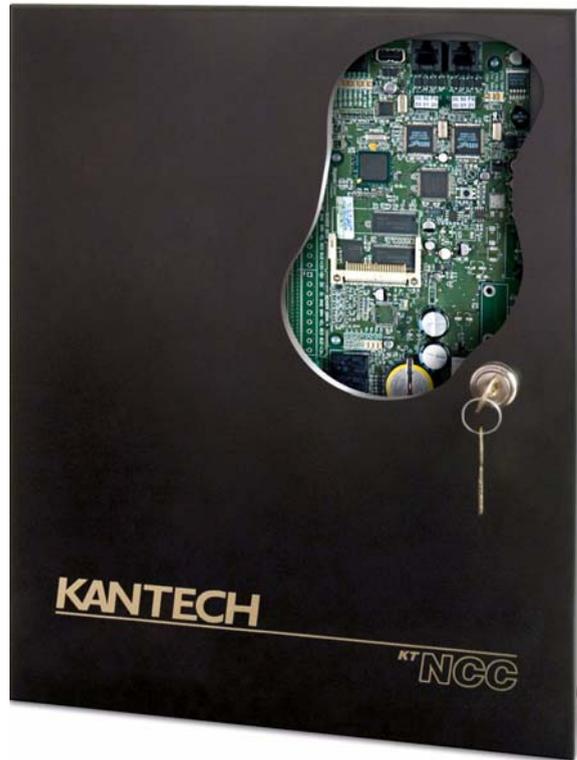


KT - NCC

Network Communications Controller



Quick Configuration Guide

DN1656-0606

KANTECH

Purpose of this Document

This Quick Setup Guide is intended for users who are already familiar with Kantech products and have some knowledge of network configuration.

This document is aimed at describing the configuration steps required to establish communication between EntraPass Global Edition and one or several KT-NCC communication controllers, taking into account your environment and your network architecture.

Note that this document does not replace the reference guide that came with the KT-NCC communication controller and the EntraPass Global Edition software.

Reference Documents

The following documents are reference documents for EntraPass Global Edition and the KT-NCC communications controller:

- *KT-NCC Network communication controller, Installation Manual*, DN1611.
- *EntraPass Global Edition Reference Manual* DN1316.
- *How to Migrate to the KT-NCC* DN1661.

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Introduction

Before you start installing KT-NCC hardware, you have to determine the configuration that best corresponds to your network architecture. This information is crucial for the good operation of the Kantech products that you will install.

We suggest that you contact the Network Administrator of the site where you will install the KT-NCC so that he can provide you with all network information that is essential for the good operation of the KT-NCC.

How to Proceed

First, determine the architecture of the site and the corresponding configuration scenario.

Next, you should:

- assemble the network information required to configure the KT-NCC;
- register and configure the KT-NCC in EntraPass Global Edition.

We have divided this manual so that, as soon as you determine the pertaining type of architecture and environment, you can follow the configuration instructions that correspond to your environment before connecting additional components.

Network Architectures

There are two types of network architectures: Local Area Network (LAN) and Wide Area Network (WAN). Each of these types of architecture has various possible configurations. In addition, you will notice that there are two constants in LAN and WAN network configuration: assigning the IP address for communication between the controllers and the server by assigning a fixed address or by letting the DHCP server to assign a dynamic IP address.

We suggest that you carefully read the following section in order to correctly select the scenario that best matches the environment where you will install the KT-NCC.

Local Area Network (LAN) Architecture

A local network enables users to communicate, exchange data and share resources in an internal network. A local network can be made up of a server and one or several controllers connected to the server through a hub or switch.

Whatever the case, an IP address has to be assigned so that the KT-NCC controllers and the EntraPass server can communicate. When the EntraPass server is used, a static or DHCP address can be assigned to establish the communication. When the Enterprise server is used, the DHCP server assigns a dynamic IP address.

Possible LAN Configurations

There are three possible ways of configuring the KT-NCC in EntraPass Global Edition:

- **Static IP Address:** You will use this type of configuration in an environment where the Network Administrator will determine the IP addresses for communication between the EntraPass server and the KT-NCC controller. The IP address will be configured using the KT-NCC Web Configuration tool.
- **EntraPass DHCP IP Address:** You will use this type of configuration in an environment where the EntraPass DHCP server assigns the reserved IP addresses automatically for communication with the KT-NCC controller(s). The IP address will be configured directly in the EntraPass Global Edition software.

Note: You will use the EntraPass DHCP server only when there are no other DHCP servers on the local network.

- **Enterprise DHCP IP Address:** You will use this type of configuration in an environment where the Enterprise DHCP server will assign IP addresses automatically for communication with the KT-NCC controller(s).

Note: Figure 1 on page 5 shows a LAN architecture with a static IP address; figure 2 shows a LAN architecture with an EntraPass DHCP server. Figure 3 on page 6 shows a LAN architecture with a Enterprise DHCP server.

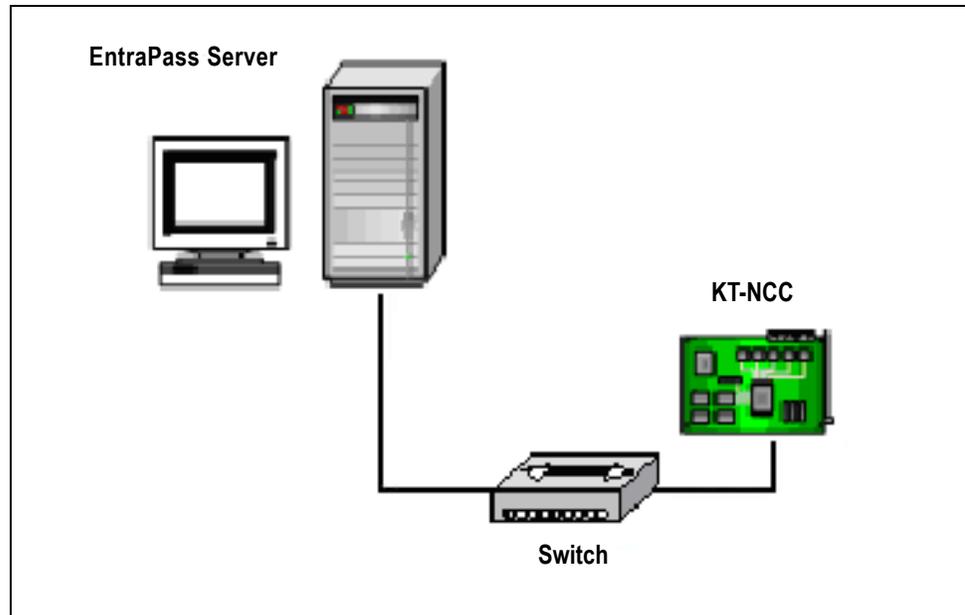


Figure 1: Local Network with EntraPass Server for Static IP Address

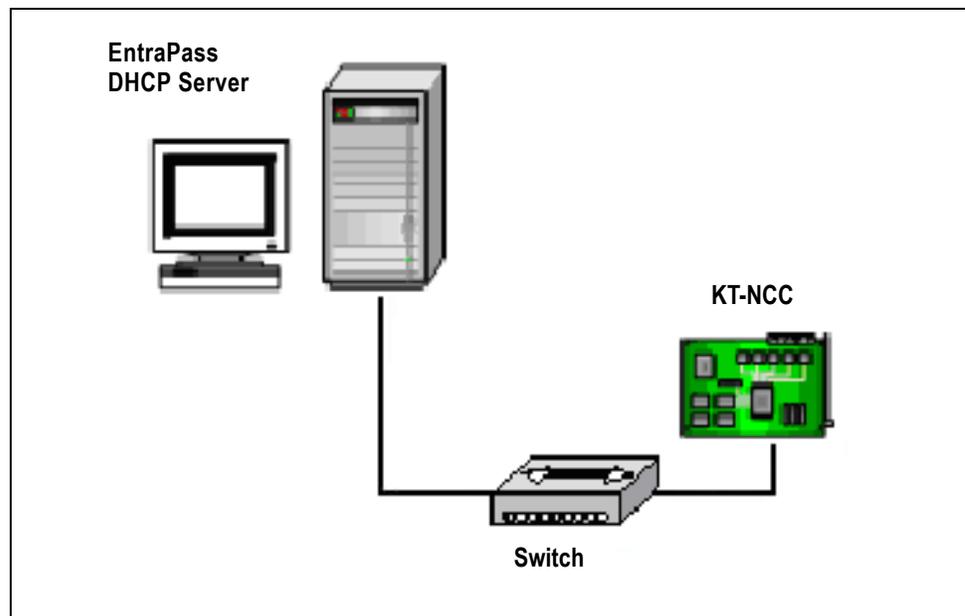


Figure 2: Local Network with EntraPass DHCP Server

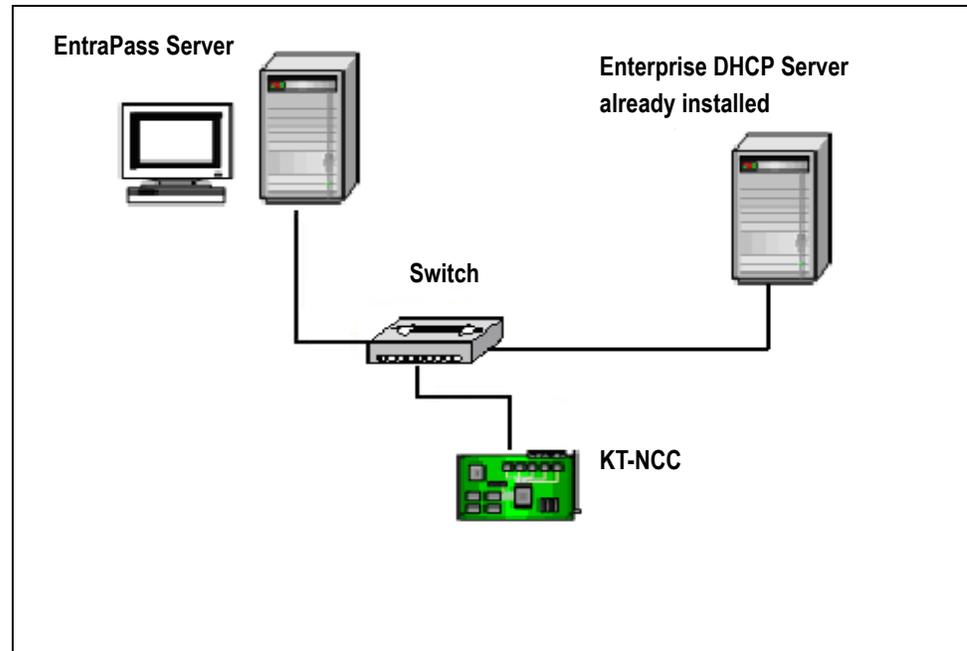


Figure 3: Local Network with Enterprise DHCP Server

Wide Area Network (WAN) Architecture

A wide area network is generally deployed on a long geographic distance and connects two or several local networks. The wide area network may use public networks to communicate and transmit data between the distant networks.

In a WAN, IP addresses can be reserved or the server could be left to assign IP addresses automatically (DHCP).

Note: We prefer the use of a static IP address for the KT-NCC since the routers have to be configured to forward ports with static addresses.

When sites that are distant from the network are protected by routers, a public address will be used for communication between the EntraPass server and the remote KT-NCC controller(s). The supplier of the public network or the Network Administrator should be able to provide you with this public IP address.

Figure 4 shows an example of an architecture in a WAN network.

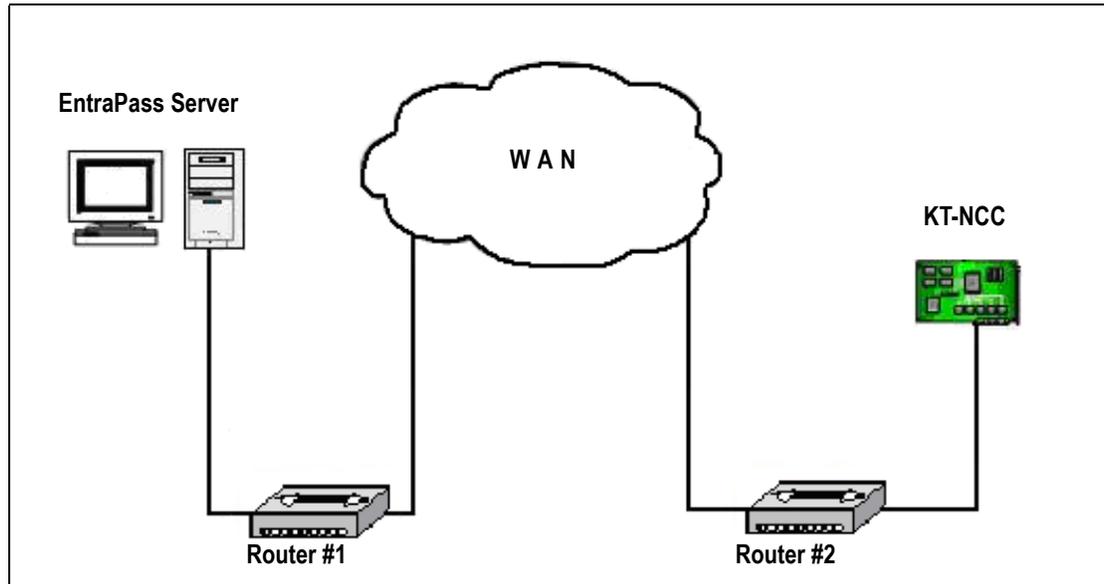


Figure 4: Wide Area Network (WAN)

Network Configuration Scenario

In the previous section, we determined that there are two types of network architecture: LAN and WAN, and that, for every type of architecture, we can either assign reserved IP addresses or let the DHCP server assign addresses dynamically.

