

EC9780 (Administrator's Guide)

This brief guide describes the EC9780 Web Interface, a hardware/software combination that allows a remote operator to control an NV9000 system over the Internet. The operator uses a software version of the NV9605 control panel.

Please refer to the NV9000 documentation for information about the NV9000 and its operation.

Introduction

The EC9780 is a 2RU device with special-purpose software. It uses the same enclosure as a NV9000 but is distinguished by a sticker on the front.

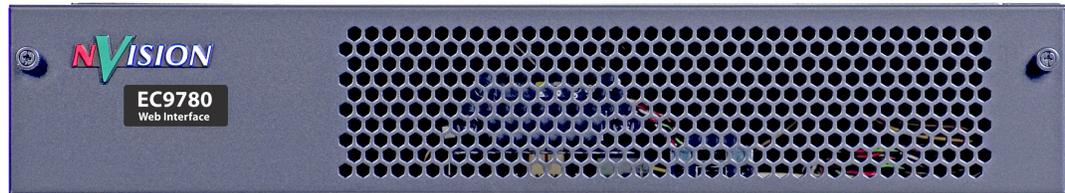


Figure 1-1. EC9780 (Front)

The EC9780 comes from the factory with the necessary software installed.

There are 3 main steps to install the EC9780 and get your remote users running.

- 1 Physically connect the EC9780 in your system.
- 2 Set up the EC9780 internal software.
- 3 Set up users' PC(s). This step occurs at remote sites. A user needs a copy of the NV9605T panel and access to the EC9780.

If the user is your customer, he or she will use a panel configuration that you developed for your system. The user cannot reconfigure a panel.

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Introduction

System Organization

The EC9780 behaves as if it were an ordinary control panel in an NV9000 system. What distinguishes the EC9780 is that its commands come from a remote user through the Internet. Panel status is displayed at the remote user's PC. Figure 1-2 illustrates the connections:

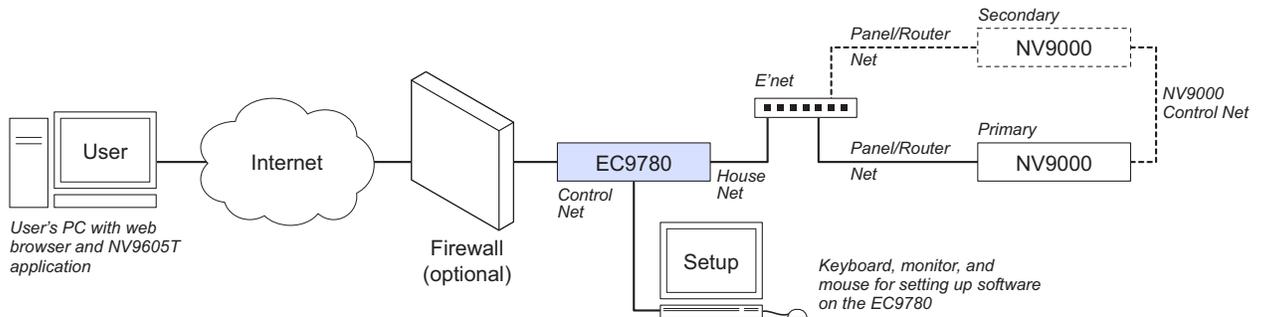


Figure 1-2. Network Connections for the EC9780

An NV9000 system might be a redundant system in which case there are two system controllers, the primary and the secondary. A non-redundant system has just the primary controller.

Your system may include a firewall. A firewall is optional, but recommended. The presence or absence of a firewall does not affect the EC9780.

▲ The Cisco ASA 5500 series is suitable.

The EC9780 has one "Internet-facing" Ethernet connection and one connection to a panel/router network of the NV9000 system.

Setting up the software in the EC9780 requires a keyboard, monitor, and mouse connected at least temporarily to the EC9780.

Hardware Setup

The EC9780 and the NV9000 have identical enclosures and connectors.

Here are the ports of the EC9780 that can be used:

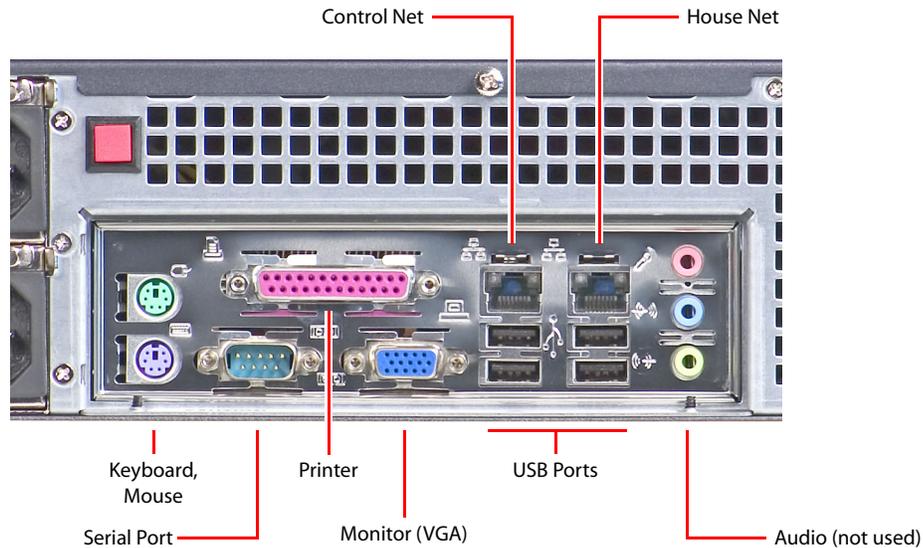


Figure 1-3. EC9780 Ports

The NV9000 ports are identical, but its four network ports can be used:

