

**B6000 BACnet/IP to
BACnet/MSTP
Router**

User Manual

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1 Introduction

The Cimetrics B6000 is a BACnet/IP to BACnet/MSTP Router. It helps route BACnet communications from a BACnet/IP to BACnet/MSTP local area network.

1.1 Logging in

Connect the B6000 Ethernet connector to an Ethernet hub, and run another Ethernet cable (patch able) from that hub to your laptop or PC. Make sure that the laptop or PC is the *only* other unit in this small LAN.

NOTE: If you do not have a hub, you can use a "crossover cable" to connect between the B6000 and your laptop.

Set your PC's IP address to **192.168.88.90** with a subnet mask of **255.255.255.252**

Open your browser and enter the following URL: <http://192.168.88.89>

You will be prompted to login: The username is = admin and the password = admin

From within the browser interface you can change all settings in the entry fields to configure your router

For improved access security, you should change your password from the default values.

Make sure you SAVE your new password! When you click on "Activate Configuration" and "confirm" then the configuration process is completed.

Please Note:

A user will be able to access the router using the above mentioned IP address at ALL TIMES (even if you have changed the IP address under BACnet/IP settings)

2 Chapter 2

2.1 BACnet/IP Settings

BACnet/IP Settings

This page allows you view current BACnet/IP settings, change BACnet/IP settings or reset it to factory defaults.

Parameter	Value	Description
IP	10.1.2.225	IP address of the Router.
Network Mask	255.255.0.0	Subnet mask.
Default Gateway	192.168.0.1	IP address of default gateway.
UDP Port	47808	BACnet/IP UDP port number.
DNET	1	Directly connected network number.
MAC	00:20:4A:AD:5B:50	MAC address of the Router.

Save Reset Defaults

IP Address:

This unit is shipped with a factory default IP address. Please change it to suit your Network. This is something usually assigned by a Network Administrator in your company.

Network Mask:

Please change the default value to something that matches your IP address. This is also typically assigned by a Network Administrator in your Company.

Default Gateway:

Please change the default value. This is also typically assigned by a Network Administrator in your Company.

UDP Port:

The default value is 47808. This is the port number that the BACnet protocol typically uses. DO not change this unless you are sure that your BACnet Network uses something different.

DNET:

This stands for Directly Connected Network Number. Please assign a Network Number to this BACnet/IP Network. This has to be a unique number on your network. It is best to speak with your Network Administrator to get a unique Number assigned to this interface of the Router. Also note that there is a parameter called DNET under your MSTP/Settings. This number here has to be unique as well.

A typical setting would be BACnet/IP settings DNET = 5 and MSTP/Settings DNET = 6.

(Assuming there are no other networks with the same Network Number connected to your BACnet network).

Save:

After making changes, clicking on "Save" followed by "Activate Configuration" followed by clicking on "Conform" will save your changes.

Reset:

Clicking on Reset will reset your configuration to the recent most saved configuration.

Default:

Clicking on default will result in the configuration being set to factory defaults.

3 Chapter 3

3.1 MSTP Settings

MS/TP Settings		
This page allows you view current MS/TP settings, change MS/TP settings or reset it to factory defaults.		
Parameter	Value	Description
Baud Rate	9600 <input type="text"/> bps	Baud rate.
This Station (MAC)	1 <input type="text"/>	MAC address of this MS/TP node.
Max Info Frames	1 <input type="text"/>	Maximum number of information frames the node may send before it must pass the token.
Max Master	127 <input type="text"/>	The highest allowable address for master nodes (not to exceed 127).
Reply Timeout	255 <input type="text"/> ms	The minimum time that a node must wait for a station to begin replying to a confirmed request (255 - 300 ms).
Usage Timeout	20 <input type="text"/> ms	The minimum time that a node must wait for a remote node to begin using a token or replying to a Poll For Master frame (20 - 100 ms).
DNET	2 <input type="text"/>	Directly connected network number.

Baud Rate:

The B6000 supports all Baud Rates supported by the BACnet Standard. From the drop down

list, please choose the appropriate baud rate for your MSTP network. Please keep in mind that ALL your Devices on the MSTP network, including THIS router need to be on the SAME baud rate. If the baud rates are different, they will not be able to communicate with each other.

MAC:

This is the Media Access Control address of the router. Please note that ALL devices on the MSTP network need to have a unique MAC address. Prior to configuring this, you will need to know the MAC addresses of all your devices on the MSTP Network. Once you have this information, enter a unique value (1 through 127) here.