Now that you have determined the appropriate configuration scenario, and before proceeding with the installation and configuration of the KT-NCC and the EntraPass Global Edition, you have to assemble the network information that is required to configure the KT-NCC controller.

To facilitate the task for you, we have prepared diagrams to illustrate every configuration scenario presented in the previous section. We have thus included a blank page and a table at the end of the manual that you can use to insert your specific configuration if it does not match the models shown.

Note: Please note that information such as the IP address entered in all dialog boxes in this manual are fictional. They are used only as examples.

It is important at this stage, if you have not already done so, to contact the Network Administrator where the KT-NCC will be installed to obtain as much information as possible so that you can enter it in the diagram that matches your network environment. We suggest that you always have a copy of the diagram close by, and keep a copy with your KT-NCC controller.

Default KT-NCC Parameters

You will use the following parameters when configuring the KT-NCC.

Ethernet Port #1

DHCP	Activated
MAC Addresses	00-50-F9-XX-XX-XX

- **Ethernet Port #1** is DHCP and is used to connect the KT-NCC to the EntraPass server.
- **Ethernet Port #1** is configured in DHCP mode by default. It is advisable to always use the default value **18710**. However, in an environment where you would have to do port forwarding and where you have to configure several KT-NCCs on the same network segment, ensure that every KT-NCC has a unique port number in order to avoid IP address conflicts.
- The **MAC Address** is found on the top right, under Ethernet Port #1 of the KT-NCC printed circuit. (See Figure 5: KT-NCC Connections Diagram on page 9.)

Ethernet Port #2

Static IP Address	192.168.0.2
Subnet Mask	255.255.255.0
MAC Addresses	00-50-F9-XX-XX-XX

- **Ethernet Port #2** is used to configure the KT-NCC using the *KT-NCC Web Configuration tool*. It can also be used to connect TCP/IP sites.
- The **MAC Address** is found on the top right, under Ethernet Port #2 of the KT-NCC printed circuit. (See Figure 5: KT-NCC Connections Diagram on page 9.)

KT-NCC Connections Diagram

The KT-NCC connections diagram in Figure 5 below shows the top section of the KT-NCC printed circuit. The diagram shows you the key items to which we will be referring when configuring the KT-NCC in the EntraPass Global Edition software.

It contains Ethernet Ports #1 and #2 on the top right, the RS-232 connection port on the top left, MAC addresses #1 and #2 under the corresponding Ethernet ports, as well as the Vital indicator (LED), under the RS-232 connection.

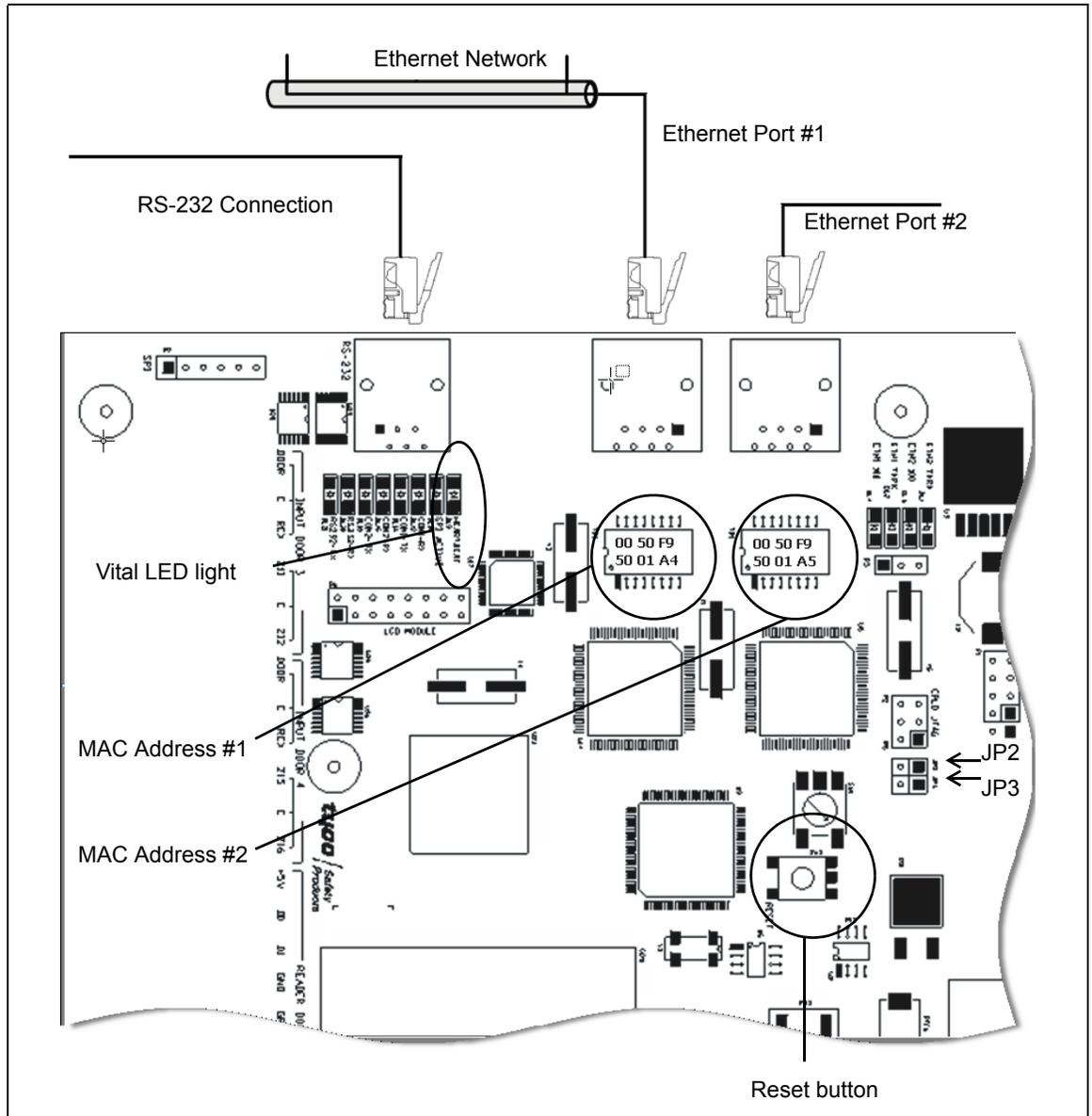


Figure 5: KT-NCC Connections Diagram

For further information on the installation of the KT-NCC, please refer to the *KT-NCC Manual - Network Communications Controller, Installation Manual DN1611*.

Flash Patterns of the LED Indicator

A blue LED indicator has been placed on the KT-NCC printed circuit enabling you to see the various states of the system. The indicator is located on top of the circuit, under the RS-232 connection (See Figure 5: KT-NCC Connections Diagram on page 9.)

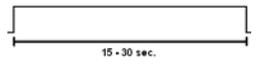
Pulses	Description	Patterns
1 flash/sec	KT-NCC is communicating with the server.	
Fast flashes	KT-NCC is no longer communicating with the server.	
Steady on (15-30 sec)	KT-NCC is starting up.	
Quick flashes (May last from 15-30 sec)	Preparing to reboot. DO NOT POWER DOWN OR RESET DURING THIS PROCESS.	
Quick flashes (May last up to 90 sec.)	Firmware update. DO NOT POWER DOWN OR RESET DURING THIS PROCESS.	
1 long flash/sec	KT-NCC is in factory reset mode.	
4 flashes on per sec/1 sec steady off	KT-NCC is in hard reset mode.	

Table 1: Vital LED Flash Patterns

Table of Communication Timings

A communication timing parameter can be configured for the KT-NCC in a WAN architecture. This parameter determines the communication frequency (latency period) between the EntraPass server and the KT-NCC. This parameter will be adjusted based on the complexity and size of the network. For example, when the network architecture is simple, a communication timing will be set to faster. On the other hand, when the network architecture is large and complex a slower communication timing will be more appropriate. It is important for the communication timing to be well configured in order to avoid communication breakdowns. Once more, we suggest that you consult the Network Administrator in order to measure the complexity of the network architecture where you will install the KT-NCC.

The communication timing parameter is found in the Gateway dialog, under the **Ethernet Port #1** tab of the EntraPass Global Edition.

Parameter	Communication timing
Very fast	Latency period: max 300 ms
Fast	Latency period: max 800 ms
Average	Latency period: max 1500 ms
Slow	Latency period: max 2500 ms
Very slow	Latency period: max 4000 ms
Extremely slow	Latency period: max 6000 ms

Table 2: KT-NCC Communication Timings

Before Connecting and Configuring the KT-NCC

- Before connecting the KT-NCC to the Entrapass network, ensure that you have version 3.17 or later of the EntraPass Global Edition software.
- Use an appropriate network cable (minimum CAT-5) to connect the KT-NCC to the network that houses the EntraPass server Global Edition.

Configuring a Static IP Address (LAN)

You have determined that communication between the EntraPass server and the KT-NCC controller(s) will be done through a static address. These addresses will be configured using the KT-NCC Web Configuration tool for communication between the EntraPass server and the KT-NCC controller(s).

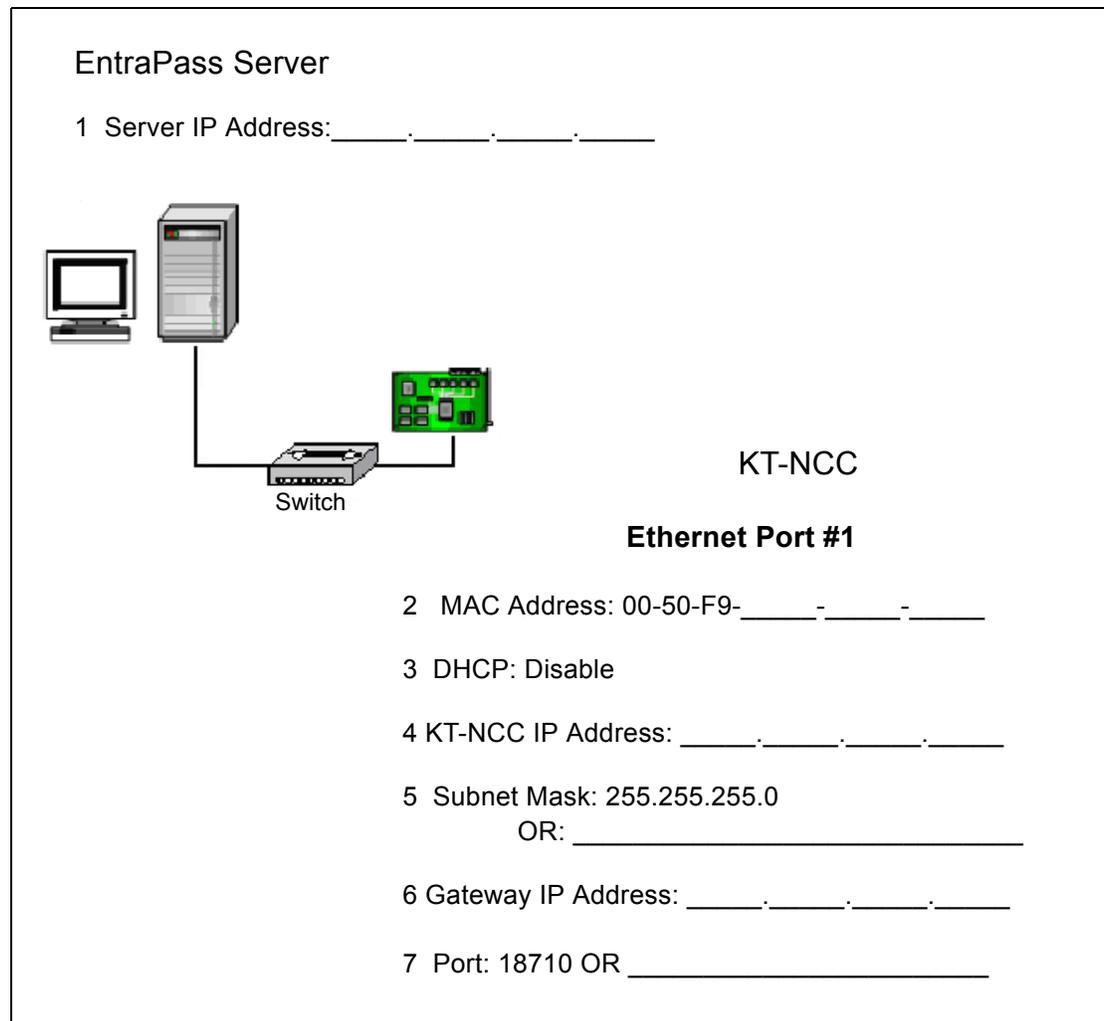


Figure 6: Static IP Address Configuration Diagram - LAN

To Configure a Static Address (LAN)

Six steps are required to configure the KT-NCC in a local network using a static address:

- Initialize the KT-NCC in factory reset mode;
- connect the KT-NCC to a PC;
- assign the static IP address of the KT-NCC using the KT-NCC Web Configuration tool;
- register the KT-NCC on the EntraPass Global Edition server;
- configure the KT-NCC in EntraPass Global Edition;
- check the connection status.