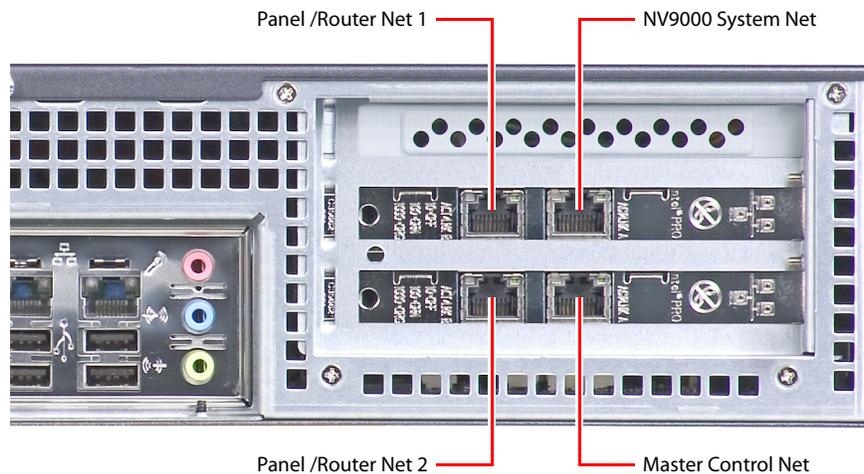


Figure 1-4. NV9000 Ports

To add the EC9780 to your system:

- 1 Cable the 'Control Net' port of your EC9780 to your Internet service.
- 2 Cable the 'House Net' port of your EC9780 to the Ethernet switch (or hub) that supports the 'Panel and Router Net 1' of the NV9000 system controller. (You could also use Panel and Router Net 2 just as easily.)

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Software Setup in the EC9780

Software Setup in the EC9780

Before you can do this, you need to hook up a keyboard monitor and mouse to the EC9780.

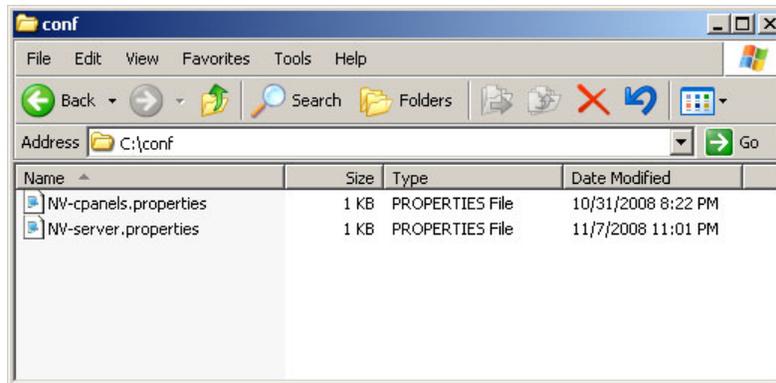
You will be performing these 3 main steps:

- 1 Define the IP addresses of the EC9780's ports.
- 2 Define user ID(s) in Mozilla Firefox.
- 3 Optionally, perform a test launch of the user software.

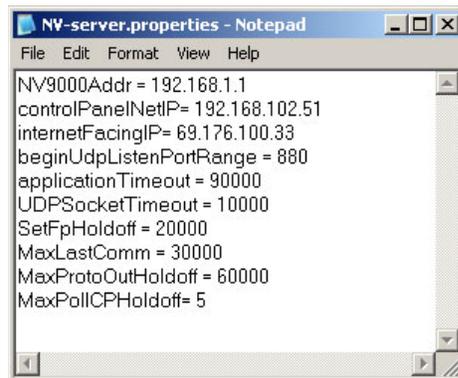
Define the IP Addresses

Follow these steps:

- 1 Go to C:\conf and open NV-server.properties:



- 2 Modify the first 3 lines of the NV-server.properties file:



The NV9000Addr is the IP address you have assigned to the (primary) NV9000 system controller. Typically this address is 192.168.1.1.

