



## **C610 Appliance Installation Guide**

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<b>General Introduction</b> .....	<b>5</b>
About this Manual .....	5
Warranty Note .....	5
<b>Safety Instructions</b> .....	<b>6</b>
Electrical Safety .....	6
General Safety .....	6
ESD Precautions .....	7
<b>Introduction and Package Contents</b> .....	<b>8</b>
Hardware Configuration .....	8
Inspecting the Package .....	8
<b>Powering Up and Down</b> .....	<b>9</b>
Powering Up the Appliance .....	9
Powering Down the Appliance .....	9
<b>Installation Using ART and System Recovery</b> .....	<b>10</b>
Using the ART Menu via Serial Console or SSH .....	10
ART and Central Management .....	11
<b>Performing a Recovery Process</b> .....	<b>12</b>
Using a PAR file on an USB Stick .....	12
Errors During Recovery .....	12
<b>Connecting to the Network and Configuring</b> .....	<b>13</b>
Default Configuration .....	13
Passwords .....	13
Network .....	13
Configuring the Appliance .....	14
Serial Connection via Console Port .....	14

# General Introduction

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The information in this user guide has been carefully reviewed and is believed to be accurate. It is valid from **Barracuda NG Firewall** firmware version **5.0**. Barracuda Networks assumes no responsibility for any inaccuracies that may be contained in this document. This manual may be updated from time to time. The most up-to-date version of this manual can be found at [www.barracuda.com](http://www.barracuda.com).

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## About this Manual

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This manual provides information for installation and use of the appliance. Installation and maintenance should be carried out by experienced technicians only.

## Warranty Note

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### Note



Opening your Barracuda Networks appliance or removing its warranty label unless instructed to do so by Barracuda Networks support will void your warranty and hardware support.

# Safety Instructions

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The following information relates to the safety of installation and maintenance personnel.

Read and follow all instructions before attempting to unpack, install or operate this equipment, especially before connecting the power adapter.

## Electrical Safety

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Basic electrical safety precautions should be followed to protect yourself from harm and the appliance from damage:

- ***Be aware of the power switch locations on the appliance's chassis as well as the emergency power-off switch for the housing room, the disconnection switch or the electrical outlet. Knowing these locations enables you to quickly remove electrical power from the system in case an electrical accident occurs.***
- ***Do not work alone when working with high voltage components.***
- ***When working around exposed electrical circuits, another person who is familiar with the power-off controls should be nearby to switch off the power if necessary.***
- ***Use only one hand when working with powered-on electrical equipment. This is to avoid making a complete circuit, which will cause electrical shock. Use extreme caution when using metal tools, which can easily damage any electrical components or circuit boards they come into contact with.***
- ***Do not use mats designed to decrease electrostatic discharge as protection from electrical shock. Instead, use rubber mats that have been specifically designed as electrical insulators.***
- ***The power supply power cord must include a grounding plug and must be plugged into grounded electrical outlets.***
- ***To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.***
- ***Avoid installation of this product during a lightning storm.***
- ***Ensure that the air vents (openings along the sides and at the backside) are never blocked and that there is sufficient airflow through the vents to prevent over-heating.***

## General Safety

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- ***Keep the area around the appliance clean and free of clutter.***
- ***Locate a safe and dry location to place this product. Keep it away from wet surfaces/surroundings.***
- ***While working on the system, do not wear loose clothing such as neckties and unbuttoned shirt sleeves, which can come into contact with electrical circuits or be pulled into a cooling fan.***
- ***Remove any jewelry or metal objects from your body, which are excellent metal conductors that can create short circuits and harm you if they come into contact with printed circuit boards or areas where power is present.***

## ESD Precautions

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Electrostatic discharge (ESD) is generated by two objects with different electrical charges coming into contact with each other. An electrical discharge is created to neutralize this difference, which can damage electronic components and printed circuit boards.

