FlowMagic-3200-12
Hardware Owner's Manual
And Getting Started Guide

RELEASE 1.0.4.01391
Doc. No. UG100
November 30, 2018
INFINICORE INCOPORATED

Publishing Information:

Document Number	UG100
Doc. Release Number	1.0.4.01391
Date	November 30th 2018

Contact Information:

Infinicore Incorporated
Information: info@infinicoreinc.com Web Site: http://www.infinicoreinc.com

Table of Contents

Welcome to FlowMagic-3200-12 Hardware Owner's Manual and Getting Started Guide..... 5

Chapter 1 Check the Items in FlowMagic-3200-12 Package..... 6

Chapter 2 Install the FlowMagic-3200-12 Appliance..... 8

2.1 FlowMagic-3200-12 Rear Panel..... 8

2.1.1 Traffic Modules and Ports Numbering..... 9

2.1.2 Traffic Module LEDs..... 10

2.1.3 Management LAN (RJ-45) LEDs..... 13

2.1.4 BMC LAN (RJ-45) LEDs..... 14

2.2 FlowMagic-3200-12 Front Panel..... 14

2.2.1 Control Panel Buttons..... 15

2.2.2. Control Panel LEDs..... 15

2.2.3 HDD Status LED..... 16

2.3 Prerequisites..... 17

2.4 Steps to connect cables..... 17

2.4.1 Ethernet based Management Port Connection..... 17

2.4.2 Optional: Console Port Connection..... 17

2.4.3 Optional: VGA Connection..... 17

2.4.4 Optional: Establish Connection between Traffic Ports..... 17

2.4.5 Power Cord Connection..... 18

2.4.6 Connections..... 18

Chapter 3 Installation of Latest Version of Browser..... 19

3.1 Prerequisites..... 19

3.1.1 Download web browser..... 19

3.1.2 The TeraTerm..... 20

Chapter 4 Power on and Power off the FlowMagic-3200-12 Appliance..... 21

4.1 Power-On Sequence..... 21

4.2 Power-Off Sequence 21
Chapter 5 Use Command Line Interface to Setup Management Parameters 22
5.1 Set up serial port on PC 22
5.1.1 Tera Term Serial Port Setting Window 23
5.1.2 Hyper Terminal Port Setting Window 23
5.2 Login to Command line interface 23
5.3 Navigation Keys used in Command Line Interface 23
5.4 Configure the network parameters and system parameters 24
Chapter 6 Validation of FlowMagic Appliance Hardware 25
6.1 Validation of Processor and Memory Sub System 25
6.2 Validation of Hard Drive Interface 26
6.2.1 Format the disk 26
6.2.2 Benchmark and Validate Disk Drives 28
Chapter 7 Overview of FlowMagic-3200-12 Web User Interface 30
7.1 FlowMagic-3200-12 Web GUI Layout 30
Chapter 8 Recommended Reading Material 33

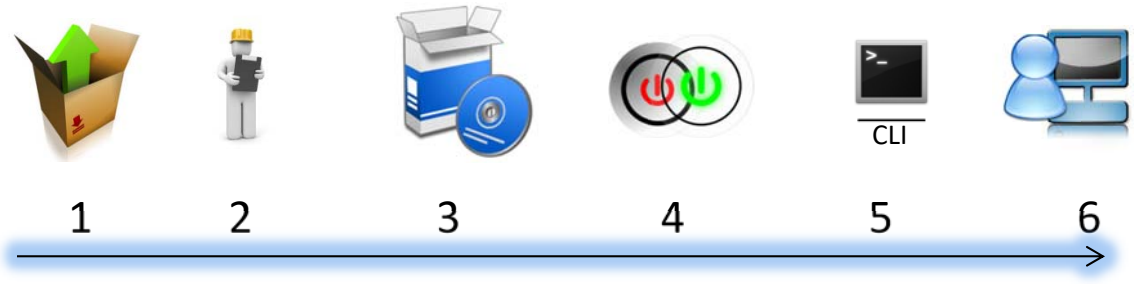
Welcome to FlowMagic-3200-12 Hardware Owner's Manual and Getting Started Guide.