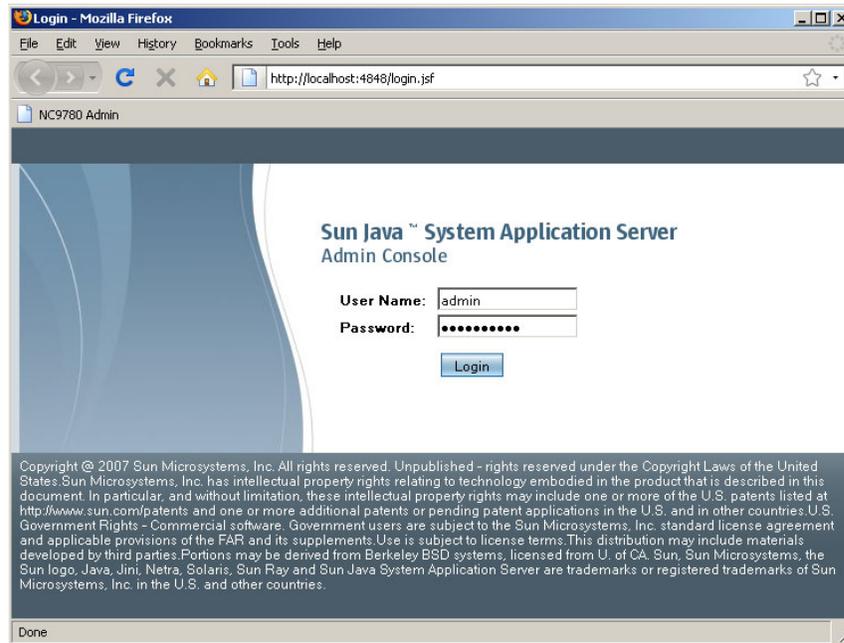
The internet-facing port, purchased from a service provider, is not arbitrary. The controlPanelNetIP is arbitrary within the allowable NV9000 address ranges. In the illustration, these are 192.168.102.51 and 69.176.100.33.

- 3 Save and close the properties file.

Define User IDs

This step defines a set of user IDs for which the EC9780 will grant access to the NV9000 system.

- 1 Launch Mozilla Firefox. An icon should exist on the desktop. When it launches, Firefox presents a login page:



Log in. The default user name and password are

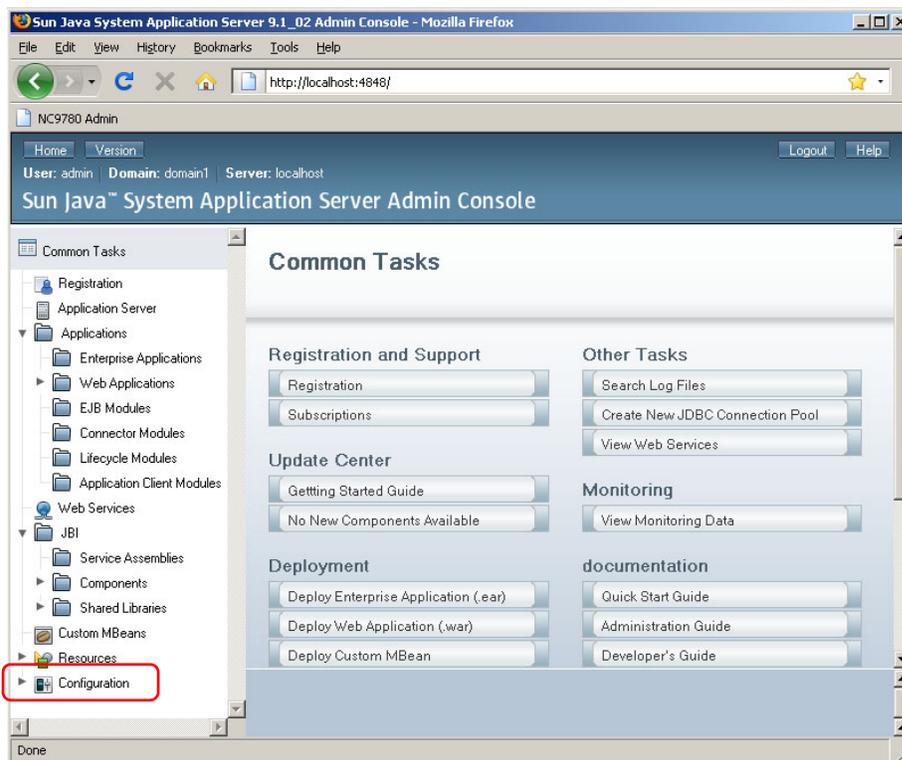
admin
adminadmin

We recommend you change these from the defaults.

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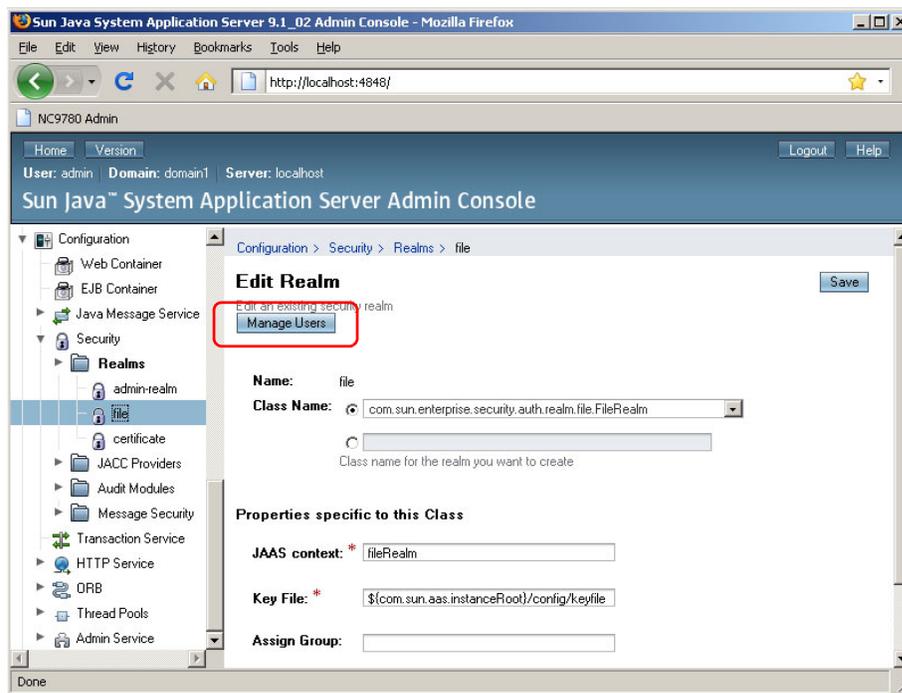
Software Setup in the EC9780

2 After you log in, Firefox displays its console:



Find and expand 'Configuration' in the 'Common Tasks' pane at the left.