Max Info Frames:

This value stands for the Maximum number of information frames the node may send before it must pass the token. This value is typically not changed and is safe to leave it at the default value of 1. **Do not change this value unless you are sure.**

Max Master:

This is the highest allowable address for master nodes on the MSTP Network. It is safe to leave it at the default value of 127. **Do not change this value unless you are sure.**

Reply Timeout:

This is the minimum time that a node must wait for a station to begin replying to a confirmed request. **Do not change this value unless you are sure.**

Usage Timeout:

This is the minimum time that a node must wait for a remote node to begin using a token or replying to a poll for Master frame. **Do not change this value unless you are sure.**

DNET:

This stands for Directly Connected Network Number. Please assign a Network Number to this MSTP Network. This has to be a unique number on your network. It is best to speak with your Network Administrator to get a unique Number assigned to this interface of the Router. Also note that there is a parameter called DNET under your BACnet/IP Settings. This number here has to be unique as well.

A typical setting would be BACnet/IP settings DNET = 5 and MSTP/Settings DNET = 6. (Assuming there are no other networks with the same Network Number connected to your BACnet network).

Save:

After making changes, clicking on "Save" followed by "Activate Configuration" followed by clicking on "Conform" will save your changes.

Reset:

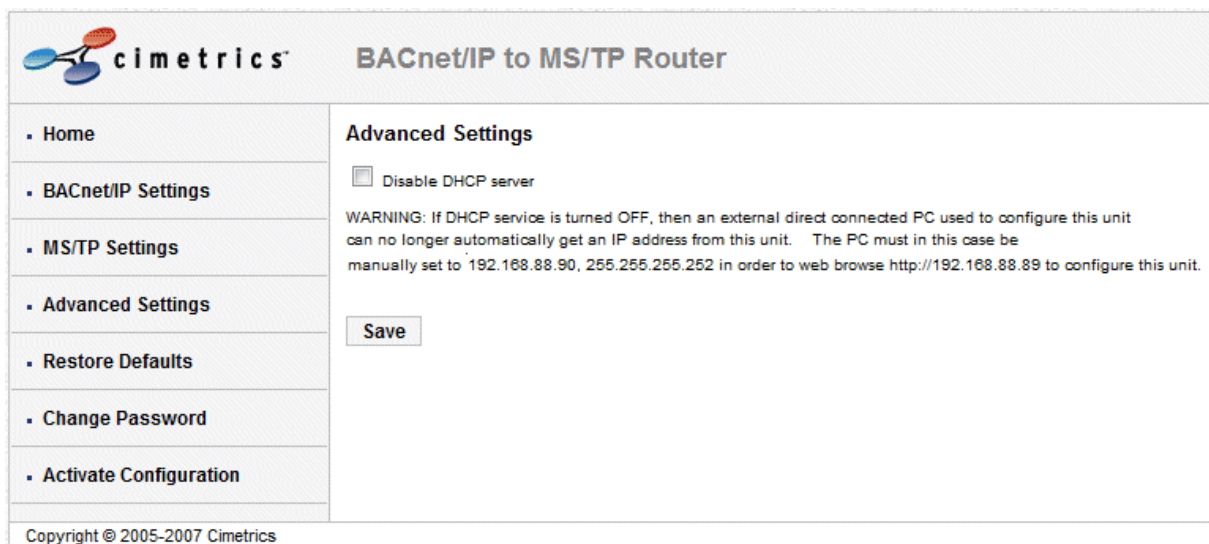
Clicking on Reset will reset your configuration to the recent most saved configuration.

Default:

Clicking on default will result in the configuration being set to factory defaults.

4 Chapter4

4.1 Advanced Settings



The screenshot shows a web interface for a Cimetrics BACnet/IP to MS/TP Router. The page title is "BACnet/IP to MS/TP Router". On the left is a navigation menu with the following items: Home, BACnet/IP Settings, MS/TP Settings, Advanced Settings (which is currently selected), Restore Defaults, Change Password, and Activate Configuration. The main content area is titled "Advanced Settings" and contains a checkbox labeled "Disable DHCP server". Below the checkbox is a warning message: "WARNING: If DHCP service is turned OFF, then an external direct connected PC used to configure this unit can no longer automatically get an IP address from this unit. The PC must in this case be manually set to 192.168.88.90, 255.255.255.252 in order to web browse http://192.168.88.89 to configure this unit." Below the warning is a "Save" button. At the bottom left of the page, there is a copyright notice: "Copyright © 2005-2007 Cimetrics".

