



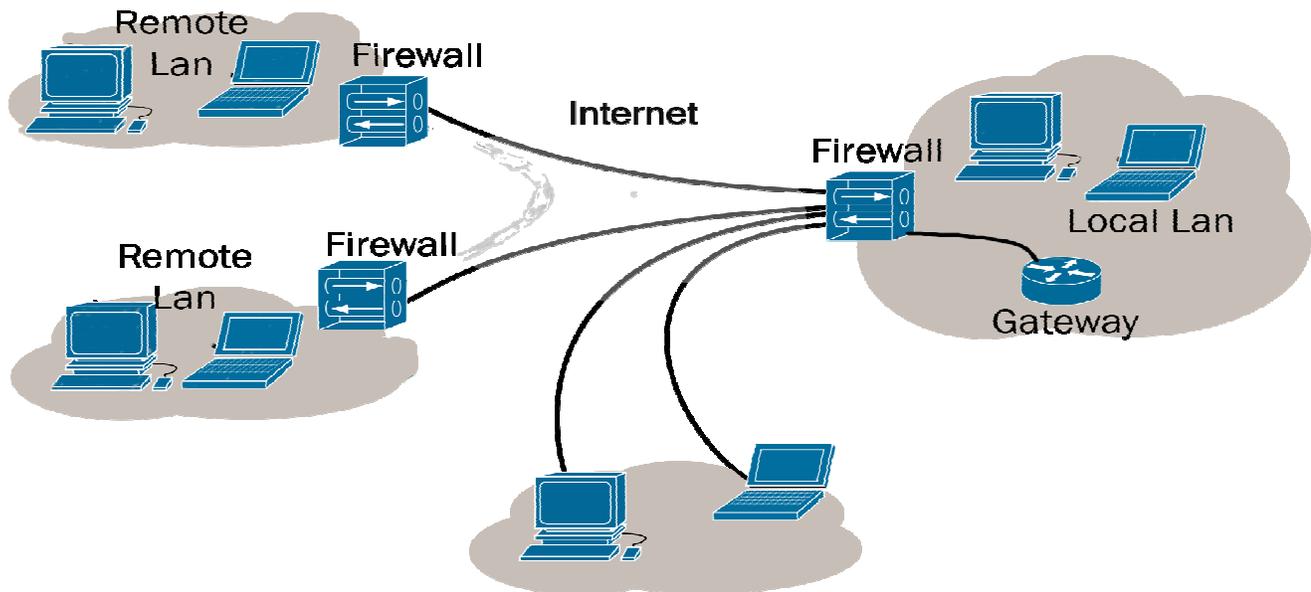
## Implementing and using the CrossTec Remote Control Gateway

### Summary

With the increased use of the internet, common questions asked by customers using CrossTec Remote Control are: “Can I connect to and remote control a machine behind a firewall?” and “Does CrossTec Remote Control work with Network Address Translation (NAT)?”

Both have been possible in previous versions of CrossTec Remote Control; however, to do so involved complex configurations of firewalls to allow incoming connections.

Now, CrossTec Remote Control includes a Gateway component that will simplify the method of connection and remove the need for complex firewall configurations.



Remote / roaming users

### What is the CrossTec Remote Control Gateway?

The CrossTec Gateway is a component in CrossTec Remote Control which provides a stable and secure method for connecting Clients and Controls via the internet using HTTP and delivers web-based remote control without the need for modifications to existing firewall configurations.

The Gateway acts as a gather point, between CrossTec Remote Control and CrossTec Remote Control Client - and when using a Gateway there is no direct communication between the Client and Control.

When the CrossTec Client is configured to use the HTTP protocol, the Client connects to the Gateway at start up. A user at the CrossTec Remote Control can then connect to the Gateway using the HTTP protocol and browse for connected Clients, then connect to any number of Clients that are attached to the Gateway.