3 Expand so that the resulting path is Configuration > Security > Realms > file:

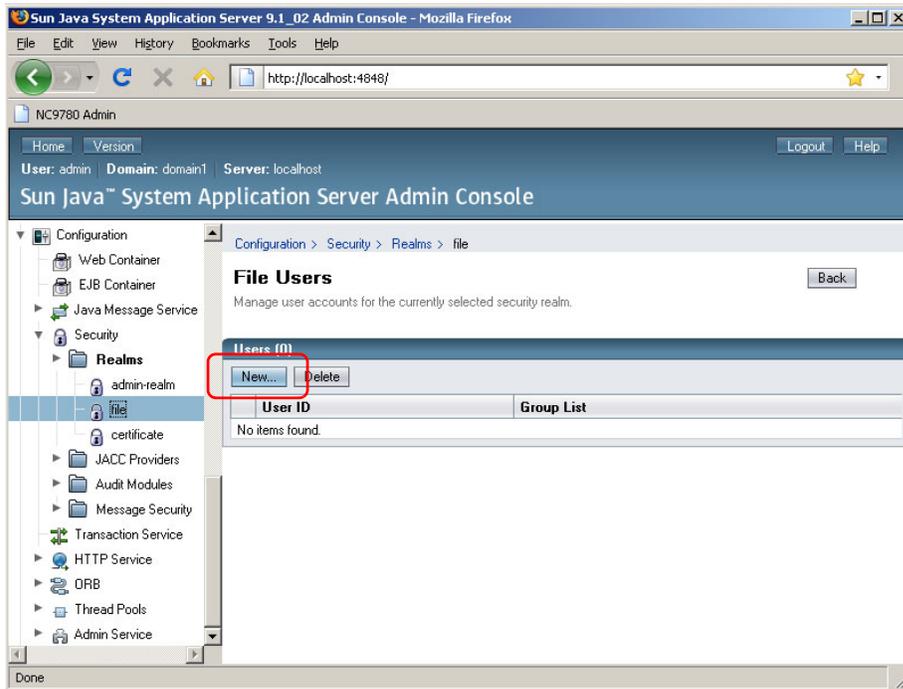


Then click the 'Manage Users' button.

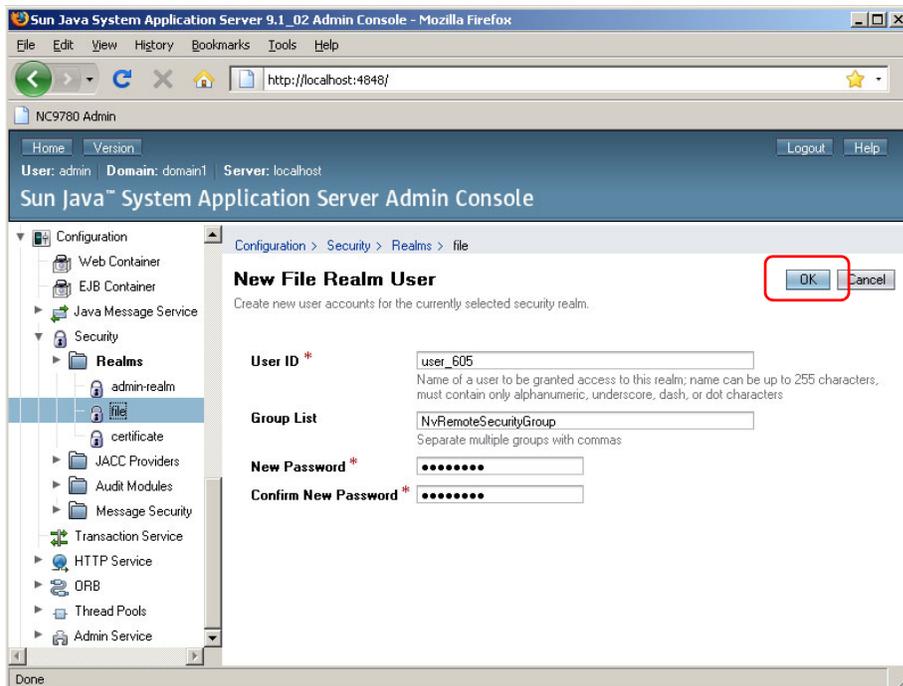
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Software Setup in the EC9780

4 In the resulting display, click 'New':



5 The user profile appears. Enter values in the fields:



The user ID you enter must be composed of a name and a panel ID separated by an underbar. The panel ID is an integer that represents a panel you have defined in the NV9000-SE Utilities configuration that applies to your system. The name is arbitrary and represents either the remote operator or the remote workstation.