In this Hardware Owner's Manual and Getting Started Guide, you will find comprehensive information about how to verify received package, how to setup and operate FlowMagic-3200-12 appliance. A fully functional FlowMagic-3200-12 appliance will be ready to use after the instructions in this guide are completed.

This guide contains the following 7 easy to follow chapters:

- Chapter 1 Check the Items in FlowMagic-3200-12 Appliance Package
- Chapter 2 Install the FlowMagic-3200-12 Appliance
- Chapter 3 Installation of Latest Version of Browser
- Chapter 4 Power on and Power off FlowMagic-3200-12 Appliance
- Chapter 5 Use Command Line Interface to Setup Management Parameters
- Chapter 6 Stress Test FlowMagic Chassis CPU and Memory
- Chapter 7 Overview of FlowMagic-3200-12 Web User Interface

Should you have any question, suggestion or feature request, please do not hesitate to contact Infinicore support team at Email: support@infinicoreinc.com. We are more than happy to assist you.



Chapter 1 Check the Items in FlowMagic-3200-12 Package

Before we start installation, it is necessary to check the received contents and make sure they are complete and free of damage. Each FlowMagic-3200-12 package is shipped with the following 5 or 6 items at the minimum configuration. Please contact support@infinicoreinc.com should you find any item missing.

1

Item Name	FlowMagic-3200-12 Appliance
Count	1

2

Item Name	Power Cord(s)
Count	2

3

Item Name	Ethernet Cable
Count	1

4

Item Name	Rack Mounting Kit
Count	1

5

Item Name	Installation Disk
Count	0 or 1

6

Item Name	FlowMagic-3200-12 Hardware Owner's Manual and Getting Started Guide
Count	1

Note 1: The above icons are abstract view to the content. The actual look and feel may be different.

Note2: Based on the details of your order, there may be additional items included in the package, such as:

- System Recovery USB Thumb Drive
- Additional SFP modules and/or SFP+ modules
- Factory Tested Ethernet or Other Types of Cables
- Region Specific Certification if Necessary
- Additional Modules and Subsystems

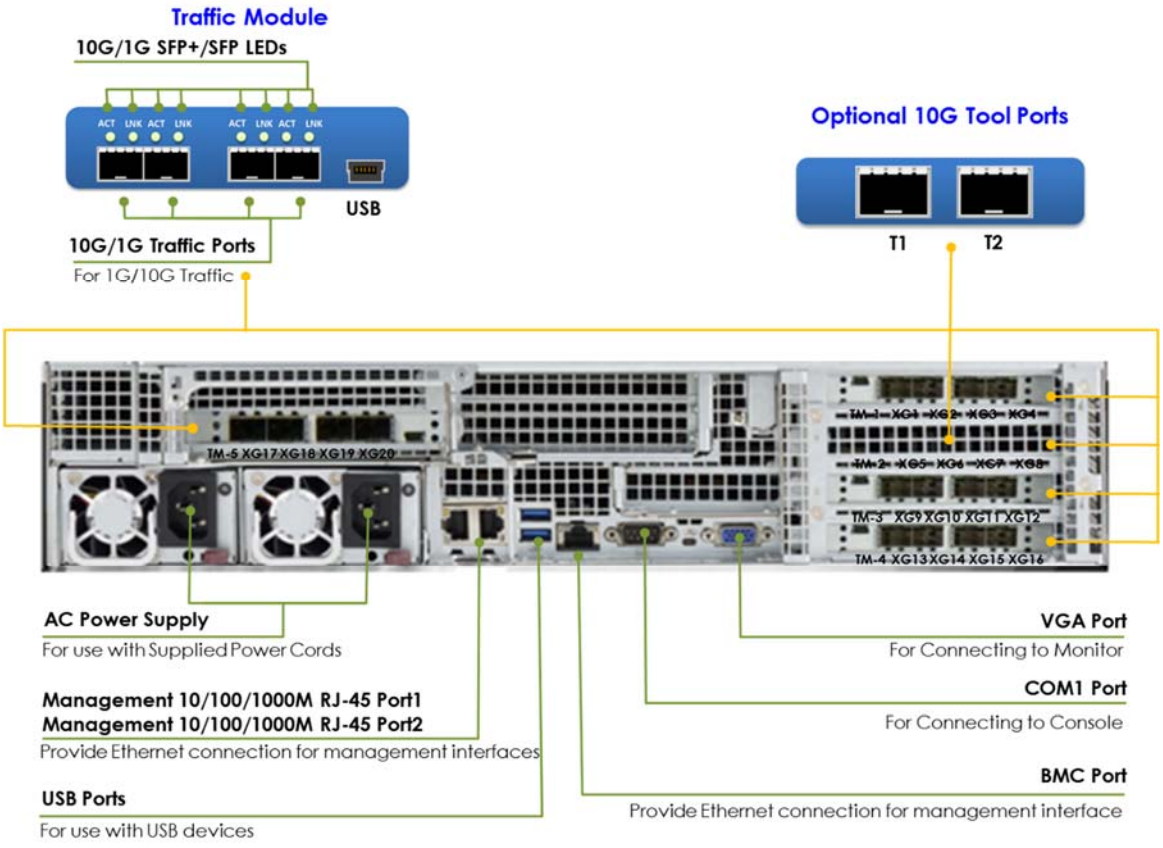
Chapter 2 Install the FlowMagic-3200-12 Appliance