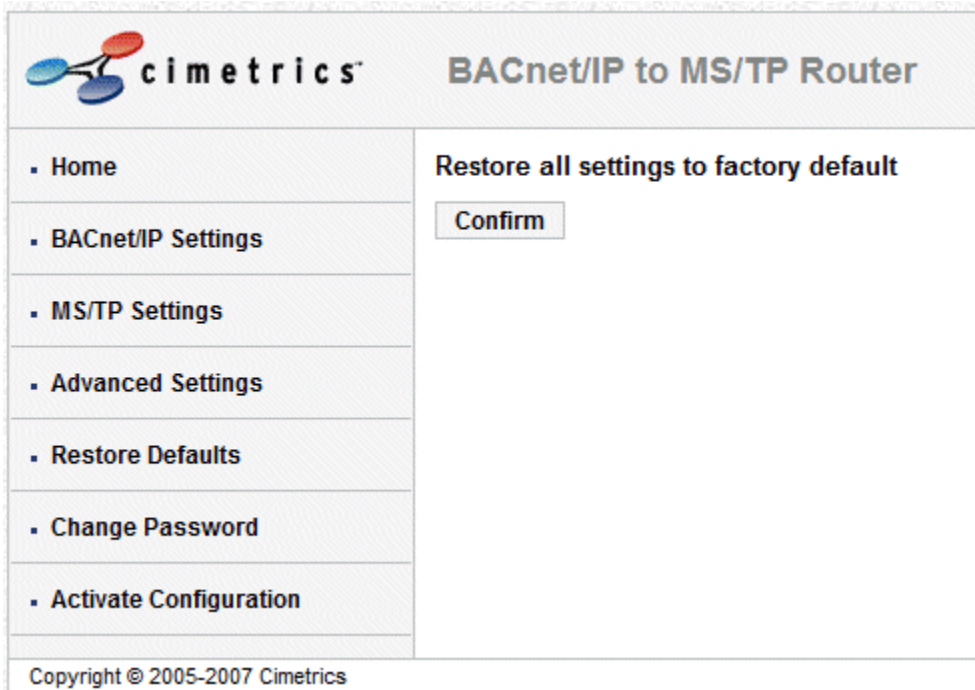
The B6000 has a timid DHCP server. This serves out an IP address of 192.168.88.90 to any machine connected to the router.

If you uncheck the above option, the B6000's DHCP server will be turned off. In this situation, if you would like to access the B6000 at its default IP address of 192.168.88.89, you will need to manually configure your PC/Laptop to an IP address of 192.168.88.90 with a subnet mask of 255.255.255.252

If the above option is checked, and you would like to access the B6000 at its default IP address of 192.168.88.89, your PC or Laptop will be automatically assigned an IP address (provided your PC or laptop is set to to use DHCP) of 192.168.88.90.

5 Chapter 5

5.1 Restore Defaults

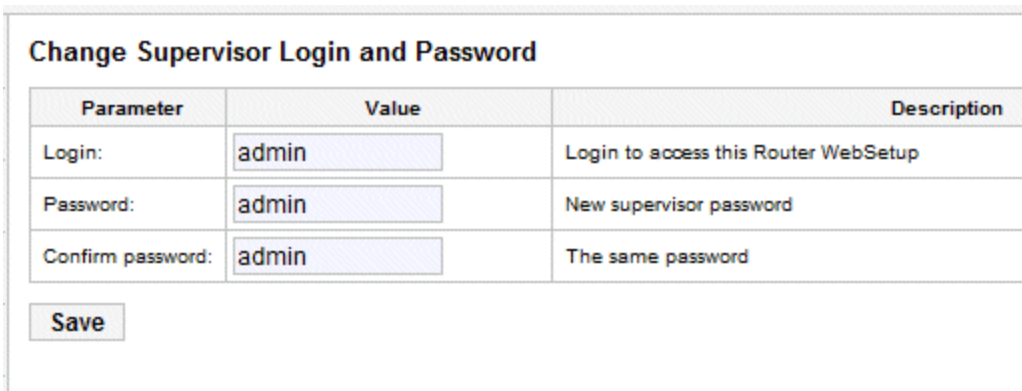


The screenshot shows the web interface for a Cimetrics BACnet/IP to MS/TP Router. The header includes the Cimetrics logo and the title "BACnet/IP to MS/TP Router". A left-hand navigation menu lists several options: Home, BACnet/IP Settings, MS/TP Settings, Advanced Settings, Restore Defaults, Change Password, and Activate Configuration. The "Restore Defaults" option is selected, and the main content area displays the text "Restore all settings to factory default" with a "Confirm" button below it. At the bottom of the page, there is a copyright notice: "Copyright © 2005-2007 Cimetrics".

Clicking on "Confirm" will result in the ENTIRE configuration of the router being set to factory defaults.

6 Chapter 6

6.1 Change Password



The screenshot shows the "Change Supervisor Login and Password" form. It contains a table with three rows for inputting the new login and password information. Below the table is a "Save" button.

Parameter	Value	Description
Login:	admin	Login to access this Router WebSetup
Password:	admin	New supervisor password
Confirm password:	admin	The same password

Save

NOTE:

Once a password has been changed, please note that it is the users responsibility to remember the new login name and password. If this information is lost, you will **NOT BE ABLE TO LOGIN**. The only option will be to ship the unit back to Cimetrics to reload the firmware. This is expensive and time consuming so please save your new username and password.