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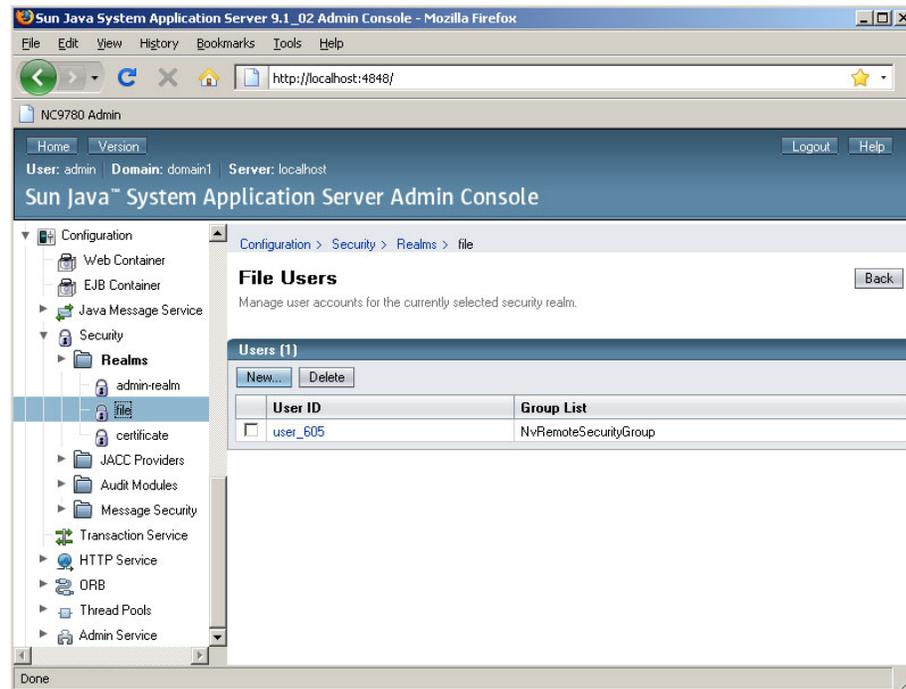
Software Setup in the EC9780

The group must be 'NvRemoteSecurityGroup'.

The password is arbitrary and will be used by the remote operator when he or she accesses the NV9000 system (through the EC9780).

The user ID and password should be convenient to the remote panel operator.

6 When you have entered these values, click 'OK'. The 'Users' window displays the new entry:



You can exit FireFox at this point, unless you want to add more users. Click 'New' again to add another user.

Optional Test Launch

This is a test launch of the user software. The initial launch at a remote site will create a desktop icon for the NV9605T remote panel and perform other minor related tasks. This test performs the launch on the EC9780.

Follow these steps for the test launch:

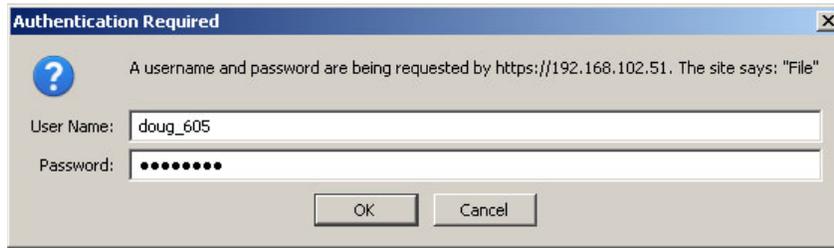
1 Launch Mozilla FireFox (again). Enter the secure URL

`https://internet address/launch`

where *internet address* is the address you assigned to the 'internetFacingIP' parameter. To match the preceding examples, this address would be `https://69.176.100.33/launch`.

▲ If you have accidentally delete the EC9780's security self-certificate, you will see security warnings. In this situation, you should restore the certificate.

You will be asked for your user ID and password.



Enter one of the user ID/password combinations you defined in the FireFox console.

Following this, the NV9605T application will also ask for your user ID and password.