As there is no direct connection between the CrossTec Remote Control Client and Control, and the protocol used is HTTP, it means that each of the machines can be situated behind a firewall configured to use NAT, without the need to make configuration changes to the firewall.

In order for the Gateway to connect a Client and Control, both the CrossTec Remote Control and Client must be able to connect to the Gateway using the HTTP protocol on the Gateway's configured port (the default port is 443).



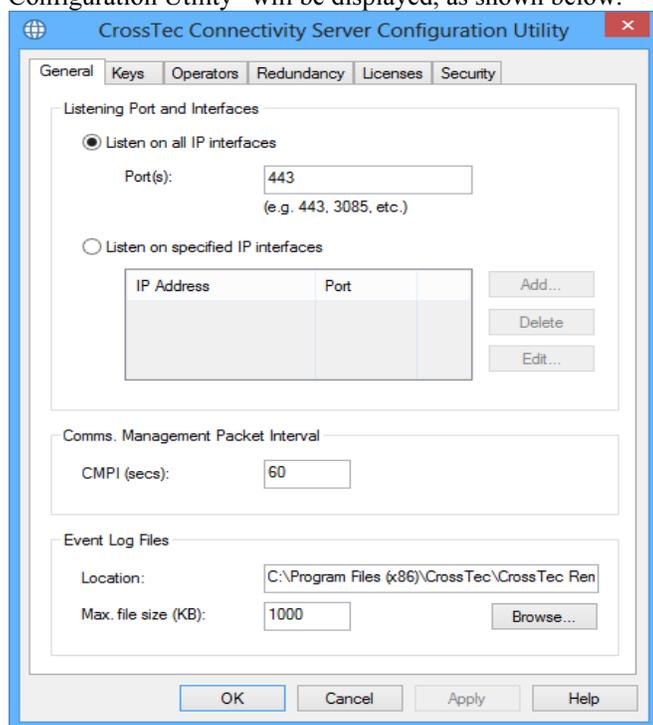
## Installing the CrossTec Remote Control Gateway

The CrossTec Remote Control Gateway can only be installed on an NT based operating system (XP, Vista, 2003, 2008, 2008 R2, Windows 7, Windows 8 and Server 2012) as the CrossTec Gateway installs as a service.

The Gateway is not installed by default. To install the CrossTec Gateway, run the standard CrossTec Remote Control installation package. When prompted for an installation type, choose “Custom”.

The next screen should then display a list of CrossTec components. From this list of components, select “Gateway” and continue through the installation.

At the end of the installation the “CrossTec Gateway Configuration Utility” will be displayed, as shown below:



### General

Here, you can set the port number that the Gateway will accept incoming connections on. The default port is 443, and this number is registered to CrossTec.

When installing the Gateway onto a machine that already has Internet Information Services (IIS) installed, the port number is required to be changed from 443 to either 3085 (also registered to CrossTec), or another port number.

The default port for the HTTP protocol on the internet is port 80 and you can configure the Gateway to accept connections on. However, some Internet Service Providers (ISPs) utilize cache or

proxy servers that cache HTTP traffic on port 80. If your ISP uses a cache or proxy server, then the Gateway connections will fail. The Gateway can be configured to listen on specified IP interfaces or on all IP interfaces on the machine.

CMPI (Sec): When configured for Gateway connections, the Client workstation confirms its availability by periodically polling the Gateway. By default, a network packet is sent every 60 seconds, but you can change this if required.

You can also specify the location and maximum size of the Gateway log file.

### Keys

You can add a Gateway Key by selecting the Keys tab. Gateway Keys are used to authenticate CrossTec Remote Control Clients and Controls, therefore ensuring that unauthorized users cannot connect to and use the Gateway.

You must set at least one Gateway Key before you can apply the configuration as the Gateway will not accept any connections unless at least one Gateway Key is configured.

### Operators

The Operators tab will allow you to restrict remote control access to a list of specified users. At the Control, a user will be required to configure a username and password in order to browse a Gateway and connect to the Clients.