Initializing the KT-NCC in Factory Reset Mode

A factory reset will erase the entire configuration of the KT-NCC, including the IP address. It is recommended to reinitialize the KT-NCC before starting the configuration.

1. Use needle nose pliers to remove jumpers **JP2** and **JP3**. (see Figure 5: KT-NCC Connections Diagram on page 9).
2. Press **Reset**.
3. Reinstall jumpers **JP2** and **JP3**.

Connecting the KT-NCC to the Network

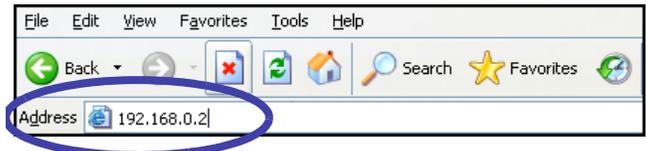
1. Connect the configuration PC to Ethernet Port #2 of the KT-NCC.
 - If your KT-NCC has to be connected directly to the computer where the Web configuration will be done, you should use a crossover network cable to connect it from Ethernet port #2 to the computer.
- OR
- If you use a switch to communicate between the KT-NCC and the computer where the Web configuration will be done, you should connect an appropriate network cable (at least CAT-5) from Ethernet port #2 to the switch.

Assigning the KT-NCC Static IP Address

To be able to assign a static address to the KT-NCC, use the KT-NCC Web Configuration tool. To do this, you have to configure the configuration computer with a valid IP address. It is advisable to use the address 192.168.0.5 and the subnet mask 255.255.255.0.

Note: NEVER use the address 192.168.0.2 to configure the IP address of the PC. This address is assigned by default to Ethernet port #2 of the KT-NCC.

1. Start Internet Explorer.
2. In the **Address** field, enter the IP address of the KT-NCC; that is, 192.168.0.2. (No. 4 in the diagram on page 12).
3. Press **Enter**.



4. The KT-NCC Web Configuration page will appear on the screen.

Note: Once the KT-NCC is registered on the server, the Web configuration page will no longer be accessible.

KT-NCC Configuration page - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://192.168.0.2/

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Access Control and Integrated Systems

KT-NCC Web Configuration

EntraPass Server

EntraPass Server - IP Address	10	40	100	228
EntraPass Server - Domain name				
DNS Address	10	40	195	245
Domain name resolution	0			

Ethernet #1

MAC Address	00-50-F9-50-01-6E			
DHCP	Disable			
Local IP Address	192	168	0	100
Subnet Mask	255	255	255	0
Gateway address	192	168	0	254
Port	18710			

Ethernet #2

MAC Address	00-50-F9-50-01-6F			
DHCP	Disable			
Local IP Address	192	168	0	2
Subnet Mask	255	255	255	0

Save configuration to KT-NCC

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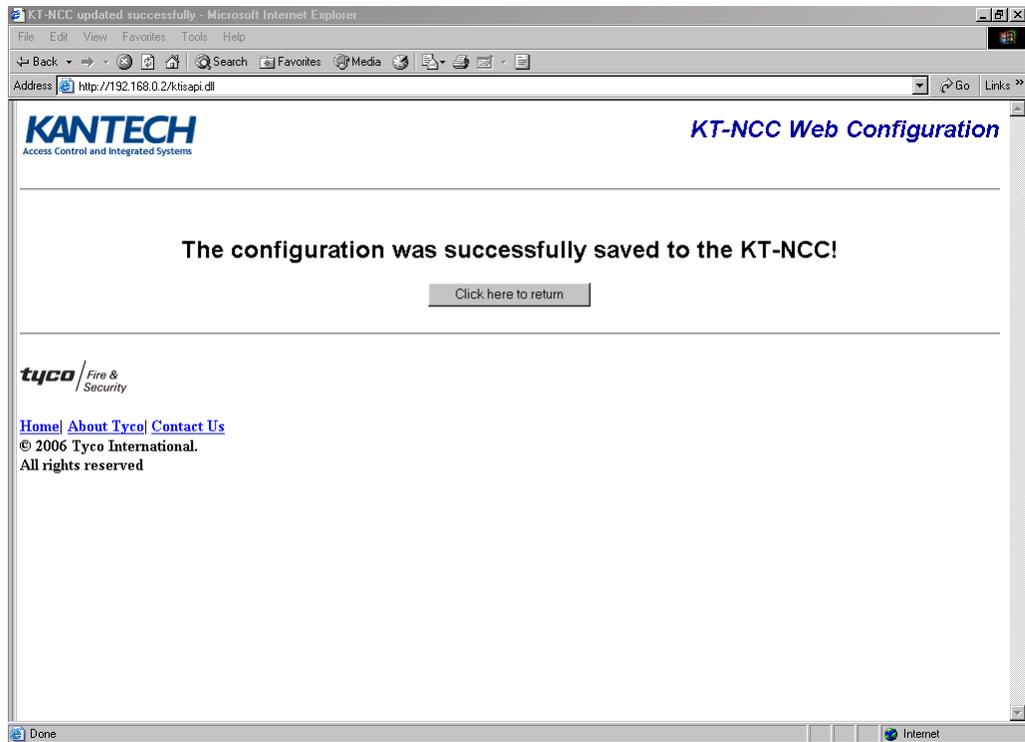
Done Internet

5. In the **EntraPass Server** section, enter the IP address of the EntraPass server (No. 1 in the diagram on page 12).

6. In the **Ethernet #1** field:

- the **MAC Address** of the KT-NCC (no. 2 in the diagram on page 12) is already configured. The MAC address is found on the top right of the KT-NCC circuit, under Ethernet Port #1. (See Figure 5: KT-NCC Connections Diagram on page 9.)
- Ensure that the **DHCP** parameter is disabled.
- Enter the **IP address** of the KT-NCC that you received from the Network Administrator. (No. 4 in the diagram on page 12).
- Enter the subnet mask of the KT-NCC 255.255.255.0. (No. 5 in the diagram on page 12).

- The **Port** number is already configured. It is advisable to always use the value **18710** by default.
7. The fields in the section **Ethernet #2** are already configured. You do not have to change these parameters.
 8. Click **Save Configuration to KT-NCC**. A message showing that the configuration is saved and that the KT-NCC is reinitializing will appear on the screen.



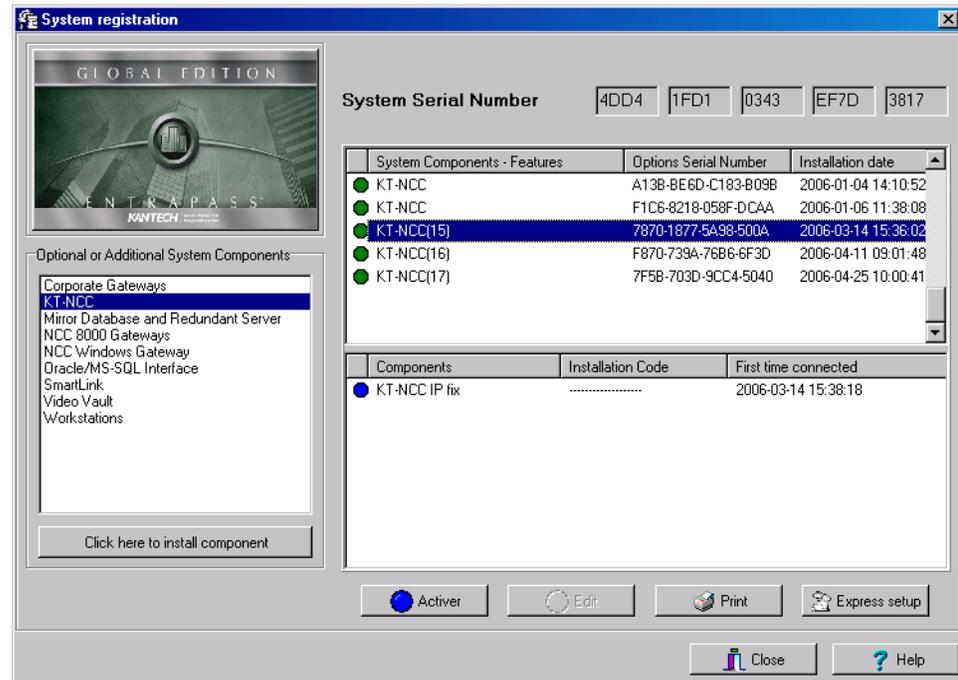
9. Click **Click here to return**. The main window of the KT-NCC Web Configuration tool will reappear on the screen. Meanwhile, the KT-NCC will reset.
 - The blue pilot light (Vital LED) of the KT-NCC will blink quickly to signal that the controller is in reset mode.
 - The blue pilot light (Vital LED) of the KT-NCC will remain lit for 15 seconds to signal that the controller is in startup mode.
 - The blue pilot light (Vital LED) of the KT-NCC will blink 4 times to signal that the controller has reset but it is not yet registered on the EntraPass server. (Hard reset mode.)

Note: For details, refer to *Flash Patterns of the LED Indicator* on page 10.

10. Close the *KT-NCC Web Configuration* window.
11. Disconnect the cable of Ethernet port #2.
12. Connect the network cable on Ethernet port #1 of the KT-NCC.

Registering the KT-NCC on the EntraPass Global Edition Server

1. In the application Entrapass Global Edition - Server, open the System Registration window found under the **Connection** tab.



Note: It is not necessary to contact the Kantech Technical Support department to register the KT-NCC in EntraPass Global Edition.

2. In the section **Optional or Additional System Components**, select **KT-NCC**.
3. **Click here to install component**. The list on the right will display the new KT-NCC preceded by a blue dot.
4. Select the new KT-NCC component from the list. The **Activate** button will activate.
5. Click **Activate** to save the KT-NCC in EntraPass Global Edition.
 - The blue dot will change to green and the new KT-NCC controller will be added to the list of components at the top of the screen.
 - The **Edit** button will activate to enable you to configure the security options and rename the KT-NCC.
6. Close the System registration window.

Configuring the KT-NCC in EntraPass Global Edition

1. In the application EntraPass Global Edition - Workstation, open the Gateway window that is found under the **Devices** tab.
2. From the **EntraPass Application** drop-down list, select the KT-NCC that you just saved in EntraPass.
3. From the **Gateway(s)** drop-down list, select the KT-NCC gateway that you would like to configure.
 - You can rename the KT-NCC gateway in the **French** and **English** fields.

4. Select the **General** tab:

The screenshot shows the 'Gateway' configuration window with the 'General' tab selected. The 'Entrapass application' is set to 'KT-NCC # 12' and the 'Gateway' is '01 - KT-NCC Site #2'. The language is set to 'English' with '01 - KT-NCC Site #2' as the site identifier. The 'KT-NCC Time Zone Configuration' section shows 'Time zone setting' as '(GMT-05:00) Eastern Time (US & Canada)' and the checkbox 'Automatically adjust clock for daylight saving changes' is checked. The 'Number of controller loops' is set to 1. The 'Video view' and 'Graphic' fields are empty.

- Enter the **Number of controller loops** that connect to the KT-NCC. The system supports up to 7 loops (2 RS-485 loops, 1 RS-232 loop and 4 IP loops).
- Configure the **KT-NCC Time Zone Configurations**
- When necessary, check the box **Automatically adjust clock for daylight saving changes**.

Note: It is advisable to check with the Network Administrator if the site where you are installing the KT-NCC is situated in an area where daylight saving time is in effect.

