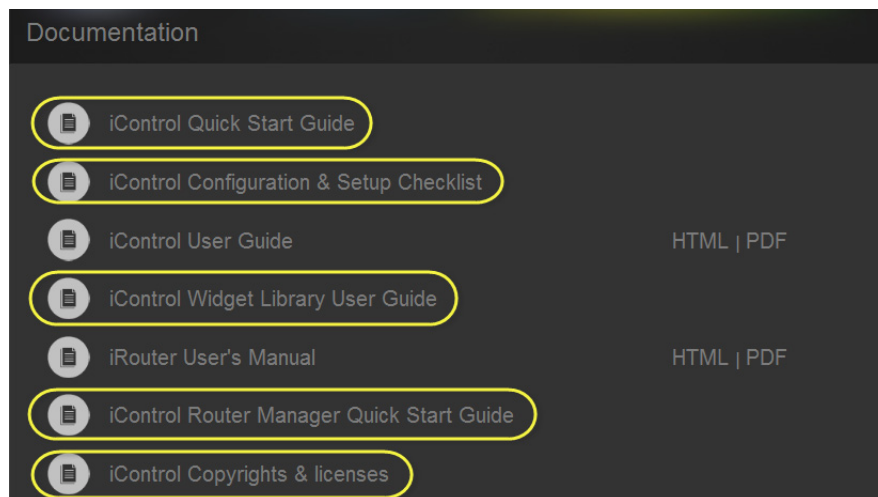
REQUIREMENT

Before beginning this procedure, make sure you have opened iControl.

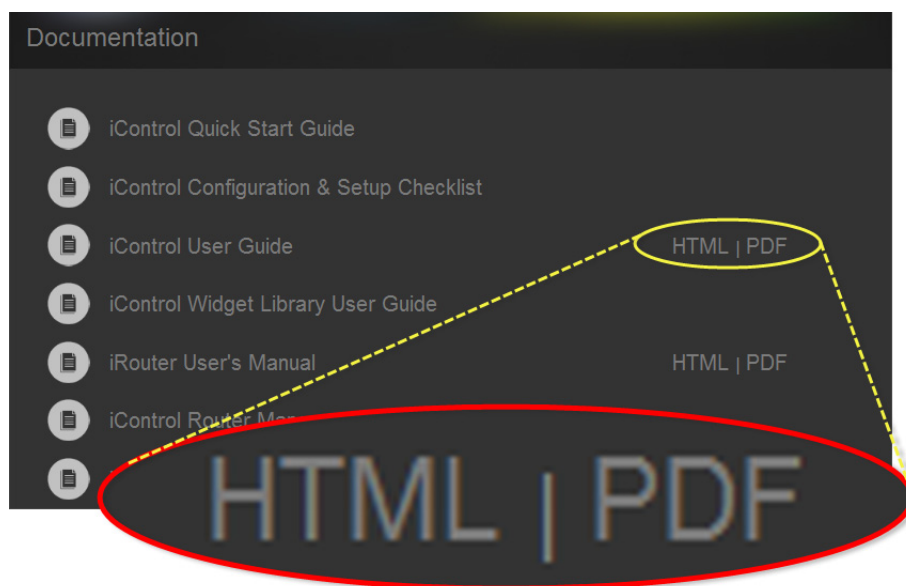
To access documentation from iControl's Documentation page

- On the *Startup* page, click **Release Notes** if desired, or click **Documentation** if you would like any other iControl documentation.

Alternatively, you can access iControl documentation from the Documentation CD (PDF only) or directly from the Grass Valley Technical Support portal (PDF and HTML).



Click any of the links (circled, here, in yellow) to open a PDF version



Where available, click either HTML or PDF to open those formats

See also

For more information about documentation and the Grass Valley Support Portal, see [Accessing Online Help from iC Navigator](#), on page 55.

Accessing Online Help from iC Navigator

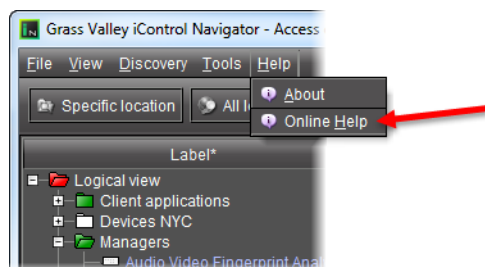
REQUIREMENTS

Make sure you meet the following conditions before beginning this procedure:

- You have opened iC Navigator.
- The client PC you are using is connected to the Internet.