This chapter provides a quick setup checklist to get your FlowMagic-3200-12 appliance up and running.

Before we install FlowMagic-3200-12 Appliance, it is beneficial to spend some time to get familiar with the various interfaces built into FlowMagic-3200-12 appliance hardware.

2.1 FlowMagic-3200-12 Rear Panel

A typical layout of FlowMagic-3200-12 rear panel is displayed in the below picture. Due to various selection of traffic modules and configurations, the names of the ports will be different depending on order configurations, please use the names presented by the web user interface.



Note 1: The availability of the number of Traffic Modules depends on the configuration. Please check the order configuration if you have any questions related to the number of Traffic Modules in the shipment. FlowMagic-3200-12 can be fully upgraded to a maximum of 5 traffic modules with total of 20 10G/1G SPF+/SFP traffic ports. Additional components may be required to be upgraded to achieve optimal performance.

Note 2: The availability of Tool Ports depends on the ordering configuration.

You will find the relative location of the following important interfaces (listed from left to right):

- iNIC Traffic Modules*
- Ethernet Management Port ×2
- USB Port ×2
- BMC Port ×1
- COM1 Console Port ×1
- VGA Port ×1
- iNIC Traffic Modules*

* The available iNIC Traffic Modules are listed in the below table:

Part Number	Port Count	Port Specification
iNIC-T2G/T4G/T6G-RJ45	2, 4 or 6	10Mb/100Mb/1Gb RJ45
iNIC-T2G/T4G/T6G-SFP	2, 4 or 6	10Mb/100Mb/1Gb SFP Fiber
iNIC-T20G/40G-RJ45	2 or 4	10Mb/100Mb/1Gb/10Gb RJ45 Copper
iNIC-T20G/T40G-SFP	2 or 4	1Gb/10Gb SFP/SFP+ Fiber
iNIC-T40G	4	1Gb/10Gb SFP/SFP+ Fiber 9.953Gb WAN SFP+ Fiber
iNIC-T50G	2	1Gb/10Gb/25Gb SFP/SFP+/SFP28 Fiber
iNIC-T80G	2	40Gb QSFP+ Fiber
iNIC-T200G	2	40Gb/100Gb QSFP+/QSFP28 Fiber

2.1.1 Traffic Modules and Ports Numbering

FlowMagic-3200-12 appliance traffic modules and ports numbering follows from top to bottom and left to right sequence. Below figure is an example for FlowMagic-3200-12 with iNIC-T40G traffic modules installed.

FlowMagic-3200-12 appliance can be installed with up to six traffic modules depending on the ordering configuration. Ports are numbered from the top to bottom and from the left to right by default as shown in the below table.