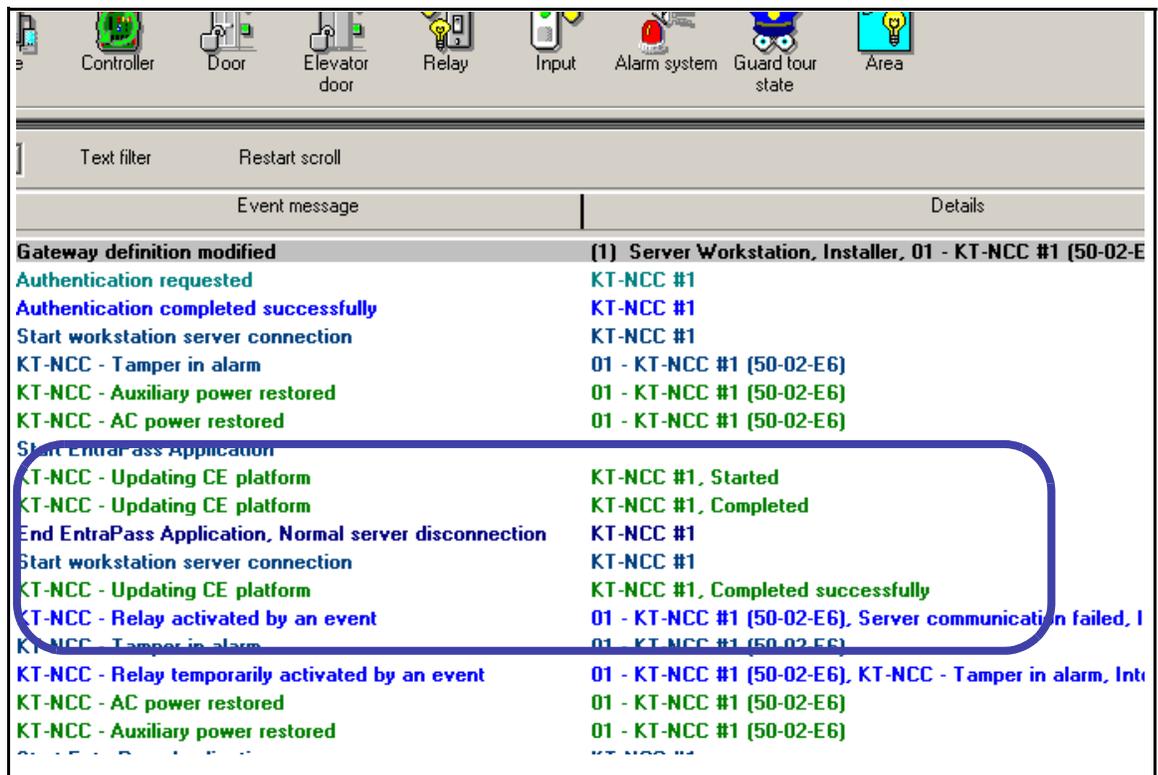
5. Select the **Ethernet Port #1** tab.

The screenshot shows the 'Gateway' configuration window with the 'Ethernet port #1' tab selected. The 'MAC address' is '00-50-F9-50-01-6E'. The 'Ethernet port #1' checkbox is checked. Under 'Obtain an IP Address Automatically', the radio button 'Use the Following IP Address' is selected. The 'IP address' is '192.168.1.1', 'Subnet mask' is '255.255.255.0', and 'Gateway (Router)' is '0.0.0.0'. The 'Port' is '18710'. Under 'Enable broadcast assignment', the radio button 'Local IP address (LAN)' is selected. The 'Communication timing' is set to 'Average (Maximum response time 1500 ms)'.

- Enter the **MAC Address** of the KT-NCC. (No. 2 in the diagram on page 12).
- Check the box **Ethernet port #1**.

- Select the option **Use the Following IP Address**.
 - Enter the **IP address** of the KT-NCC (No. 4 in the diagram on page 12).
 - Enter the **Subnet mask** address (No. 5 in the diagram on page 12).
 - When necessary, enter the KT-NCC **Gateway address** that the Network Administrator provided you (No. 6 in the diagram on page 12).
 - Port **18710** is automatically assigned to the KT-NCC by default. It is advisable not to modify it.
 - The case **Enable broadcast assignation** is selected by default. Leave this option as is.
 - Select the appropriate **Communication timings**. (Consult Table 2 on page 11).
6. Click the save icon and close the Gateway dialog.

At this stage, the system checks if the version number of the software and the controller are the same. If not, the system will automatically update the KT-NCC firmware. Three messages will appear on the EntraPass workstation list of messages to indicate that the update has been completed.



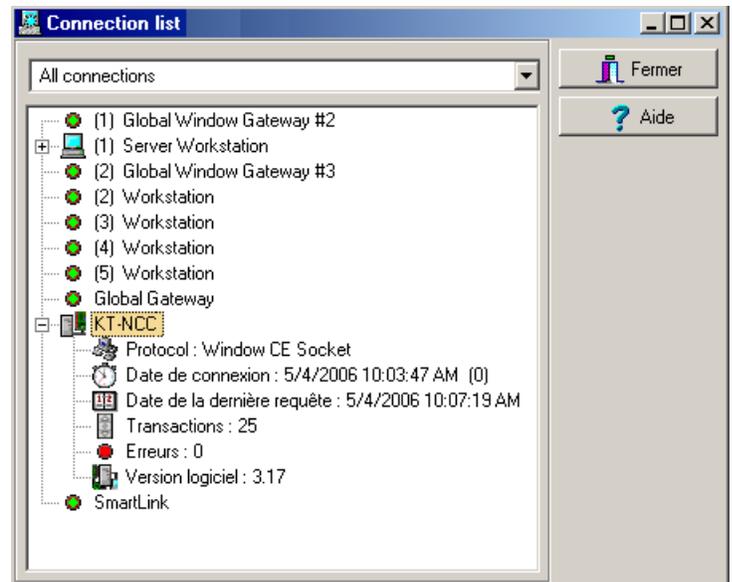
The messages to lookout for are:

- KT-NCC Update of platform CE - KT-NCC, Started
- KT-NCC Update of platform CE - KT-NCC, Completed
- KT-NCC Update of platform CE - KT-NCC, Completed successfully.

Verifying the Connection Status

1. In the application EntraPass Global Edition - Server, open the Connection list that is found under the **Connection** tab, and check the connection status of the KT-NCC that you just saved.

The next step will consist in configuring the system loops. To do so, please consult Chapter 4 of the *EntraPass Global Edition Reference Guide* DN1316.



Configuring the EntraPass DHCP IP Address (LAN)

You have determined that the EntraPass DHCP server will automatically assign IP addresses for communication with the KT-NCC controller(s).

IMPORTANT : You will use the EntraPass DHCP server only when there is no other DHCP server on the local network in order to avoid serious network conflicts.

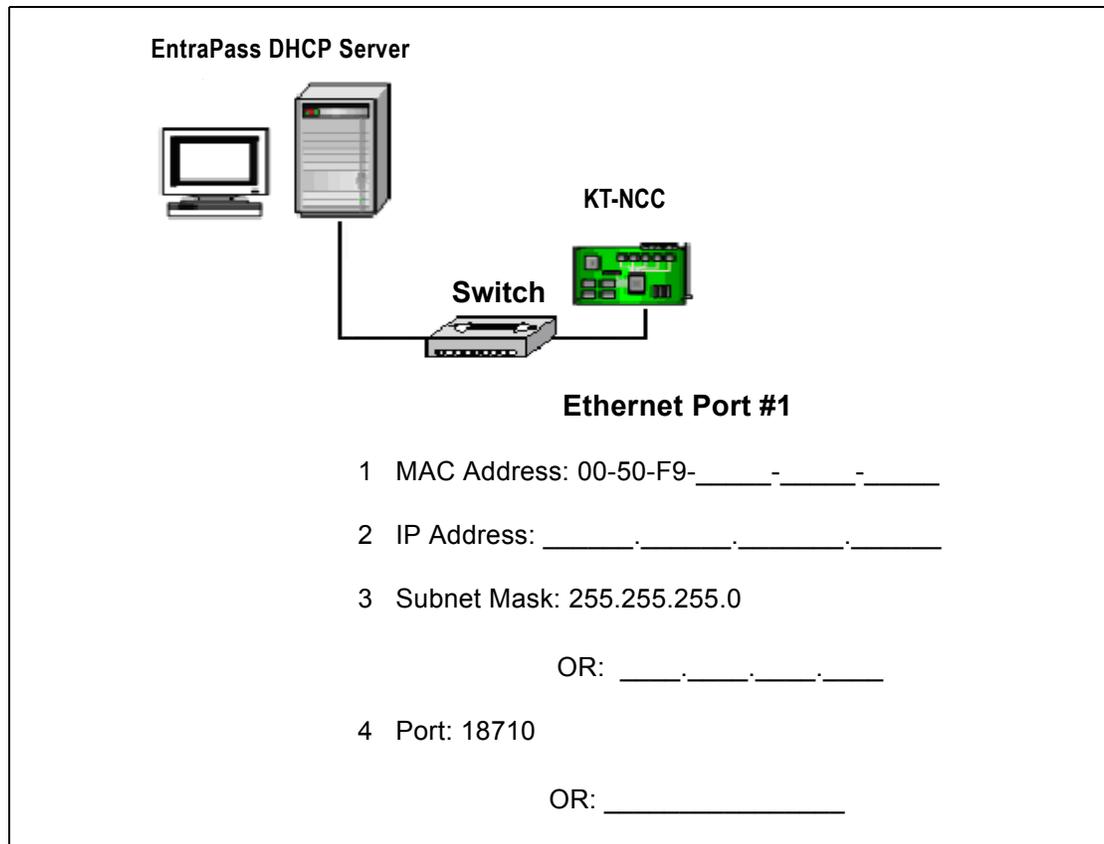


Figure 7: Configuration Diagram of the EntraPass DHCP IP Address - LAN

To configure an EntraPass DHCP Address (LAN)

Six steps are required to configure the KT-NCC in a local network with a DHCP address:

- Initialize the KT-NCC in factory reset mode;
- register the KT-NCC on the EntraPass Global Edition server;
- activate the EntraPass DHCP;
- configure the KT-NCC in EntraPass Global Edition;
- connect the KT-NCC to the network;
- check the connection status.

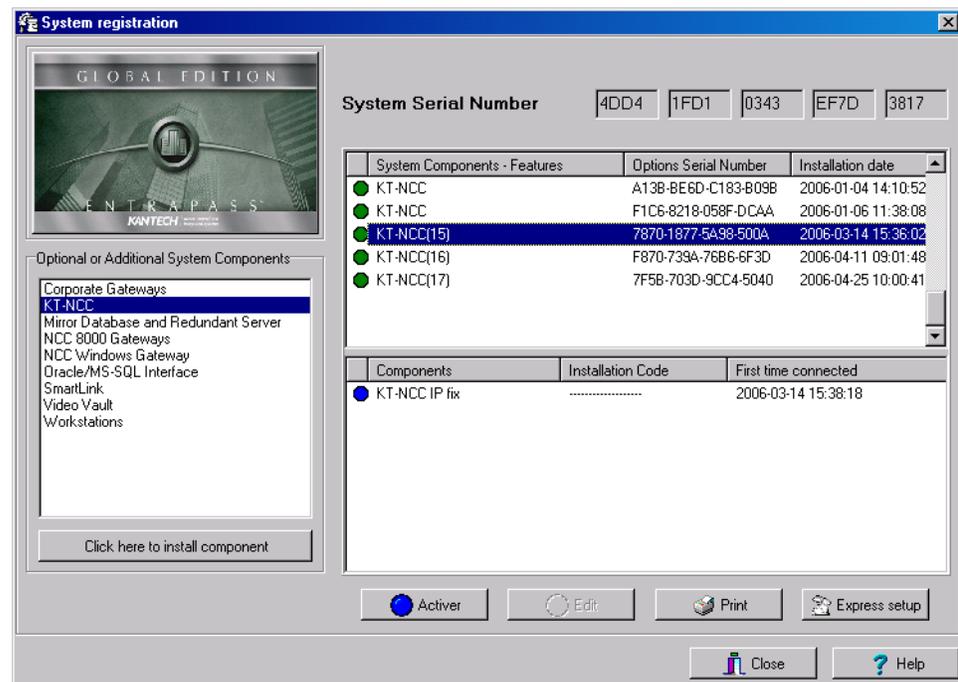
Initializing the KT-NCC in Factory Reset Mode

A factory reset will delete the entire configuration of the KT-NCC, including the IP address. It is advisable to reinitialize the KT-NCC before starting the configuration.

1. Use needle nose pliers to remove jumpers **JP2** and **JP3** (see Figure 5: KT-NCC Connections Diagram on page 9).
2. Press **Reset**.
3. Reinstall jumpers **JP2** and **JP3**.

Registering the KT-NCC to the EntraPass Global Edition Server

1. In the application EntraPass Global Edition - Server, open the System registration window that is found under the **Connection** tab.

