

WebBrick Gateway

User Manual

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<http://www.WebBrickSystems.com> for company information

<http://www.webbrick.co.uk> for WebBrick information

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1 WebBrick Gateway Appliance.

This section provides information on reconfiguring the gateway when supplied as a pre-installed appliance to suit local network configuration. This section is very technical, reconfiguration at this level is done using a command shell on the WebBrick Gateway Appliance. You will need to be able to start an SSH (Secure SHell) session from a machine, the install media should have a copy of an SSH client called putty on it, this can be run on another computer and connect to the WebBrick Gateway. If you go beyond here it is assumed you have some knowledge of Linux.

The default configuration of the WebBrick Gateway Appliance is to use a single network connection on 10.100.100.1 (labeled LAN1), therefore all the webbricks and clients will need to be on this network.

The WebBrick Gateway Appliance has installed:

Apache to act as a secure interface to the WebBrick Gateway Appliance and to provide on line doc
NTPD A network time protocol client
DHCPCD A dhcp client that can be used for any other network interface
DHCPSD A dhcp server to provide IP addresses as required to clients

1.1 Network

The WebBrick Gateway Appliance has 3 network connections, as delivered it is expected that everything connects to LAN1 which has the IP address 10.100.100.1. The additional interfaces can be used to separate the webbrick control network from the general computer network and from the outside world. The system as delivered is not expected to be connected using these but your installer can set them up for your use if required. The Linux firewall is installed and can be enabled if required.

1.1.1 HostName

The system hostname defaults to 'gateway' To change it edit /etc/conf.d/hostname

If you change this it is suggested that you also change the apache ServerName and regenerate the self signed server certificates.

1.1.2 IP addresses

The WebBrick Gateway Appliance has 3 network interfaces, If you are going to use all 3 it is suggested you do as follows. LAN1 - Webbrick network, default IP address 10.100.100.1

LAN2 - public internet, this should use DHCP to get an IP address from your broadband connection
LAN3 - private network, local computers, default IP address 192.168.1.1. This will run a DHCP server to provide IP address and routing information to local computers.

The address configuration for these is in `/etc/conf.d/net`. The new interface is started with `/etc/init.d/net.1 start`, to get the interface to automatically start when booted the command `/etc/init.d/net.1 add default` is required to be issued.

1.1.3 Routing

No routing adjustments need to be done if the WebBrick Gateway Appliance is used in default setup using just LAN1.

If you use the extra interfaces you may need to add a route to the router that will deliver inbound traffic correctly. Note the broadband connection is likely to be using NAT and therefore it is not necessary to run NAT on the WebBrick Gateway Appliance, but the broadband router will need to know where the internal networks are.

LAN3 is suggested for use as the private network and it is expected that computers on this network will require external access therefore the external router needs to be given a routing table entry for the 192.168.1.0 network so that it can route return traffic.

This consists of adding the following routing rule: `network 192.168.1.0 netmask 255.255.255.0 gateway <address currently provided using DHCP for LAN2>`

As the address required for gateway is needed for routing, you can either change the LAN2 interface to use a static address on your network or get the DHCP server to provide a known address for LAN2 using MAC address lookup.

It is not expected that access to the 10.100.100.0 network will be available from the external systems or that any device on 10.100.100.0 network will make external access therefore no routing should be added for that network.

If you decide not to use the LAN3 private network and just to connect all local machines on the LAN1 side of the WebBrick Gateway Appliance this routing entry is not needed.

1.1.4 DHCP

DHCP is used in two guises: A DHCP client is used to retrieve external addressing and routing information from your external broadband connection when using LAN2 for this purpose. A DHCP server is used to provide IP addresses and routing information to the private network when using LAN3 for this purpose.

The DHCP server needs to be configured with the DNS servers in use for your site, with most broadband routers this will be your routers IP address.

1.1.5 DNS

The WebBrick Gateway Appliance itself will get DNS server addresses from the DHCP request for the 2nd LAN interface, if you are not using the second network interface then you will need to remove it from startup and manually edit `/etc/resolve.conf`.

To remove second network interface use the command. `rc-update delete net.eth1 default`

At present the DHCP server supporting the 3rd LAN port will need to be provided with the site DNS server addresses so that it can provide them to DHCP clients on that network segment.

1.1.6 Firewall

The linux firewall software is installed if you wish to use the firewall to enhance security, it's default rules allow all traffic. This relies on the firewall and NAT abilities of most ADSL routers to handle perimeter security.

If using SSH and allowing external access you may want to restrict the accounts allowed access.

1.1.7 Network Time (NTP)

NTP is used to synchronize the system clock, The default configuration files use uk NTP pools (see www.ntp.org), this can be updated by editing `/etc/net.cfg`.

1.2 Apache HTTP server

Apache HTTP server is used to provide authenticated secure external access to the WebBrick Gateway Appliance and access to online documentation. Access to the WebBrick Gateway Appliance from outside, public network, is only allowed using https, from inside you can access

Apache is used to provide access to documentation and remote access to the WebBrick Gateway Appliance.

If you connect to port 80, i.e. using `http://<address>` you will be presented with the WebBrick Gateway Appliance and webbrick documentation links, if you connect over https:, i.e. using `https://<address>` you will be presented with the WebBrick Gateway Appliance home page. In the later case you will have to accept a self signed certificate used by apace for the SSL connection. For access to the WebBrick Gateway Appliance through apache you will also be asked for a user name and password. The default usernam/password is user/webbrick.

To add additional passwords you will need to log in to the WebBrick Gateway Appliance and use the htpasswd2 command. `htpasswd2 -a /etc/apache2/.htpasswd <username>`

will add a new user and ask for password.

`htpasswd2 -help` will provide help.

1.3 passwords

To add users or change password for users you need to login to the WebBrick Gateway Appliance using SSH (or connect keyboard and screen to the console ports). The following usernames are setup on delivery: SSH is configured to disallow direct root login, so you

username	password
root	webbrick
webbrick	password

will need to ssh as `webbrick@mysite` and then issue `su` (set user).

once logged in the command `passwd` can be used to change the root password. To add users use `adduser`. To change password for an arbitray user enter the command: `passwd <username>`.