Traffic Module	Traffic Port No.					
iNIC-T2G-RJ45	GE1	GE2				
iNIC-T2G-SFP	GE1	GE2				
iNIC-T4G-RJ45	GE1	GE2	GE3	GE4		
iNIC-T4G-SFP	GE1	GE2	GE3	GE4		
iNIC-T6G-RJ45	GE1	GE2	GE3	GE4	GE5	GE6
iNIC-T6G-SFP	GE1	GE2	GE3	GE4	GE5	GE6
iNIC-T20G-RJ45	XG1	XG2				
iNIC-T20G-SFP	XG1	XG2				
iNIC-T40G-RJ45	XG1	XG2	XG3	XG4		
iNIC-T40G-SFP	XG1	XG2	XG3	XG4		
iNIC-T40G	XG1	XG2	XG3	XG4		
iNIC-T50G	XXVG1	XXVG2				
iNIC-T80G	XLG1	XLG2				
iNIC-T200G	CG1	CG2				

2.1.2 Traffic Module LEDs

The following figure and table describe the traffic ports LEDs status on the FlowMagic-3200-12 appliance rear panel with various traffic modules that can be used with FlowMagic-3200-12.

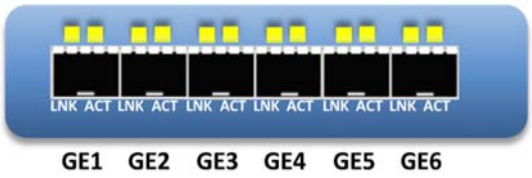
2.1.2.1 iNIC-T2G/T4G/6G-RJ45 Traffic Module LEDs

The following figure and table describe the LEDs status of the iNIC-T2G/T4G/6G-RJ45 traffic modules on FlowMagic-400 appliance rear panel.

LEDs Description-Two LEDs Per Port	
LINK LED	**YELLOW:** 1Gbps link **GREEN:** 100Mbps link **OFF:** 10M link or No link
ACT LED	**BLINKING:** Data activity **OFF:** No data activity

2.1.2.2 iNIC-T2G/T4G/6G-SFP Traffic Module LEDs

The following figure and table describe the LEDs status of the iNIC-T2G/T4G/6G-SFP traffic modules.



LEDs Description-Two LEDs Per Port	
LINK LED	**YELLOW:** 1Gbps link **GREEN:** 100Mbps link **OFF:** 10M link or No link
ACT LED	**BLINKING:** Data activity **OFF:** No data activity

2.1.2.3 iNIC-T20G-RJ45 Traffic Module LEDs

The following figure and table describe the LEDs status of the iNIC-T20G-RJ45 traffic modules.

LEDs Description-Two LEDs Per Port	
LINK LED	**GREEN:** 10Gbps link **YELLOW:** 1Gbbps link **OFF:** No link
ACT LED	**GREEN BLINKING:** Data activity **GREEN:** No data activity

2.1.2.4 iNIC-T20G-SFP Traffic Module LEDs

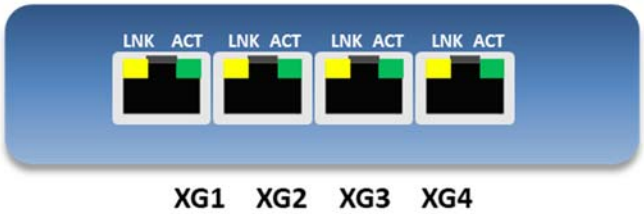
The following figure and table describe the LEDs status of the iNIC-T20G-SFP traffic modules.