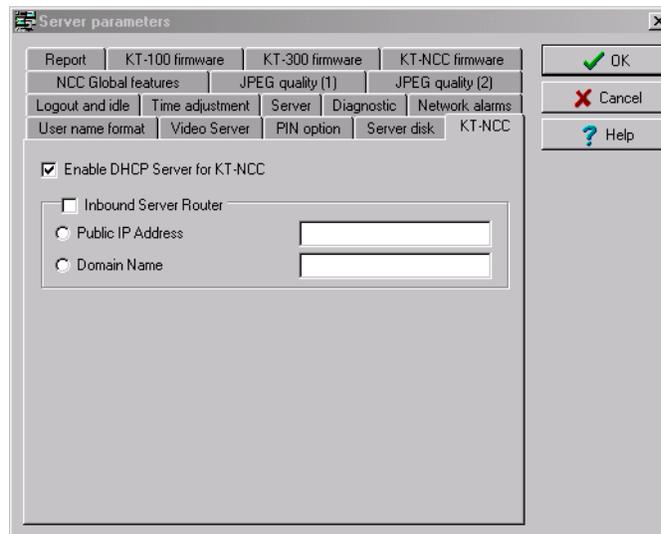


Note: It is not necessary to contact the Kantech Technical Support department to register the KT-NCC in EntraPass Global Edition.

2. In the section **Optional or Additional System Components**, select **KT-NCC**.
3. **Click here to install Component**. The list on the right will display the new KT-NCC preceded by a blue dot.
4. Select the new KT-NCC component from the list. The **Activate** button will activate.
5. Click **Activate** to save the KT-NCC in EntraPass Global Edition.
 - The blue dot will change to green and the new KT-NCC controller will be added to the list of components at the top of the screen.
 - The **Edit** button will activate to enable you configure the security options and rename the KT-NCC.
6. Close the System registration window.

Activating the EntraPass DHCP

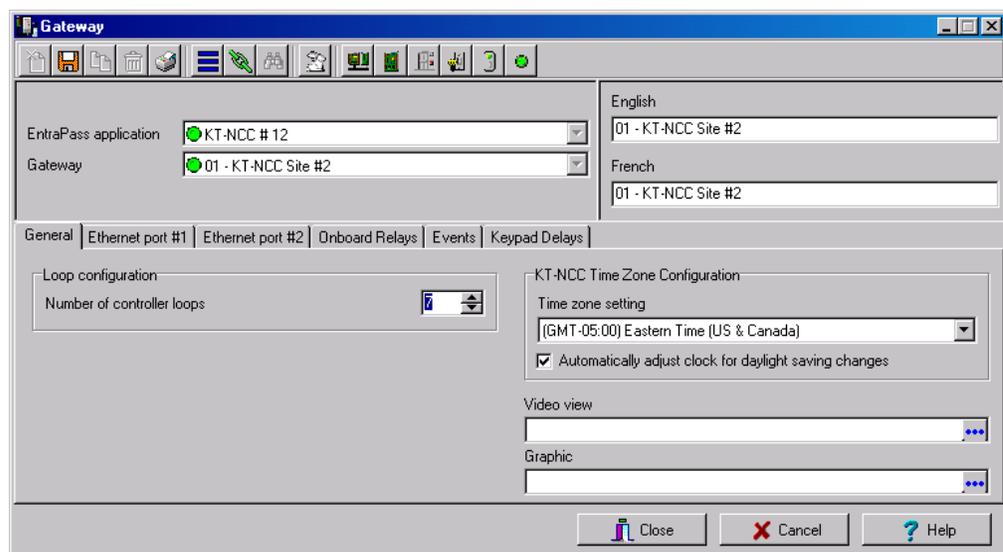
1. In the application EntraPass Global Edition - Server, click the Server parameters icon found under the **Options** tab to open the Server parameters window.



2. Under the **KT-NCC** tab, check the box **Activate DHCP server for KT-NCC**.
3. Click **OK** to save the configuration and close the dialog.

Configuring the KT-NCC in EntraPass Global Edition

1. In the application EntraPass Global Edition - Workstation, open the Gateway window under the **Devices** tab.

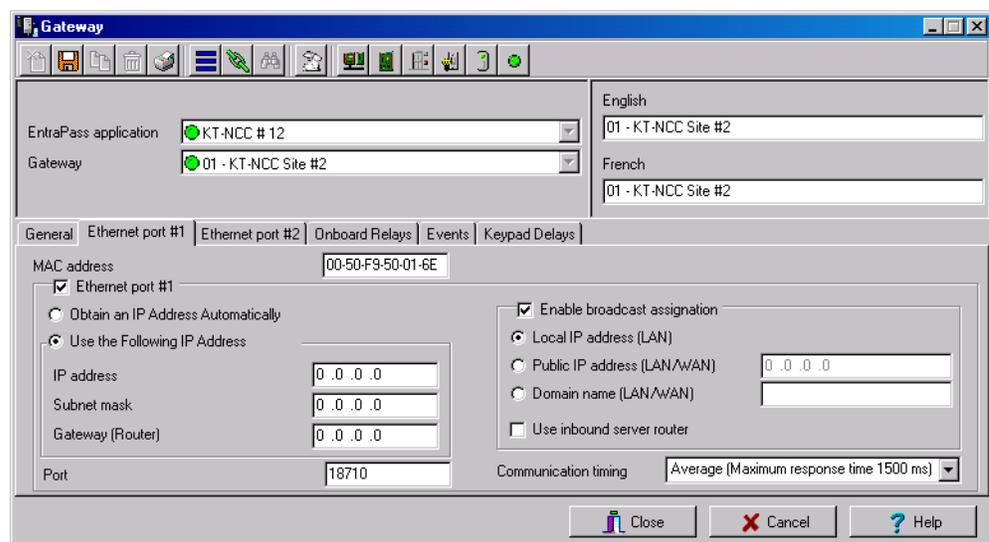


2. From the **EntraPass Application** drop-down list, select the KT-NCC that you just saved in EntraPass.

3. From the **Gateway(s)** drop-down list, select the KT-NCC gateway that you would like to configure.
 - You can rename the KT-NCC gateway in the **French** and **English** fields.
4. Select the **General** tab:
 - Enter the **Number of controller loops** that connect to the KT-NCC. The system supports up to 7 loops (2 RS-485 loops, 1 RS-232 loop and 4 IP loops).
 - If necessary, check the box **Automatically adjust clock for daylight saving changes**.

Note: It is advisable to check with the Network Administrator if the site where you are installing the KT-NCC is situated in an area where daylight saving time is in effect.

5. Select the **Ethernet Port #1** tab. The section **Use the Following IP Address** will be empty.



- Enter the **MAC Address** of the KT-NCC. (No. 1 in the diagram on page 20).
 - Check the box **Ethernet port #1**.
 - Select the option **Use the following IP Address Automatically**.
 - Enter the KT-NCC **IP Address** (No. 2 in the diagram on page 20).
 - Enter the KT-NCC **Subnet mask** (No. 3 in the diagram on page 20).
 - Port **18710** is automatically assigned to the KT-NCC by default. It is advisable not to modify it.
 - The box **Enable broadcast assignment** is selected by default. Leave this option as is.
 - Select the appropriate **Communication timing**. (Consult Table 2 on page 11).
6. Click the save icon.
 7. Close the Gateway dialog.

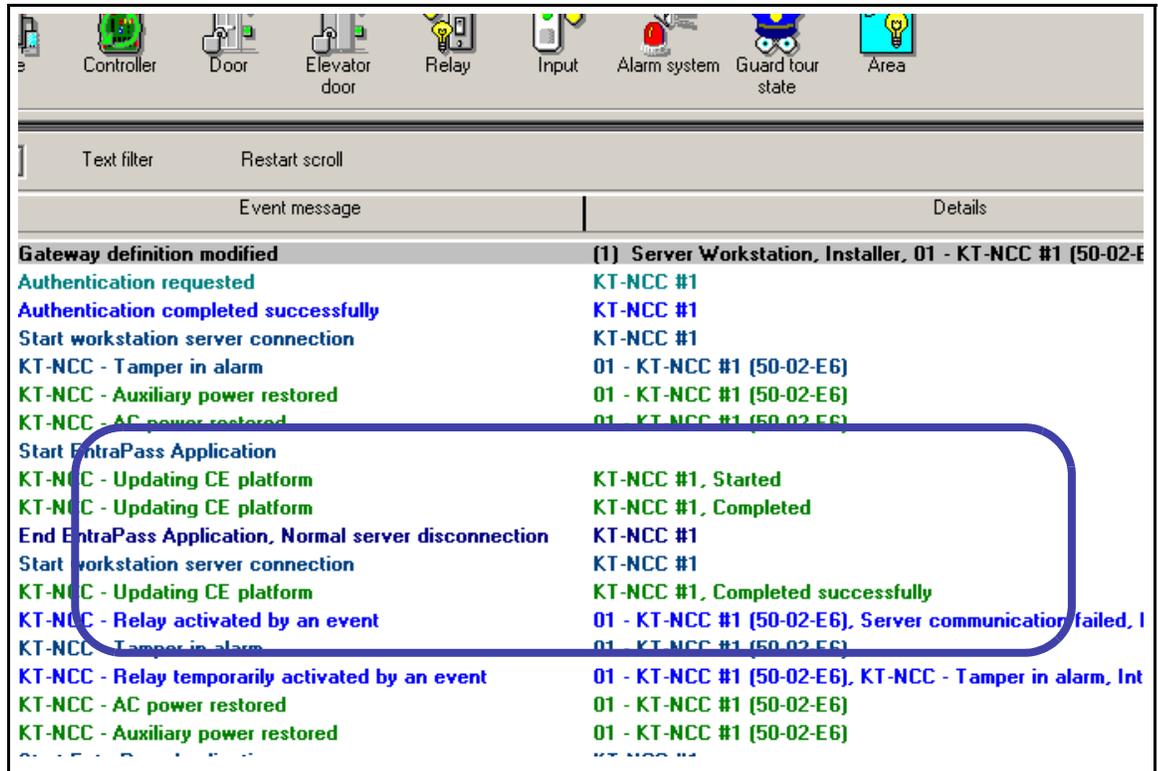
Connecting the KT-NCC to the Network

1. Connect the KT-NCC to the network via KT-NCC Ethernet port #1. The KT-NCC will place a request to obtain the IP address of the Entrapass DHCP server automatically.
 - The blue pilot light (Vital LED) of the KT-NCC will blink quickly to signal that the controller is in reset mode.
 - The blue pilot light (Vital LED) of the KT-NCC will remain lit for 15 seconds to signal that the controller is in startup mode.

- The blue pilot light (Vital LED) of the KT-NCC will blink once/second to signal that it is communicating with the server.

Note: For details, refer to *Flash Patterns of the LED Indicator* on page 10

At this stage, the system checks if the version number of the software and controller are the same. If not, the system updates the KT-NCC firmware automatically. Three messages will appear on the list of messages of the EntraPass workstation to indicate that the update has been completed.



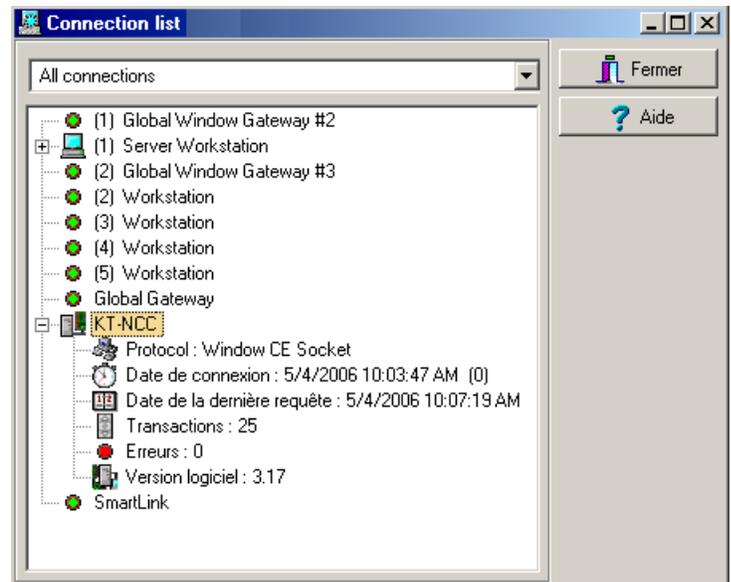
The messages to lookout for are:

- KT-NCC Update of platform CE - KT-NCC, Started
- KT-NCC Update of platform CE - KT-NCC, Completed
- KT-NCC Update of platform CE - KT-NCC, Successfully completed.

Verifying the Connection Status

1. In the application EntraPass Global Edition - Server, open the List of connections that is found under the **Connection** tab, and check the connection status of the KT-NCC that you just saved.

The next step will consist in configuring the system loops. For this, please consult Chapter 4 of the *EntraPass Global Edition Reference Guide* DN1289.



Configuring a Enterprise DHCP IP Address (LAN)

You have determined that the Enterprise DHCP server will assign IP addresses automatically for communication with the KT-NCC controller(s).

Note: We suggest the use of a reserved IP address for the MAC address of the KT-NCC.