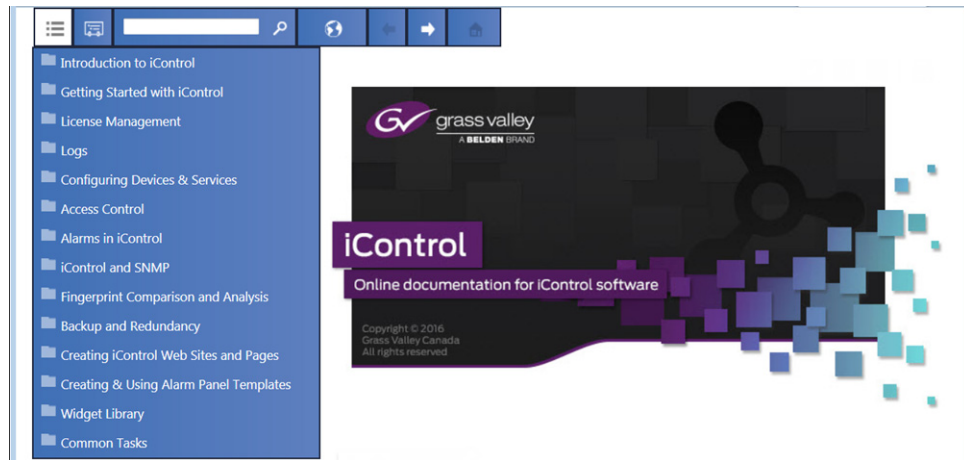
To access online help from iC Navigator

1. In iC Navigator, on the **Help** menu, click **User Guide (HTML)**.



2. If you are prompted for your Grass Valley Documentation Library user credentials, enter them now (first register, if you do not already have a user account).

SYSTEM RESPONSE: The requested online help appears.



Accessing Online Help from Router Manager Configurator

REQUIREMENTS

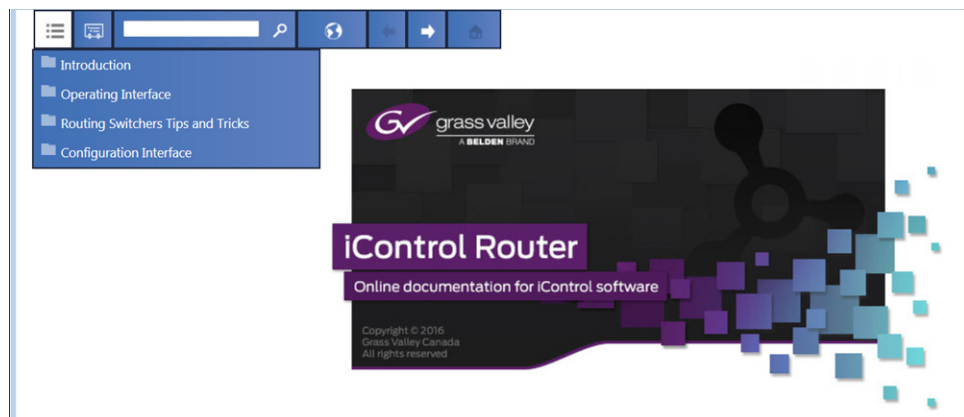
Make sure you meet the following conditions before beginning this procedure:

- You have opened **Router Manager Configurator** (see the “Open Router Manager Configurator” section in the “Setting up iControl Router” chapter of the *iControl Router Quick Start Guide*).
- The client PC you are using is connected to the Internet.

To access online help from Router Manager Configurator

- In **Router Manager Configurator**, click the *Help* button ().

SYSTEM RESPONSE: If you are prompted for your Grass Valley Documentation Library user credentials, enter them now (first register, if you do not already have a user account). Otherwise, the online help should appear in your browser.



See also

For more information about documentation and the Grass Valley Documentation Library, see [Accessing Online Help from iC Navigator](#), on page 55.



Grass Valley Technical Support

For technical assistance, contact our international support center, at 1-800-547-8949 (US and Canada) or +1 530 478 4148.

To obtain a local phone number for the support center nearest you, please consult the *Contact Us* section of Grass Valley's website (www.grassvalley.com).

An online form for e-mail contact is also available from the website.

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