LEDs Description-Two LEDs Per Port	
LINK LED	**GREEN:** 10Gbps link **YELLOW:** 1Gbbps link **OFF:** No link

ACT LED	**GREEN BLINKING:** Data activity **GREEN:** No data activity

2.1.2.5 iNIC-T40G-RJ45 Traffic Module LEDs

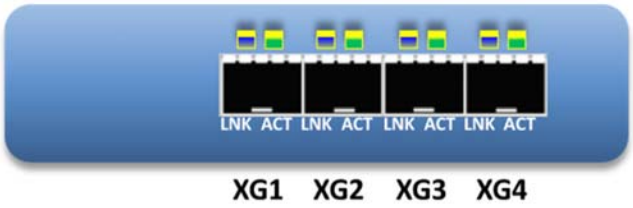
The following figure and table describe the LEDs status of the iNIC-T40G-RJ45 traffic modules.



LEDs Description-Two LEDs Per Port	
LINK LED	**GREEN:** 10Gbps link **YELLOW:** 1Gbbps link **OFF:** No link
ACT LED	**GREEN BLINKING:** Data activity **GREEN:** No data activity

2.1.2.6 iNIC-T40G-SFP Traffic Module LEDs

The following figure and table describe the LEDs status of the iNIC-T40G-SFP traffic modules.



LEDs Description-Two LEDs Per Port	
LINK LED	**BLUE:** 10Gbps link **YELLOW:** 1Gbbps link **OFF:** No link
ACT LED	**GREEN BLINKING:** Data activity **GREEN:** No data activity

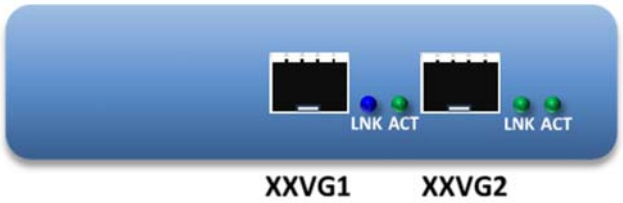
2.1.2.7 iNIC-T40G Traffic Module LEDs

The following figure and table describe the LEDs status of the iNIC-T40G traffic modules.

LEDs Description-Two LEDs Per Port	
LINK LED	**GREEN:** 1/10Gbps link **OFF:** No link
ACT LED	**GREEN BLINKING:** Data activity **GREEN:** No data activity

2.1.2.8 iNIC-T50G Traffic Module LEDs

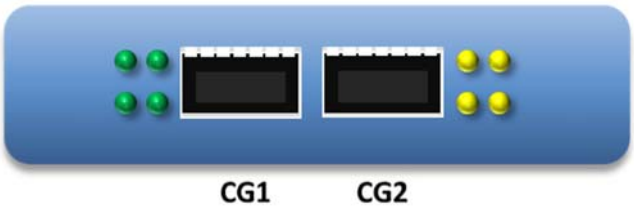
The following figure and table describe the LEDs status of the iNIC-T50G traffic modules.



LEDs Description-Two LEDs Per Port	
LINK LED	**GREEB:** 25Gbbps **BLUE:** 10Gbps
ACT LED	**GREEN BLINKING:** Data activity **GREEN:** No data activity

2.1.2.9 iNIC-T200G Traffic Module LEDs

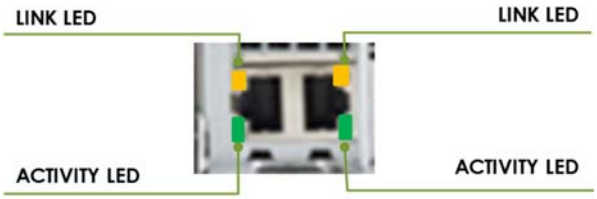
The following figure and table describe the LEDs status of the iNIC-T200G traffic modules.



LEDs Description-Four LEDs Per Port	
LINK/ACT LED for 100/25/10Gbps LED **LINK: ON** **ACT: BLINK**	**YELLOW:** 100Gbps **ORANGE:** 25Gbbps **BLUE:** 10Gbps
LINK/ACT LED for 40/25/10Gbps LED **LINK: ON** **ACT: BLINK**	**YELLOW:** 40Gbps **ORANGE:** 25Gbbps **BLUE:** 10Gbps

2.1.3 Management LAN (RJ-45) LEDs

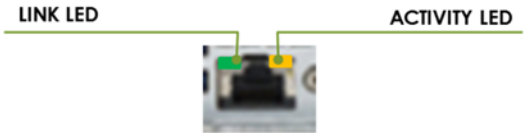
The following figure and table describe the Management 100M/1G/10G RJ-45 LEDs status on FlowMagic-3200-12 appliance rear panel.