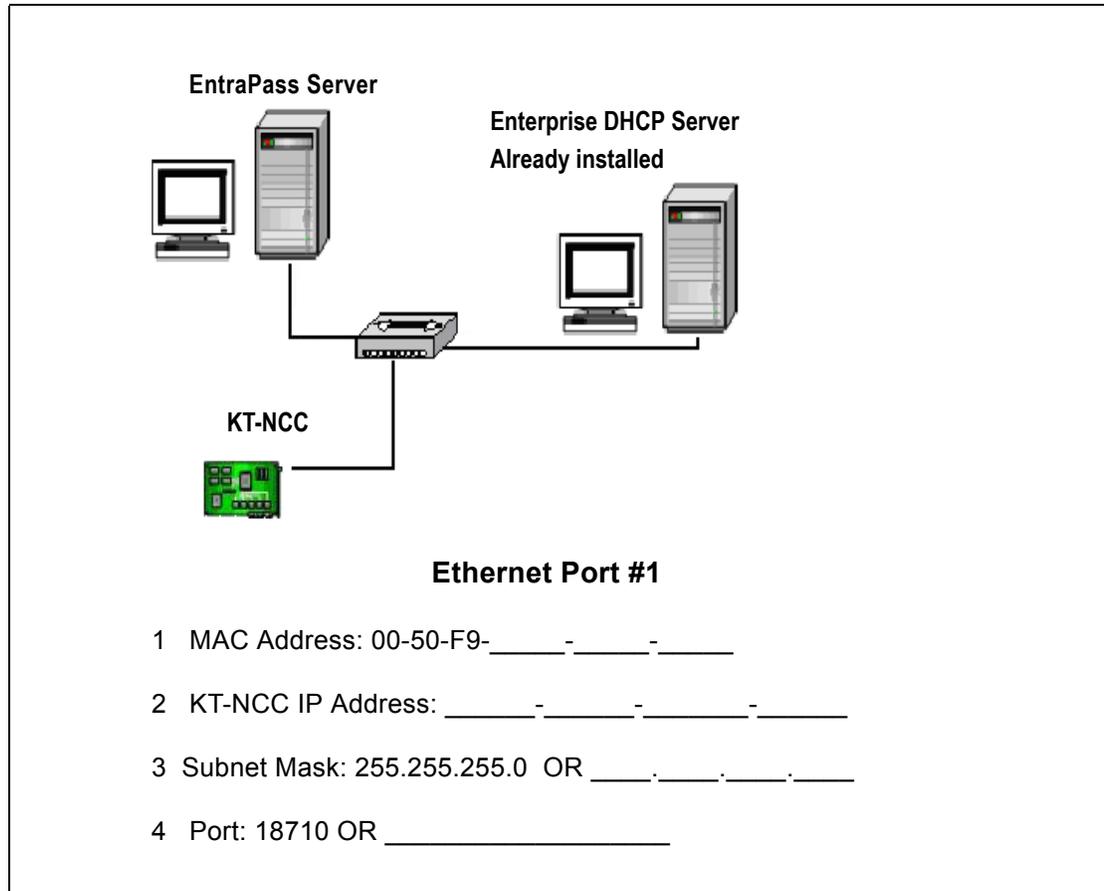


Figure 8: Configuration Diagram for Enterprise DHCP IP Address - LAN

To configure a Enterprise DHCP address (LAN)

Five steps are required to configure the KT-NCC in a local network with a DHCP address:

- Initialize the KT-NCC in factory reset mode.
- connect the KT-NCC to the network.
- register the KT-NCC to the EntraPass Global Edition server.
- configure the KT-NCC in EntraPass Global Edition.
- check the connection status.

Initializing the KT-NCC in Factory Reset Mode

A factory reset will delete all configurations of the KT-NCC, including the IP address. We recommend that you reinitialize the KT-NCC before starting the configuration.

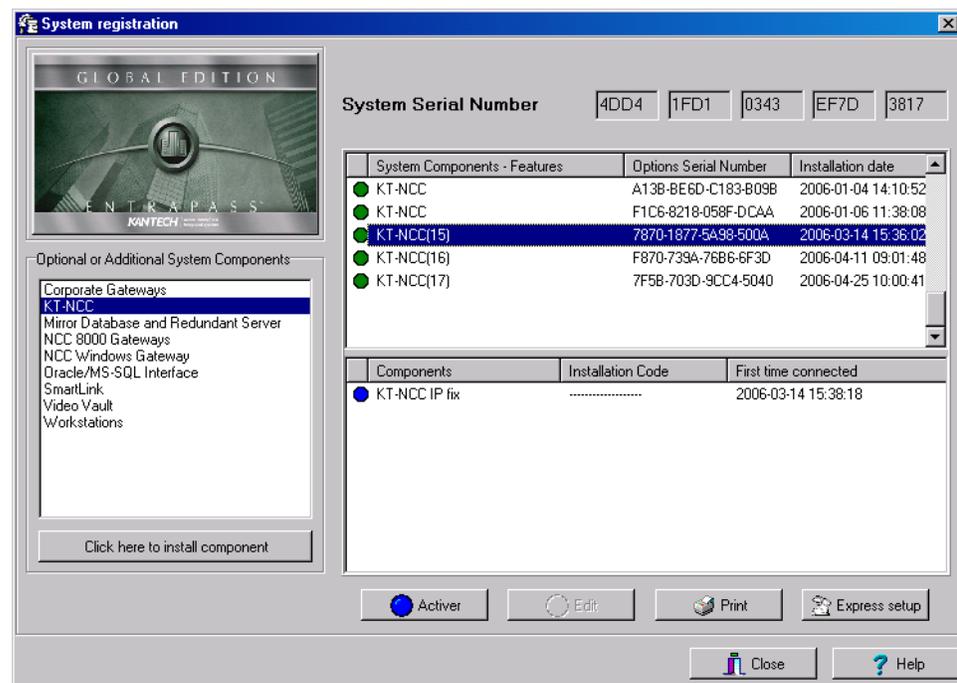
1. Use needle nose pliers to remove jumpers **JP2** and **JP3** (see Figure 5: KT-NCC Connections Diagram on page 9).
2. Press **Reset**.
3. Reinstall jumpers **JP2** and **JP3**.

Connecting the KT-NCC to the Network

1. Connect the KT-NCC to the network via Ethernet port #1 of the KT-NCC. The KT-NCC will place a DHCP request to obtain an IP address.

Registering the KT-NCC to the EntraPass Global Edition Server

1. In the application EntraPass Global Edition - Workstation, open the Gateway window found under the **Devices** tab.

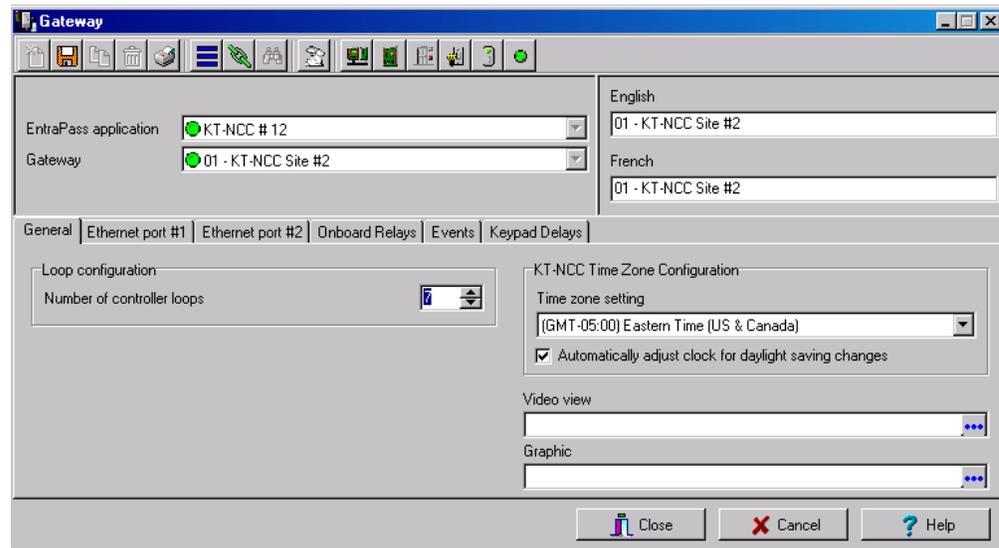


Note: It is not necessary to contact the Kantech Technical Support department to register the KT-NCC in EntraPass Global Edition.

2. In the section **Optional or Additional System Components**, select **KT-NCC**.
3. **Click here to install component**. The list on the right will display the new KT-NCC preceded by a blue dot.
4. Select the new KT-NCC component from the list. The **Activate** button will activate.
5. Click **Activate** to save the KT-NCC in EntraPass Global Edition.
 - The blue dot will change to green and the new KT-NCC controller will be added to the list of components at the top of the screen.
 - The **Edit** button will activate to enable you configure the security options and rename the KT-NCC.
6. Close the System registration window.

Configuring the KT-NCC in EntraPass Global Edition

1. In the application EntraPass Global Edition - Workstation, open the Gateway window found under the **Devices** tab.
2. From the **EntraPass Application** drop-down list, select the KT-NCC that you just saved in EntraPass.
3. From the **Gateway(s)** drop-down list, select the KT-NCC gateway that you would like to configure.
 - You can rename the KT-NCC gateway in the **French** and **English** fields.
4. Select the **General** tab:



- Enter the **Number of controller loops** that connect to the KT-NCC. The system supports up to 7 loops (2 RS-485 loops, 1 RS-232 loop and 4 IP loops).
- Configure the **KT-NCC Time Zone Configuration**.
- When necessary, check the box **Automatically adjust clock for daylight saving changes**.

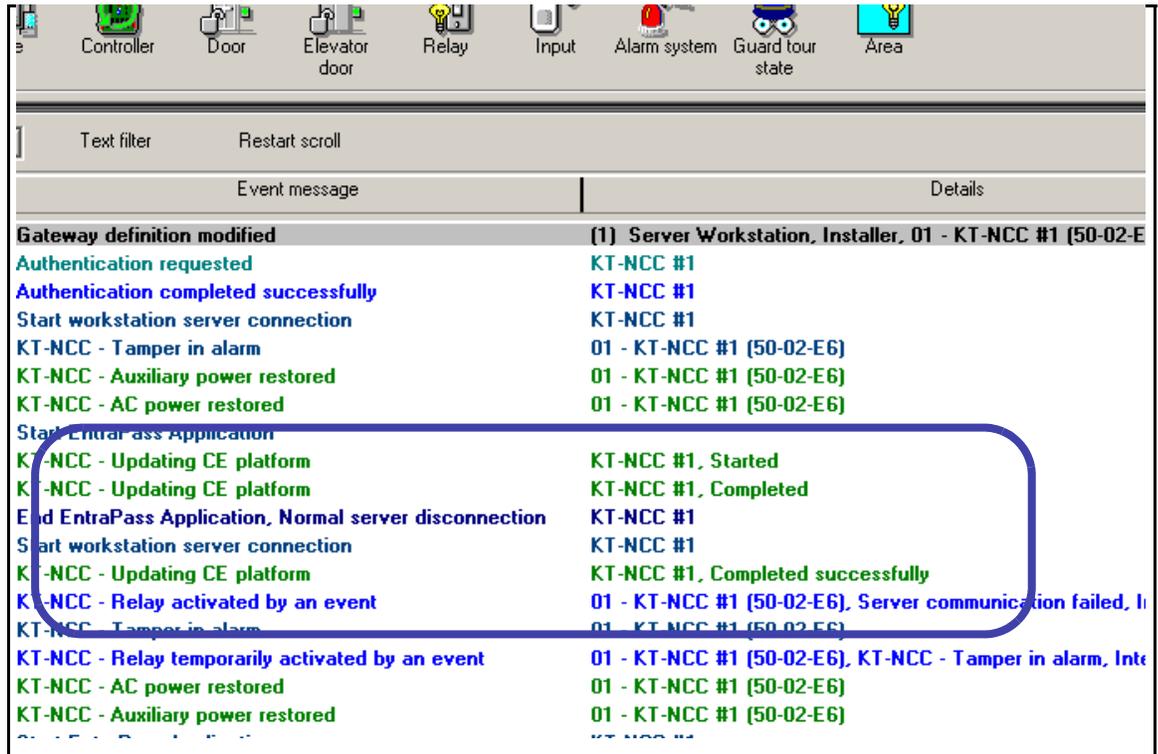
Note: It is advisable to check with the Network Administrator if the site where you are installing the KT-NCC is situated in an area where daylight saving time is in effect.