The following measures are generally sufficient to neutralize this difference before contact is made to protect your equipment from ESD:

- ***Use a grounded wrist strap designed to prevent static discharge.***
- ***Keep all components and printed circuit boards (PCBs) in their antistatic bags until ready for use.***
- ***Touch a grounded metal object before removing the board from the antistatic bag.***
- ***Do not let components or PCBs come into contact with your clothing, which may retain a charge even if you are wearing a wrist strap.***
- ***Handle a board by its edges only; do not touch its components, peripheral memory modules or contacts.***
- ***When handling chips or modules, avoid touching their pins.***
- ***Put the server board and peripherals back into their antistatic bags when not in use.***
- ***For grounding purposes, make sure your computer chassis provides excellent conductivity between the power supply, the case, the mounting fasteners and the server board.***
- ***After accessing the inside of the system, close back the system and secure it to the rack unit with the retention screws after ensuring that all connections have been made.***

# Introduction and Package Contents

Your new Barracuda NG Control Center C610 is a management appliance preinstalled with firmware to centrally manage Barracuda NG Firewall appliances in a secure, reliable and efficient way.

## Hardware Configuration

**Table 1** *Hardware*

Component	Description
CPU	AMD quad core
Memory	4 GB
HDD	4 x 500 GB, 7200 rpm
Flash Disk	4 GB
Form Factor	2U full size
Dimensions (W/D/H)	44.2 x 8.9 x 64.8 cm
Net Weight	20.9 kg
Power Supply Input Voltage	100 - 240 V, AC
Power Supply Frequency	47 Hz - 63 Hz
Storage Temperature	-20 °C - +70 °C
Operation Temperature	0 °C - 40 °C
Relative Humidity	5% - 95%, non-condensing
Certifications	CE, FCC, ROHS

**Note**



The hardware configuration list in Table 1 was valid at the time this manual was published. The listed components are subject to change at any time, as Barracuda Networks may change hardware components due to technological progress. Therefore, the list may not reflect the current hardware configuration of the Barracuda Networks NG Firewall or NG Control Center appliance it was delivered with.

## Inspecting the Package

The following items are included in the package:

- **One security appliance**
- **One power cord**
- **Printed Quick Start Guide**
- **One USB flash drive including documentation and administrative tools**
- **One rail mount kit**

Please contact Barracuda Networks support if any of these items is missing.

# Powering Up and Down

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This chapter describes the procedure used to install your appliance and perform the initial configuration.

## Powering Up the Appliance

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- **Connect and power on the appliance. The power LED indicates green.**
- **The current status of the boot process can be traced by using the serial console.**
- **After a few seconds, the boot process will be initiated.**
- **Wait until the booting procedure is finished.**

## Powering Down the Appliance

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### Warning



You must never turn off the appliance by simply switching it off or otherwise removing power from it. Always initiate a proper system shutdown as described below.

- **The system shutdown must be initiated either using the Barracuda NG Admin tool or a remote logon to the appliance.**
- **The current status of the shutdown process can be traced through the serial console.**
- **Wait until the shutdown process is finished.**

# Installation Using ART and System Recovery

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## Note



When your Barracuda NG Firewall is booted for the first time after the installation, ART will generate its configuration. Therefore, ART is not available unless this process, that is typically running for 5 to 10 minutes, has been finished.

Active Recovery Technology (ART) enables you to perform certain basic configuration operations in order to reconfigure your appliance outside Barracuda OS. ART is based on a very small-sized Linux system. It can be accessed either via the serial console or via SSH.

## Using the ART Menu via Serial Console or SSH

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You get access to the ART menu by rebooting the appliance while being connected to it via serial console or SSH and pressing any key during the boot process while `Press any key to enter ART` is displayed.

Once the appliance has booted into ART, you will see this menu:

```
*****
* Active Recovery Technology *
*****

=> Test hard disk drive
   Test CPU
   Get hardware info
   Test RAM
   Configuration reset
   Start shell >>
   Reboot
   Exit

Test the appliance hard disk drives.
```

## Note



ART system recovery is not available on Control Center C610.

Use the *Cursor keys*, *Enter* and *Escape* to navigate.