### Licenses

The Licenses tab displays all of the CrossTec licenses that have been applied to the Gateway. The Status field shows if the license has been activated. If the license has not been activated the Activate button can be used to initiate the activation process.

This activation process is either performed automatically over the internet, or manually by contacting the CrossTec Technical Support team.

### Security

From the Security tab, the option to {Enable encryption of communications to remote computers} is available. When this option is enabled, all communication in the connection process over the Gateway is encrypted.

Note: The remote computers (Controls and Clients) need to be running CrossTec Remote Control version 11.00.0005 or later to use the encryption option.

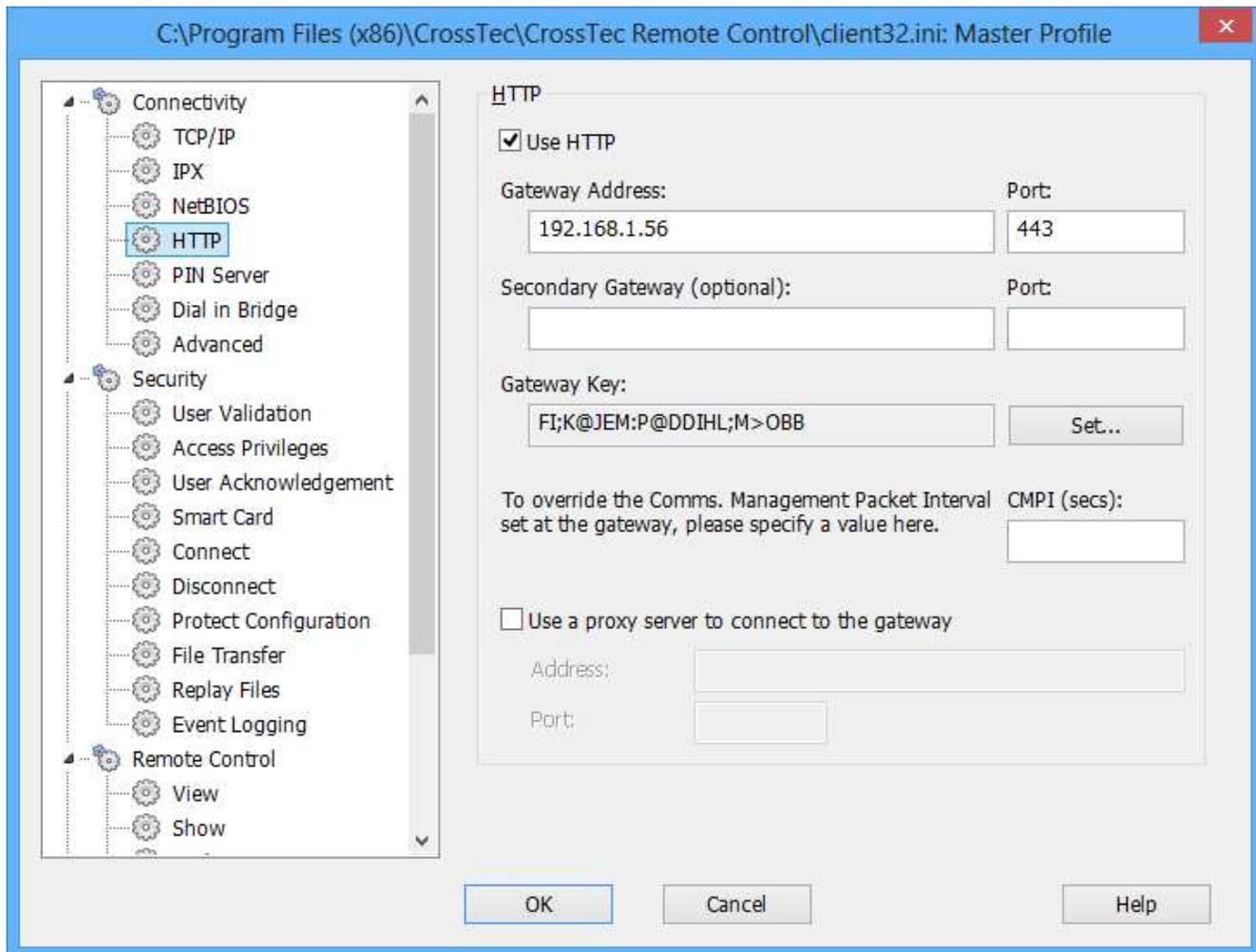
There is an additional option {Block any remote computers not using encrypted communications}. Enabling this option will prevent earlier versions of the CrossTec Remote Control Client that do not support the enhanced level of encryption from connecting to the Gateway.