5. Select the **Ethernet Port #1** tab.

The screenshot shows the 'Gateway' configuration window with the 'Ethernet port #1' tab selected. The window title is 'Gateway'. At the top, there are several icons. Below the icons, there are two dropdown menus: 'EntraPass application' set to 'KT-NCC # 12' and 'Gateway' set to '01 - KT-NCC Site #2'. To the right, there are two text boxes: 'English' with '01 - KT-NCC Site #2' and 'French' with '01 - KT-NCC Site #2'. Below these are tabs for 'General', 'Ethernet port #1', 'Ethernet port #2', 'Onboard Relays', 'Events', and 'Keypad Delays'. The 'Ethernet port #1' tab is active. It contains a 'MAC address' field with '00-50-F9-50-01-6E'. Below this is a checked box for 'Ethernet port #1'. Underneath, there are two radio buttons: 'Obtain an IP Address Automatically' (selected) and 'Use the Following IP Address'. The 'Use the Following IP Address' section has three text boxes: 'IP address' (192.168.1 .1), 'Subnet mask' (255.255.255.0), and 'Gateway (Router)' (0 .0 .0 .0). To the right, there is a checked box for 'Enable broadcast assignment' and three radio buttons: 'Local IP address (LAN)' (selected), 'Public IP address (LAN/WAN)' (0 .0 .0 .0), and 'Domain name (LAN/WAN)'. Below these is an unchecked box for 'Use inbound server router'. At the bottom right, there is a 'Communication timing' dropdown menu set to 'Average (Maximum response time 1500 ms)'. At the bottom of the window are three buttons: 'Close', 'Cancel', and 'Help'.

- Enter the **MAC Address** of the KT-NCC. (No. 1 in the diagram on page 32).
 - Check the box **Ethernet port #1**.
 - Select the option **Obtain an IP Address Automatically**.
 - Port **18710** is automatically assigned to the KT-NCC by default. It is advisable not to modify it.
 - The box **Enable broadcast assignment** is selected by default. Leave this option as is.
 - Select the appropriate **Communication timings**. (Consult Table 2 on page 11).
6. Click the save icon and close the Gateway dialog. The section **Use the Following IP Address** will be refreshed to include the KT-NCC parameters.
 7. Close the Gateway dialog.

At this stage, the system checks if the version number of the software and controller are the same. If not, the system updates the KT-NCC firmware automatically. Three messages will appear on the list of messages of the EntraPass workstation to indicate that the update has been completed.



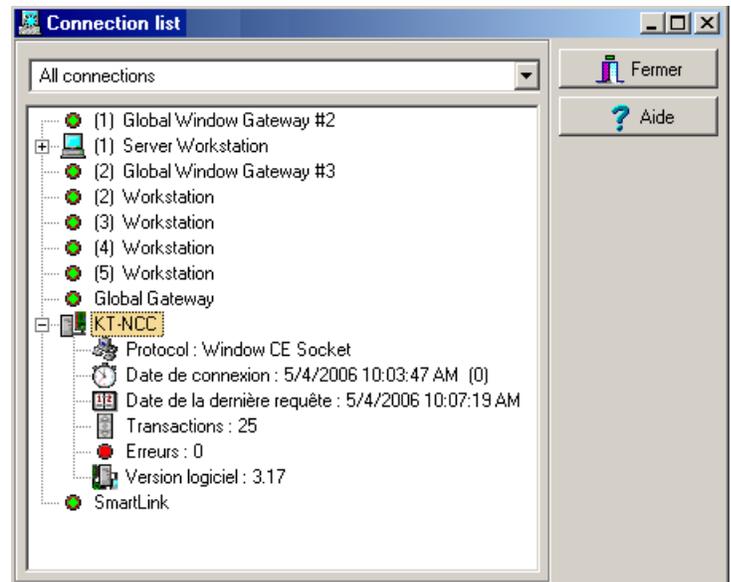
The messages to lookout for are:

- KT-NCC Update of platform CE - KT-NCC, Started
- KT-NCC Update of platform CE - KT-NCC, Completed
- KT-NCC Update of platform CE - KT-NCC, Successfully completed.

Verifying the Connection Status

1. In the application EntraPass Global Edition - Server, open the List of connections that is found under the **Connection** tab, and check the connection status of the KT-NCC that you just saved.

The next step will consist in configuring the system loops. For this, please consult Chapter 4 of the *EntraPass Global Edition Reference Guide* DN1316.



WAN Network

The following diagram shows a type of architecture in a WAN network when the site of the EntraPass Server is distant from the site of the KT-NCC module and the two communicate through a public network.

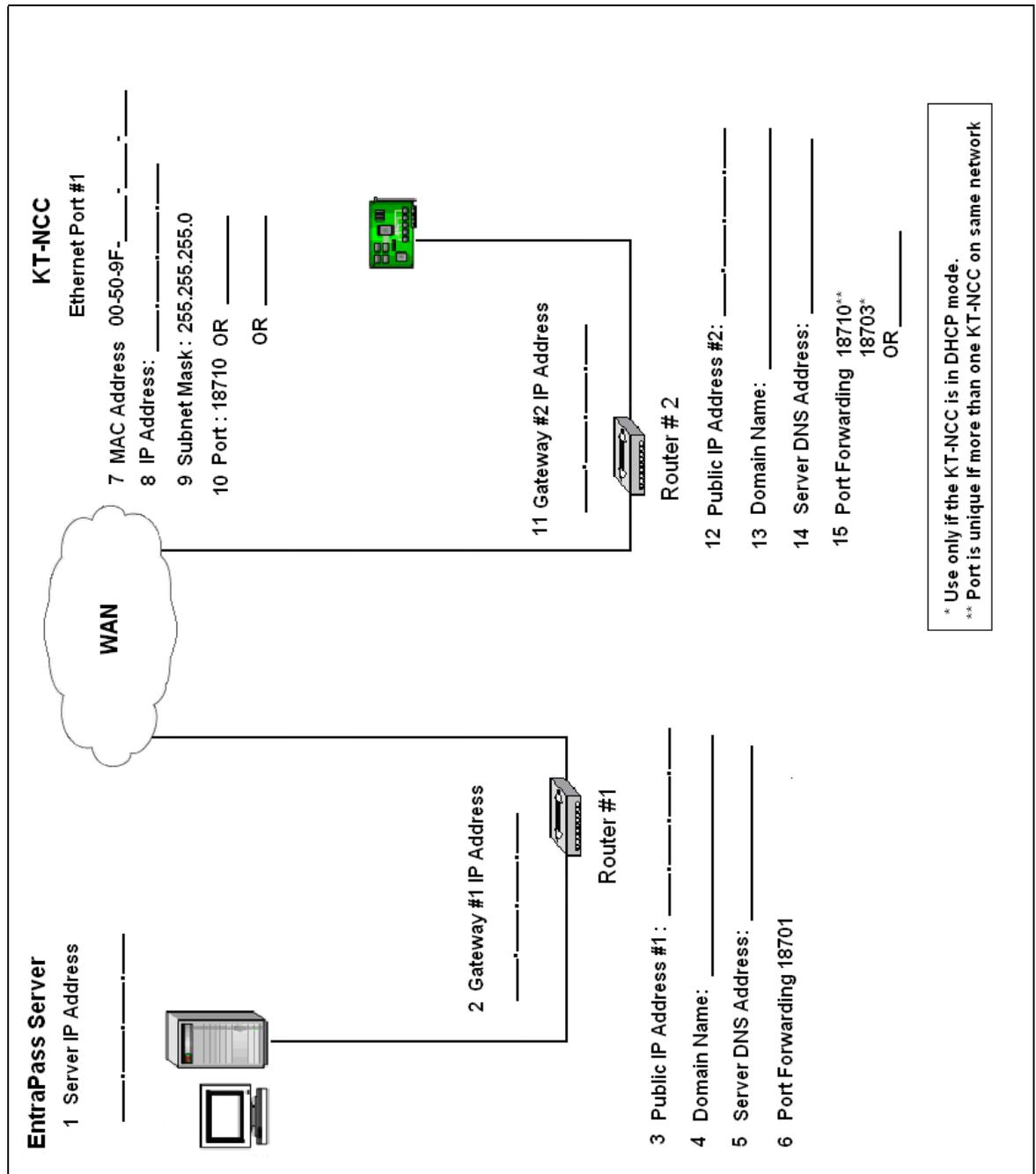


Figure 9: WAN Configuration Diagram

Configuring a DHCP Address (WAN)

Six steps are required to configure the KT-NCC in a wide area network (WAN) using a reserved DHCP address:

- Initialize the KT-NCC in factory reset mode.
- verify the port forwarding configuration with the Network Administrator.
- connect the KT-NCC to the network.
- register the KT-NCC to the EntraPass Global Edition server.
- enter TCP/IP parameters in the EntraPass server.
- configure the KT-NCC in EntraPass Global Edition.

Initializing the KT-NCC in Factory Reset Mode

A factory reset will delete the entire configuration of the KT-NCC, including the IP address. It is recommended to reinitialize the KT-NCC before starting the configuration.

1. Use needle nose pliers to remove jumpers **JP2** and **JP3** (see Figure 5: KT-NCC Connections Diagram on page 9).
2. Press **Reset**.
3. Reinstall jumpers **JP2** and **JP3**.

Port Forwarding

After collecting the network information necessary to configure the system from the Network Administrator, ensure that the routers are well configured (port forwarding).

- Port forwarding configuration is only done on static IP or reserved DHCP addresses.
- Port forwarding is done to the same IP address. If you use more than one KT-NCC with a router, you should use different ports for every KT-NCC.

To help you understand how to configure routers, please refer to the diagram on page 32.

Site Server Router (Router No. 1)

- Ensure that port 18701 is well forwarded to the address of the EntraPass server (no 1 in the diagram on page 32).
- Ensure that UDP protocol is selected.

KT-NCC Site Router (Router No. 2)

- Ensure that the port at no 15 in the diagram on page 32 is well forwarded to the KT-NCC address.
- Ensure that UDP protocol is selected.

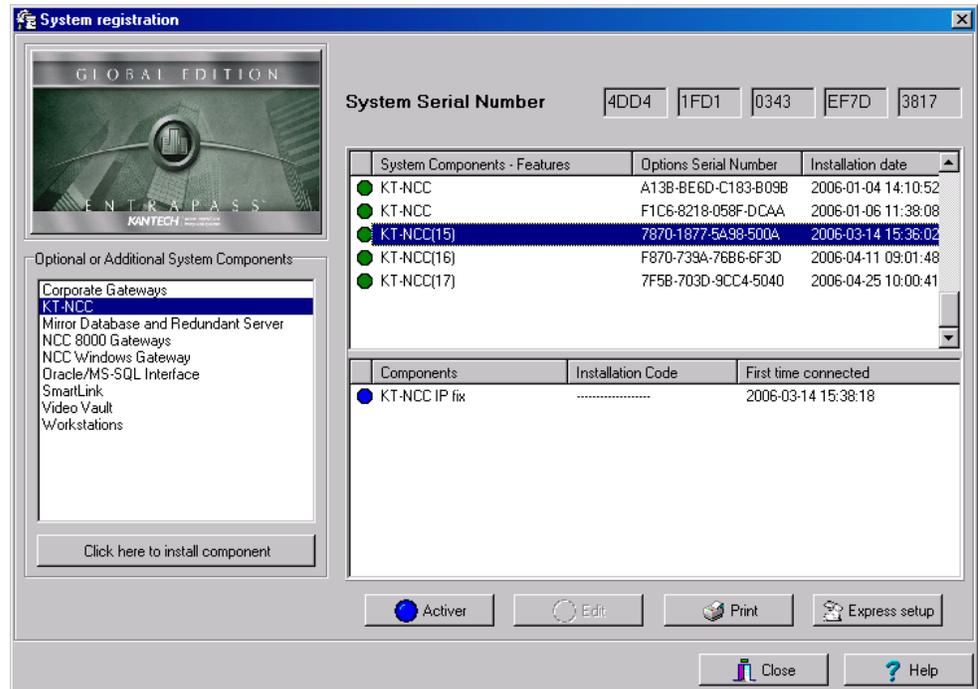
Connecting the KT-NCC

1. Connect the network cable to Ethernet port #1 of the KT-NCC.
 - The blue pilot light (Vital LED) of the KT-NCC will blink quickly to signal that the controller is in reset mode.
 - The blue pilot light (Vital LED) of the KT-NCC will remain lit for 15 seconds to signal that the controller is in start mode.
 - The blue pilot light (Vital LED) of the KT-NCC will blink once/second to signal that the controller has been reset but it is not yet registered on the EntraPass server. The KT-NCC is in factory default mode.

Note: For details, refer to *Flash Patterns of the LED Indicator* on page 10

Registering the KT-NCC to the EntraPass Global Edition Server

1. In the application EntraPass Global Edition - Server, open the System registration window that is found under the **Connection** tab.