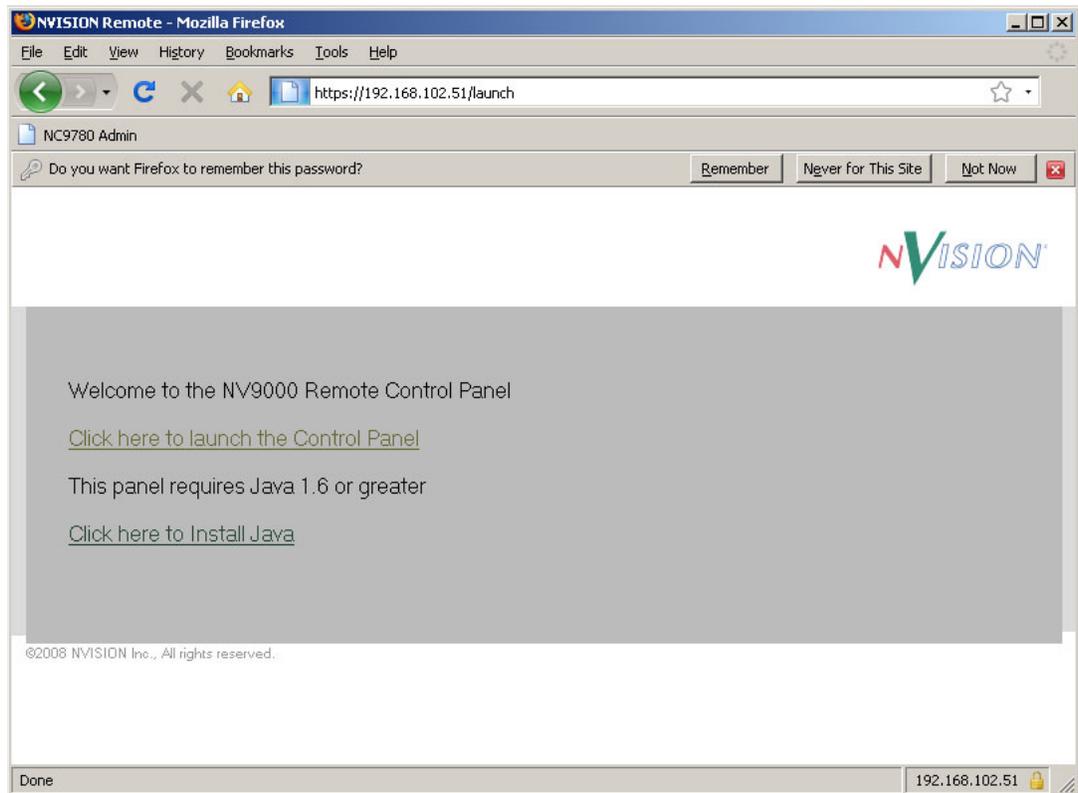


Enter the same ID and password.

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Software Setup in the EC9780

After that, Firefox displays a startup page:

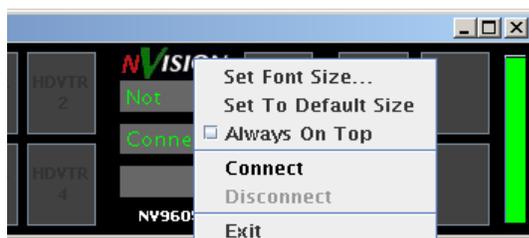


Because you are running this on the EC9780, Java has already been installed. Click 'Click here to launch the control panel'.

The control panel now appears. It first appears empty:



If, after a few seconds, the panel buttons do not change, right-click the word "NVISION." A context menu appears:

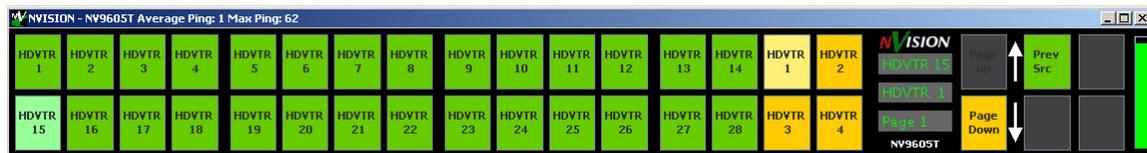


Click the 'Connect' command.

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Software Setup in the User's PC

The panel should fully illuminate with its configured buttons:



The initial launch of the NV9605T panel places a shortcut for the panel on the desktop and makes an entry for the panel in the Windows Start menu. Thereafter, double-clicking the shortcut launches the panel with only a single user ID/password check.

This process resembles what the remote user experiences the first time the software launches. Note that the remote operator might be using a browser other than FireFox.

The user does not have the ability to choose a configuration for this panel (as one does with the NV9605 virtual panel.) The configuration is defined in NV9000-SE Utilities and given to the user in the EC9780 software as discussed under [Define User IDs](#) on page 5.

If you have created a panel configuration for the NV9605T, you could test it at this point.

- ▲ You might note the time-out function (green bar) at the right end of the panel. It is described under [Using the NV9605T Panel](#) on page 14.

Software Setup in the User's PC

This simple process is performed by the remote operator. At a remote site, the process has different characteristics.

The remote operator should follow these steps to launch the panel initially:

- 1 Start a browser, e.g., Internet Explorer.

`https://internet address/launch`

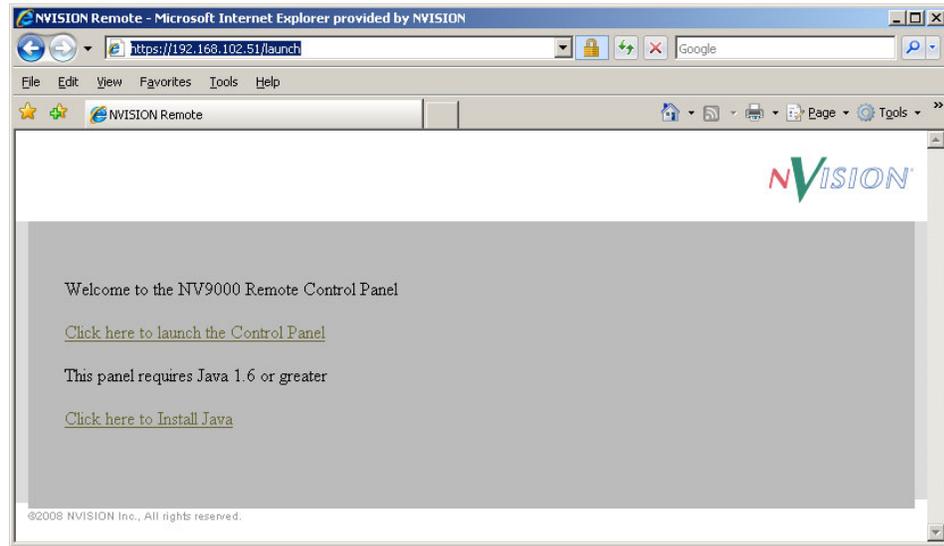
where *internet address* is the address you assigned to the 'internetFacingIP' parameter. To match the preceding examples, this address would be `https://69.176.100.33/launch`.