LAN LEDs Description	
ACT LED	**GREEN:** Linked **BLINKING:** Data activity **OFF:** No link
LINK LED	**GREEN:** 10Gbps connection **BLINKING:** 1Gbps connection **OFF:** 100Mbps connection

2.1.4 BMC LAN (RJ-45) LEDs

The following figure and table describe the BMC LAN RJ-45 LEDs status on FlowMagic-3200-12 appliance rear panel.

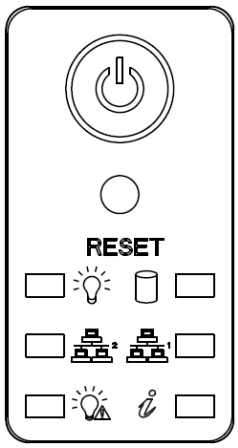


LAN LEDs Description	
LINK LED	**AMBER:** 1Gbps Connection **GREEN:** 100Mbps Connection **OFF:** 10Mbps or No Connection
ACTIVITY LED	**BLINKING:** Data activity **OFF:** No Activities

2.2 FlowMagic-3200-12 Front Panel

Figure below displays the layout of FlowMagic-3200-12 front panel.

There are several LEDs on the control panel as well as others on the drive carriers to keep you being constantly informed of the overall status of the system as well as the activity and health of specific components. There are also two buttons on the chassis control panel, as shown in the figure below. This following session explains the meanings of all LED indicators and the appropriate response you may need to take.



2.2.1 Control Panel Buttons

There are two push-buttons located on the front of the chassis: a power on/off button and a reset button.

Buttons		Operations
	POWER ON/OFF	Use the power button to apply or remove power from the power supply. Turning off appliance with this button removes the main power but keeps standby power supply to the appliance.
 RESET	RESET	Use the reset button to reboot the appliance

2.2.2. Control Panel LEDs

There are six LEDs on the control panel located on the control panel.

These LEDs provide critical information related to different parts of the system. This section explains what each LED indicates when illuminated and any action that may be required.

LEDs		Meanings
	Power LED	**ON:** indicates power is being supplies the appliance's power supply units. This LED should normally be illuminated when the system is operating.

	HDD LED	**Blinking:** indicates hard drive read/write activities **OFF:** No HDD activity
	Management LAN RJ-45 Port2 LED	**ON:** LAN Connection is present **Blinking:** indicates network activities on Management 10/100/1000 RJ-45 Port 2 **OFF:** No LAN connection
	Management LAN RJ-45 Port1 LED	**ON:** LAN Connection is present **Flashing:** indicates network activities on Management 10/100/1000 RJ-45 Port 1 **OFF:** No LAN connection
	Power Fail LED	**ON:** Indicates a power supply module has failed **OFF:** Normal
	Information LED	**ON and RED:** Overheat **Flashing 1Hz:** Indicates Fan Fail **Flashing 1/4Hz:** Indicates Redundant Power Supply Fail **BLUE:** Activated Local UID **FLASHING BLUE:** Remote UID is on

2.2.3 HDD Status LED

There are total 12 Hard disk drive bays which allow a total of 12 HDDs to be installed in the chassis. Each HDD has its own LEDs, please see the following figure and table for LED status details.

SATA II/SAS HDD LED Description	
HDD Activity LED (Blue)	**ON:** HDD present, no activity **Blinking:** IO activity **OFF:** HDD not present
HDD Status LED	**RED ON:** Failed drive for SAS/SATA/NVMe with RSTe support **RED Blinking at 1 Hz:** Rebuilt drive for SAS/SATA/NVMe with RSTe support **RED Blinking with 2 blinks and one stop at 1 Hz:** Hot spare for SAS/SATA/NVMe with RSTe support **RED on for 5 seconds then off:** Power on for SAS/SATA/NVMe with RSTe support

	RED Blinking at 4 Hz: Identify drive for SAS/SATA/NVMe with RSTe support **GREEN ON:** Safe to remove NVMe device **AMBER Blinking at 1 Hz:** Attention state-do not remove NVMe device

2.3 Prerequisites

The following prerequisites are necessary before proceeding to Section 2.4.