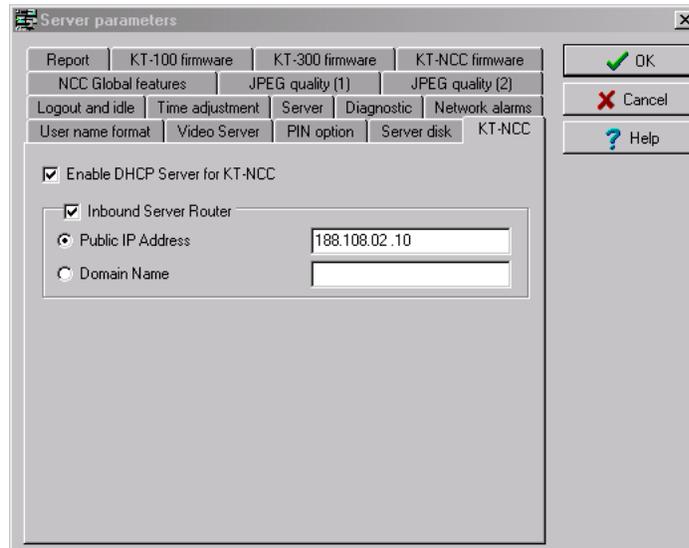


Note: It is not necessary to contact the Kantech Technical Support department to register the KT-NCC in EntraPass Global Edition.

2. In the section **Optional or Additional System Components**, select **KT-NCC**.
3. **Click here to install component**. The list on the right will display the new KT-NCC preceded by a blue dot.
4. Select the new KT-NCC component from the list. The **Activate** button will be activated.
5. Click **Activate** to save the KT-NCC in EntraPass Global Edition.
 - The blue dot will change to green and the new KT-NCC controller will be added to the list of components at the top of the screen.
 - The **Edit** button will activate to enable you to configure the security options and rename the KT-NCC.
6. Close the System registration window.

Entering Router Parameters on the Server

1. In the application EntraPass Global Edition - Server, click the Server Parameters icon under the **Options** tab to open the Server parameters window.

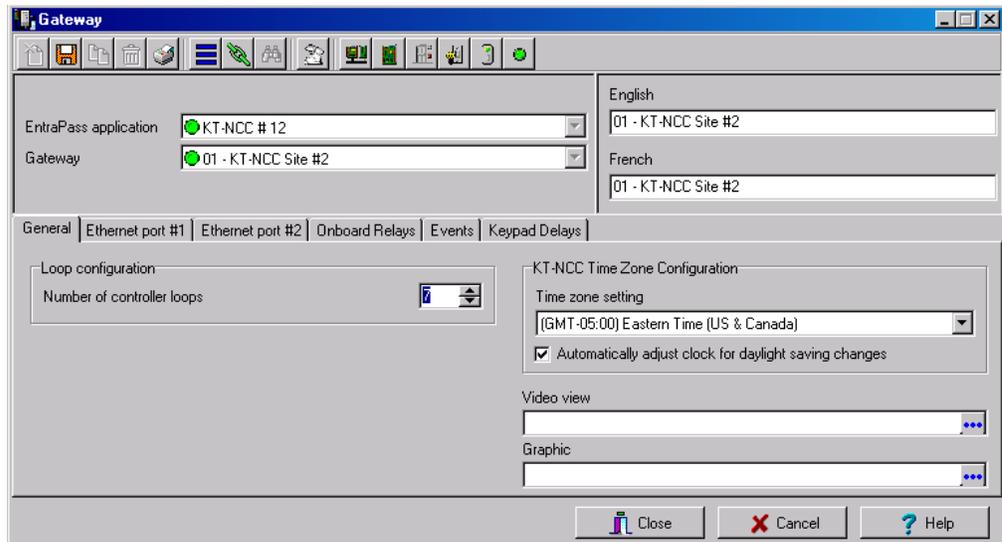


2. Under the **KT-NCC** tab:
 - Check the box **Inbound Server Router**.
 - Check the box **Public IP Address**.
 - Enter the **Public IP Address #1** of inbound router #1 (no. 3 in the diagram on page 32) or the **Domain Name** (no. 4 in the diagram on page 32). This address is assigned by the public network provider with whom you are connected.
3. Click **OK** to save the configuration and close the dialog.

Configuring the KT-NCC in EntraPass Global Edition

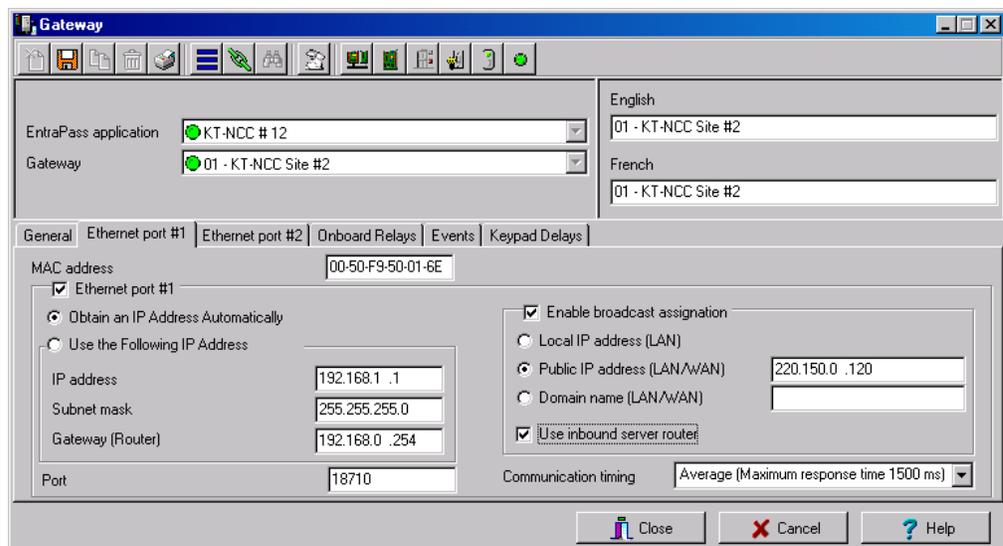
1. In the application EntraPass Global Edition - Workstation, open the Gateway window that is found under the **Devices** tab.
2. From the **EntraPass Application** drop-down list, select the KT-NCC that you just saved in EntraPass.
3. From the **Gateway(s)** drop-down list, select the KT-NCC gateway that you would like to configure.

- You can rename the KT-NCC gateway in the **French** and **English** fields. Select the **General** tab:



- Enter the **Number of controller loops** that connect to the KT-NCC. The system supports up to 7 loops (2 RS-485 loops, 1 RS-232 loop and 4 IP loops).
- Configure the **KT-NCC Time Zone Configuration**.
- When you check the box **Automatically adjust clock for daylight saving changes**, you enable EntraPass to manage the time change twice per year. If your network has several time zones and the time changes are not synchronized, we suggest that you not check this box and manually adjust the clock during time changes.

4. Select the **Ethernet Port #1** tab.



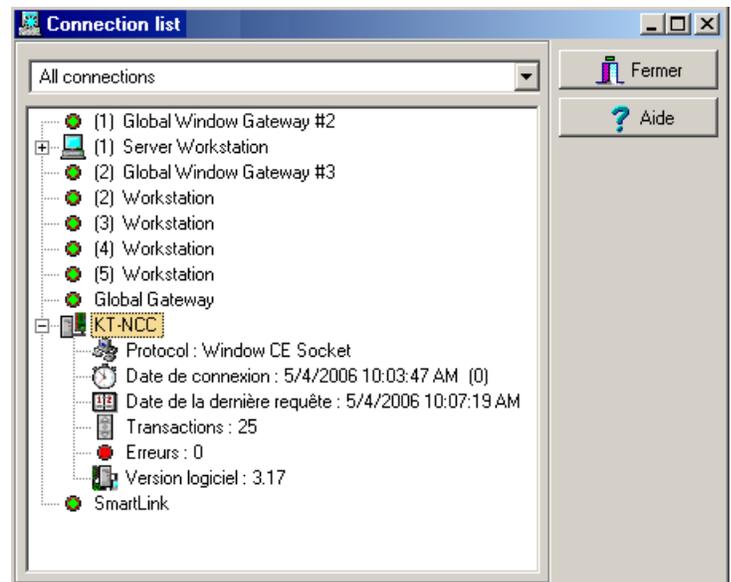
- Enter the **MAC Address** of the KT-NCC (No. 7 in the diagram on page 32).
- Check the box **Ethernet port #1**.

- Check the option **Obtain an IP Address Automatically**.
 - Port **18710** is automatically assigned to KT-NCC by default. It is advisable not to modify it. However, if you have to configure several KT-NCCs, ensure that every KT-NCC has a unique port. This is necessary when forwarding ports to an IP address.
 - The box **Enable broadcast assignation** is selected by default.
 - Select the option **Public IP address (LAN/WAN)** and enter the IP address corresponding to no. 12 in the diagram on page 32.
 - Check the option **Use inbound server router**.
 - Select the appropriate **Communication timing** (Consult Table 2 on page 11).
5. Click the save icon and close the Gateway dialog.

Verifying the Connection Status

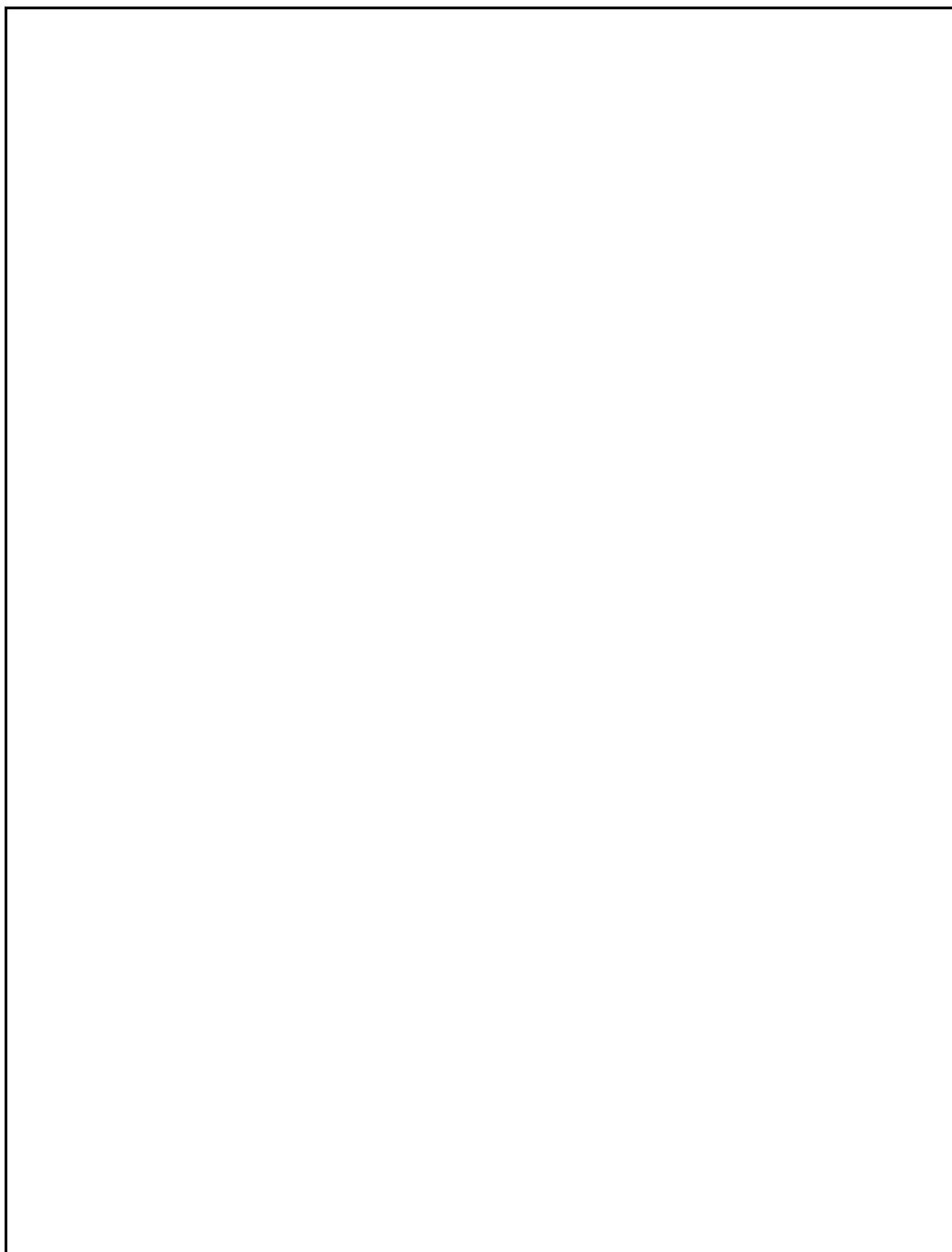
1. In the application EntraPass Global Edition - Server, open the List of connections that is found under the **Connection** tab, and check the connection status of the KT-NCC that you just saved.

The next step will consist in configuring the loops of the system. For this, please consult Chapter 4 of the *EntraPass Global Edition Reference Guide* DN1316.



My Network Configuration

If none of the options provided in this document corresponds to your network architecture, you can use the following pages to illustrate your specific network and list the parameters of your network.



	Network component	IP address	Notes
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