- ▲ If you have accidentally delete the EC9780's security self-certificate, you will see security warnings. In this situation, you should restore the certificate.

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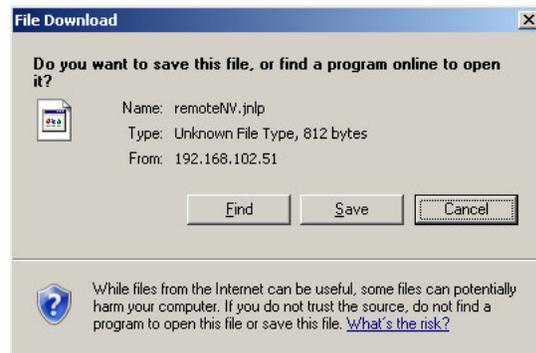
Software Setup in the User's PC

The launch panel appears:



The operator should click 'Click to launch the Control Panel'.

If the operator's PC does not have Java 1.6 installed, the operator should first click 'Click here to Install Java' and follow the simple instructions and procedure. If Java 1.6 is not installed, he or she will see a message resembling this one:



2 When the operator launches the control panel, several events occur.

First, a security warning appears. The operator should click 'Run'.



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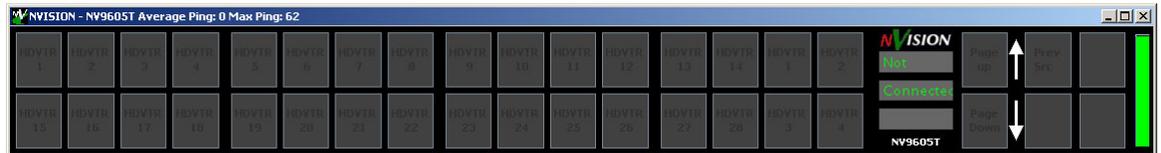
Software Setup in the User's PC

3 The panel (initially dark) appears and the authentication dialog appears:

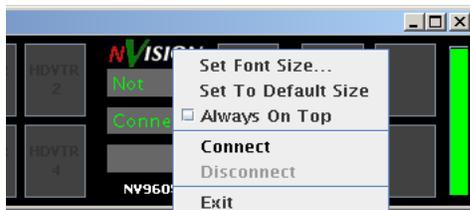


The operator must, of course, enter a valid user ID and password.

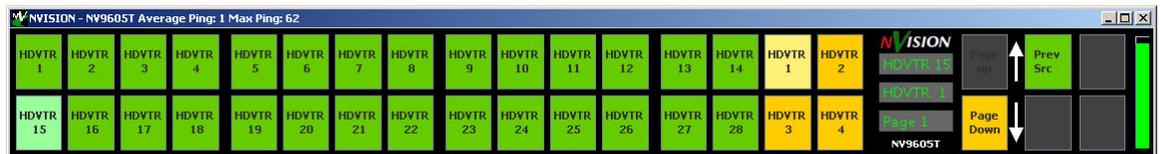
The control panel first appears empty (dark):



If, after a few seconds, the panel buttons do not change, the operator must right-click the word "NVISION." A context menu appears:



Click the 'Connect' command. The panel should fully illuminate with its configured buttons:



During the initial launch, the software installs a desktop icon and a Windows start menu entry for the remote panel.



The Start Menu entry is Programs > Nvision > Remote NV.

4 The remote panel launch is complete. After this first time, the operator may simply click the desktop icon to launch the control panel. (Authentication is still required.)

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Using the NV9605T Panel

Please note the following:

- The panel configuration is fixed—determined in the configuration of the EC9780. The user has no choice, except perhaps to negotiate with the you.
- Panel configurations include button definitions, panel modes (e.g., release mode, data routing mode) and a few other factors. For information, refer to the *NV9000-SE Utilities User's Guide*.

Using the NV9605T Panel

Much of the control panel function is pre-determined by you or someone in your organization prior to distribution to remote operators. You will have created one or more NV9605 configurations in NV9000-SE Utilities and will have assigned one of the configurations (identified by panel ID) to the remote user(s). The exact nature of your configuration is a matter of negotiation between remote panel users and you.

Although it is not possible to describe every configuration, it is possible to present some usage guidelines:

- There are four banks of 8 buttons (or 2 rows of 16 buttons). The NV9605T shows up to 4 pages of buttons. (That allows 128 buttons.) Use the page up and page down buttons to scroll through pages.
- Green buttons represent source devices; amber buttons represent destination devices.
- The panel has three 8-character status lines. The third shows the number of the selected page. The middle status line shows the selected destination. The top status line shows the source for the selected destination.
- A take is either a 1- or 2-button operation:
 - (1) Optionally press a destination button.
 - (2) Select source button.
- There are 4 function buttons to the right of the arrows. The functions are arbitrarily chosen from a fixed set at configuration.

See [Button Functions](#) on page 15 for a complete listing.
- To the right of the function buttons is a timeout indicator. The panel times out after 60 seconds of non-use. If it does time out, the operator must “reconnect” by clicking ‘Connect’ on the context menu (which is available by right-clicking anywhere in the black region or in the logo.)
- The panel can be resized. You can shrink it, but after a certain limit, the panel buttons get cropped away. There is a command in the context menu to restore the panel's default size.