- A PC, which required to have the following
  - Ethernet connectivity to the FlowMagic-3200-12 Appliance
  - Microsoft Windows XP or Microsoft Windows 7 or later
  - The latest browser such as Chrome from Google, or Firefox from Mozilla and Safari from Apple Inc. if running on a MAC OS.
  - Optionally, a working serial port or a USB to serial port converter for debugging purpose
- 110-240V 50-60Hz Power Connector with 8-5Amps capacity

2.4 Steps to connect cables

Please use the following steps to connect FlowMagic to necessary interfaces on PC.

2.4.1 Ethernet based Management Port Connection

Use Ethernet cable Cat.5 or better to connect FlowMagic management port to a switch or PC. The management Ethernet cable is not provided in the packing list.

2.4.2 Optional: Console Port Connection

Use a Crossover (NULL-Modem) Console cable to connect FlowMagic console port to the PC's serial port. Fasten the screw on the DB-9 connector.

2.4.3 Optional: VGA Connection

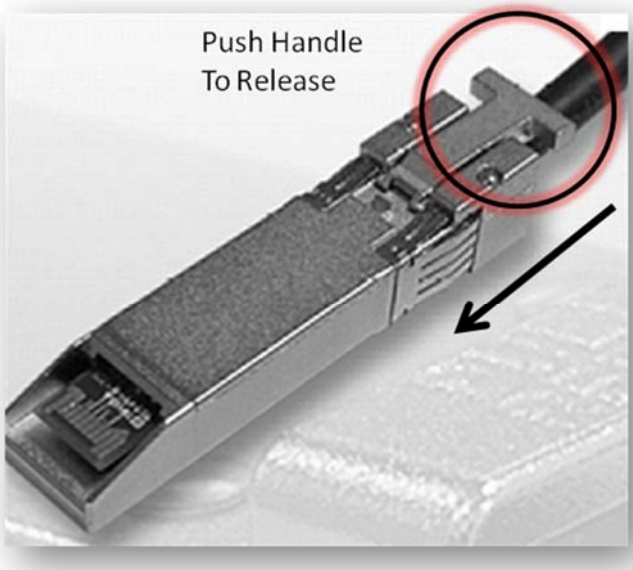
Use a VGA cable to connect FlowMagic VGA port to monitor. Fasten the screw on the VGA connector.

2.4.4 Optional: Establish Connection between Traffic Ports

Depending on the traffic module(s) installed, please use suitable optics modules and fiber cables or DACs, or Ethernet cables to connect Traffic ports.

Tip: For most of the SFP/SFP+/SFP28/QSFP+/QSFP28 DAC cables, please note that to disconnect the cable, there is usually a lock need to be pushed or pulled to release the cable. Below

is an example of one kind of DAC with a push handle lock, the handle is located beneath the DAC plug, and push the handle to release the cable, as shown in the following figure.