- ***Test hard disk drive***

Evokes a hard disk check tool. A hard disk can be selected first, then read-only checks for bad blocks are performed. In case of a positive, hard disk file system repair actions may be triggered via the CLI only.

- ***Test CPU***

Performs a load test of all available CPUs.

- ***Get hardware info***

Displays all available information stored in a hidden partition on the appliance such as serial number, initial installation date, etc.

- ***Test RAM***

Evokes a RAM checking utility. Note that not the whole existing RAM can be tested as ART OS occupies some RAM by itself.

- ***Configuration reset***

Allows the definition of a new host name, management IP address, default route and optionally a network driver. This functionality comes in handy if connectivity to an appliance was lost due to some misconfiguration or activation of an erroneous PAR file.

- ***Start shell***

Enables access to a bash shell within which you may perform certain commands included with ART.

- ***Reboot***

Reboots the appliance into Barracuda OS.

- ***Exit***

Exits into Barracuda OS.

Currently the only possible reason the ART recovery OS is invoked automatically for is a hard disk drive flagged as "dirty". This may indicate a hardware failure or a corrupt file system on the hard disk. The latter might be remedied by an administrator through the shell via a remote login.

## **ART and Central Management**

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Appliances that are centrally managed using a Barracuda NG Control Center will obviously no longer be normally centrally manageable once the recovery system is up and running. However, ART is aware of the appliance being centrally managed and therefore invokes a connection back to the Control Center, indicating its presence. An administrator can then login remotely to the appliance using SSH, invoking the ART menu or a command line in order to debug the problem or perform a recovery process

# Performing a Recovery Process

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Related  
Docs



See the **Barracuda NG Firewall Administrator's Guide** in order to learn about creating Portable Archive (PAR) files.

## Using a PAR file on an USB Stick

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- ***Be sure that the appliance is powered off.***
- ***Then, insert the USB stick into one of the USB connectors of the appliance and switch the appliance on. Depending on the appliance type, it may take a few minutes until the recovery process will start.***
- ***You may follow the process via the serial console.***
- ***When recovery is finished, power off the appliance and remove the USB stick.***
- ***Switch the appliance on again. If the appliance was recovered with a standard Barracuda manufactured USB stick (autodetection), the appliance will perform another reboot after adjusting some settings. If the appliance was recovered using an USB stick generated with the Barracuda NG Install application specifically for this appliance type, the second reboot is not necessary and the appliance will boot directly into operation mode.***

## Errors During Recovery

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You may trace the output using the serial console.

# Connecting to the Network and Configuring

**Fig. 1** Front Side of the C610 Appliance



The front side of the C610 appliance has a small LED status panel in its upper-right corner. On the back side it offers two unlabelled RJ45 gigabit ports, the left of which is port #1 while the right one is port #2, furthermore there is one DB9 serial *Console* connector, one VGA connector, two USB ports, two PS/2 connectors for connecting a keyboard and a mouse, one 24-pin printer port and two redundant power connectors.

The table below shows the assignment of the network connectors to the internal notation.

**Table 2** Ports

Position on the Back Side	OS Notation
Center Bottom Left	port1
Center Bottom Right	port2

## Default Configuration

### Passwords

**Table 3** Default User and Password

Account Type	User Name	Password
Administrator	root	ngf1r3wall

You need a valid Barracuda Networks license in order to change the administrator password. In demo mode, restrictions in the firmware prevent the appliance from being used in productive environments.

### Network

The ethernet connector *LAN* is preconfigured with the IP address 192.168.200.200 and the netmask 255.255.255.0.

In standard configuration and upon delivery, no other ethernet connector is configured.

## Configuring the Appliance

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In order to configure the appliance please copy Barracuda NG Admin from the USB flash drive to your management PC first.

### Serial Connection via Console Port

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In order to establish a console connection to the appliance using a serial cable, you need to configure the serial port on the terminal using the following parameters:

**Table 4** *Default User and Password*

Parameter	Value
Baud	19200
Bits	8
Stop bit	1
Parity	None
Handshake	None