Please refer to the NV9605 documentation in the *NV9000-SE Utilities User's Guide* for information. Also, please note:

- There are NV9605 configuration options that the remote operator cannot see. For example, there are 2 “release” modes and 3 “data routing modes” that might be in effect. The operator should be aware of these options, but might not be. In any case, the operator cannot directly control the options.
- A physical NV9605 has GPIO connectors (which are configurable) and whatever panel configuration the NV9605T uses will include those. Needless to say, the NV9605T does not have GPIO connectors and those configuration data are simply ignored.

The Context Menu

This is the context menu that appears when the operator right-clicks in blank area of the panel:



Commands in this menu include:

- Set Font Size...
The choices range from size 7 to size 15. The default is 11.
- Set to Default Size
If you have resized the panel, this command restores the panel to its default size (1155×155 pixels).
- Always on Top
This is a checkbox item—a Boolean option. When the box is checked, the panel remains in front of every other window on the operator's screen. Otherwise it does not.
- Connect
Click this command to connect the remote panel to the EC9780. You might have to reconnect using this command if your panel times out.
- Disconnect
Click this command to disconnect the remote panel from the EC9780.
- Exit
Click this command to terminate and close the panel.

Customers familiar with the NV9605V (virtual control panel) will notice that the context menu of the NV9605T is reduced.

Misc. Topics

Button Functions

There are two classes of buttons:

- Those that assign a dedicated function to a button directly, such as 'Default State' or 'Clear'.
- Those that define a variable function, such as 'Source' or 'Level'. With this type of assignment, additional selections are needed before the button can be used.

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Misc. Topics

These are the assignable button types. The 'Where' column indicates where the button type can be applied. "Right 4" means the right-most 4 function buttons. "Left 32" means the left-most 32 function buttons. (Remember that there are 4 pages of 32 buttons for a total of 128 functions.)

Type	Where	Description
Broadcast	Right 4	On the data (control) level, the button assigns one controlling device (master) to multiple controlled devices (slaves). Useful in dubbing and editing applications. Status is only reported from the first assigned slave.
Chop	Right 4	When supported by the router, the button is a toggle that enables and disables rapid switching of the selected destination device between the current source and the preset source. Used to test system timing.
Default State	Right 4	Reverts the panel to its pre-defined state.
Destination	Left 32	The button selects a destination device.
Destination Lock	Right 4	The button sets or clears a "lock" on the current destination device.
Destination Protect	Right 4	The button sets or clears a "protect" on the current destination device.
Free Source	Right 4	The button selects a phantom device that can be used to release (or free) devices on the data (control) level. A free source is also used with tielines to free the tieline for others to use.
Hold	Right 4	The button causes preset information to be retained after a take. Useful when routing the same source to many destinations.
Level	Left 32	Chooses a specific virtual level. When you assign a level button, an additional drop-down menus appears: virtual level. Choose one of the levels (or 'none') from the list.
Menu	Right 4	When pressed, the button brings up menus in the Display section of the panel that provide access to a variety of local panel options. <i>We strongly recommend that you do not create panel configurations that have menu buttons.</i>
None/All	Right 4	The button selects <i>all levels</i> or <i>no levels</i> as part of a switch. Levels available depend upon the selected destination device.
Previous Source	Right 4	The button presets the previously selected source to the currently selected destination. (The function does not apply to sources chosen at other panels.)
Salvo	Left 32	The button arms a salvo. A second press of the button executes the salvo.
Source	Left 32	The button selects a source device.
Source Master	Right 4	The button reverses the direction of data routing for devices used in data (control) level takes. For example, if the destination (controlling) device is the master and the source (controlled) device is the slave, press Source Master to reverse the roles.
Source Shift	Right 4	Every source button can represents 2 sources. The Source Shift button is a toggle that enables or disables the second source. Without a source shift button, the user is limited to the 64 first sources. (The Source Shift button acts like the Shift key or Caps Lock key on a keyboard.)
Undefined	Both sets	An <i>undefined</i> button remain unlit and unusable.

Please refer to the *NV9000-SE Utilities User's Guide* or other NV9000 documentation for more information.

Obtaining Security Certificates

We supply a self-certificate. We *do not* recommend that you purchase a real security certificate. (It is possible for you or for the remote operator to side-step a missing certificate.)

Technical Support

Miranda has made every effort to ensure that the equipment you receive is in perfect working order and that the equipment fits your needs. In the event that problems arise that you cannot resolve, or if there are any questions regarding this equipment or information about other products manufactured by Miranda, please contact your local representative or contact Miranda directly through one of the appropriate means listed here.

- Main telephone: 514-333-1772
Fax: 514-333-9828

In the Americas, call toll-free: +1-800-224-7882 (9 am to 9 pm EST)

In Europe, the Middle East, African or the UK, call +44 (0) 1491 820222 (9 am to 6 pm, GMT)

In France, call +33 1 55 86 87 88 (9 am to 5 pm, GMT + 1)

In Asia, call +852-2539-6987 (9 am to 5 pm, GMT + 8)

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- ▲ **Note:** Return Material Authorization (RMA) required for all returns.

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Technical Support