## Configuring Clients to use the CrossTec Remote Control Gateway

To configure a Client to use the HTTP protocol, you will need to run the CrossTec Remote Control Configurator.

- Run the CrossTec Remote Control Configurator and select the “Advanced” option Master Profile
- Expand the “Connectivity” group and select “HTTP”; you should then see the HTTP configuration shown below:



- To enable HTTP you will need to check the “Use HTTP” option
- Enter the port number for the Gateway you are going to use is configured for, the default being 443
- Enter the IP address of the primary CrossTec Gateway
- Enter the optional secondary Gateway IP address and port number
- Press the “Set” button to enter the Gateway Key. The Gateway Key entered must be identical to one of the Gateway Keys added to the Gateway
- Enter the proxy server details if the Client is connecting to the internet via a proxy server.

Once the required configuration details have been entered, click “OK” to save the configuration and restart the CrossTec Client. The Client should then connect to the Gateway.

The entire configuration for a CrossTec Client is stored in the client32.ini configuration file. This file can be easily copied or deployed (Using the CrossTec Remote Control Deploy tool) to other Client machines. For further details relating to CrossTec Remote Control deploy, see the Online Help or the CrossTec Remote Control User Manual.



## Configuring the Control to use the CrossTec Gateway

Before you can connect to a CrossTec Client using the CrossTec Gateway, you must add the Gateway to your Control Console. To do this, follow the steps below:

- Run the CrossTec Remote Control Console
- In the left hand pane, select the Internet Gateways group
- Double click on the "Add a Gateway" icon
- On the first window, enter the name and description and click "Next". Here, you can enter any details you wish that describe the Gateway
- Enter the IP address of the Gateway and the port number that the Gateway is configured to use (default is 443)
- If required, check the "Use Proxy Server" box and enter the proxy server IP address and port number. Click "Next".
- Click the "Set" button and enter the Gateway Key
- Note: If the Gateway is configured with multiple Gateway Keys, when you browse for Clients on this Gateway you will only see the Clients that are using the same Gateway Key as entered
- If Operators have been configured on the Gateway, click "Set" and enter in the matching username and password. Click "Finish".

It is possible to configure multiple Gateways in the Control Console with the same IP address but with different Gateway Keys.

Once you have a Gateway configured in the Control Console the browse option can be used to display the list of Client machines currently connected to the Gateway.

## Securing the CrossTec Gateway

The Gateway will support multiple Gateway Keys. Each Gateway Key must be a minimum of 8 characters, Gateway Keys can be added to the Gateway dynamically without disrupting any current Client connections.

The Gateway will not accept connections from a CrossTec Control or Client unless a matching Gateway Key configured the Client or Control has also been entered on the Gateway.

Clients can only be configured with one Gateway Key, whereas the Control Console is able to support multiple Gateways, each with a different Gateway Key. All Gateway Key data is sent encrypted between the Client, Control and Gateway.

Once connected to the Gateway, all Client and Control security such as User Validation, Security Keys etc will function normally.

A Control can only connect and browse for Clients that are using the same Gateway Key as the Control.