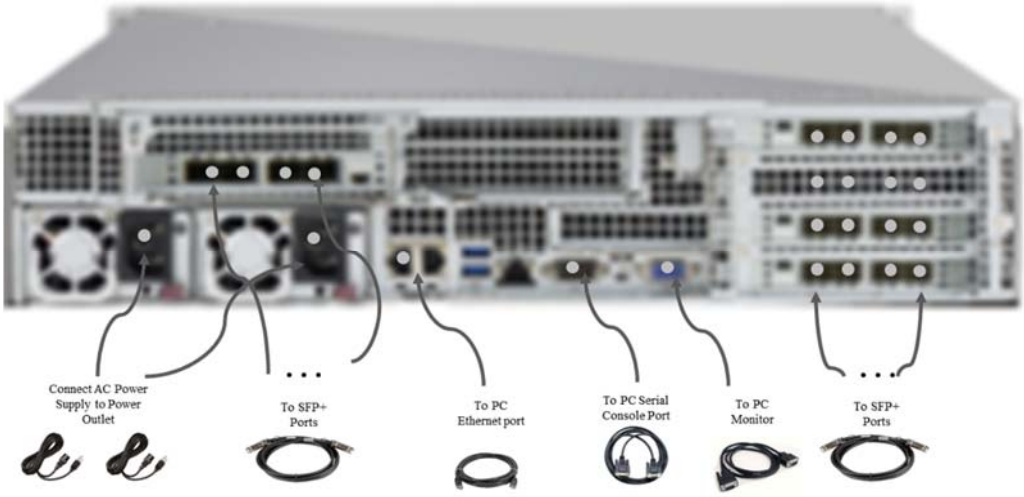
SFP+ DAC Cable Release Latch

2.4.5 Power Cord Connection

At last, use the power codes included in the package to connect FlowMagic-3200-12 appliance to the power source.

2.4.6 Connections

The following figure displays a view of FlowMagic-3200-12 Appliance with all previous mentioned connections in place.



Chapter 3 Installation of Latest Version of Browser

This chapter will provide step by step guidance to install a modern browser to a PC used in previous chapter. You may skip this entire chapter if you have one of the following browser installed already.

- Mozilla Firefox
- Google Chrome
- Microsoft Internet Explorer 9 or after
- Apple Safari

3.1 Prerequisites

3.1.1 Download web browser

Modern web browsers are often provided for free by many different vendors. The following browser products are recommended to use with FlowMagic-3200-12.

- Microsoft Windows XP, Windows Vista, Windows 7 and Windows 8

  Chrome from Google Inc.
  https://www.google.com/intl/en/chrome/browser/

  Firefox from Mozilla Foundation
  https://www.mozilla.org/en-US/firefox/new/

- Microsoft Windows 8

  Internet Explorer 9, 10 from Microsoft Inc.

  Chrome from Google Inc.
  https://www.google.com/intl/en/chrome/browser/

  Firefox from Mozilla Foundation
  https://www.mozilla.org/en-US/firefox/new/

- MAC OS

  Safari from Apple Inc.

- Linux Distributions

  Firefox from Mozilla Foundation
  https://www.mozilla.org/en-US/firefox/new/

3.1.2 The TeraTerm

Since Windows 7, Microsoft does not include HyperTerminal program into their operating system, which is often used to establish console access, we recommend you use a program called TeraTerm that can be found at the following link. You can skip this step if you have alternative application that provides console access.

http://hp.vector.co.jp/authors/VA002416/ttermp23.zip

Chapter 4 Power on and Power off the FlowMagic-3200-12 Appliance

This chapter describes the power on and power off process of FlowMagic-3200-12 Appliance.

4.1 Power-On Sequence

Before powering on the FlowMagic-3200-12 appliance, please be noted that FlowMagic-3200-12 appliance has a default IP address of **"192.168.0.221/24"**. In order to prevent IP address confliction, when you are not sure, please leave the Ethernet cable unplugged to your network. Instead directly connect the appliance with a desktop or a laptop to change the IP address from GUI.

When ready, please press power on button to turn the appliance on.

It will take about 5 minutes or less before the appliance to be ready to use.

4.2 Power-Off Sequence

There are two ways to initiate power off sequence.

- The Power off sequence is entered when power button is pressed again when the appliance is on.
- When the chassis is not power off, press and HOLD the Power off button for 15 seconds or less will force the appliance to be powered off.

As the last resort, when the chassis still stays on, pull out the power cords when the above methods failed.

Chapter 5 Use Command Line Interface to Setup Management Parameters

After FlowMagic-3200-12 Appliance has been boot up, it is the time to setup the management parameters through the attached monitor/keyboard, network or serial port. The settings will take effect immediately after the configuration is changed.

Please note the FlowMagic-3200-12 Appliance allows user to attach a Monitor and Keyboard directly to configure the appliance. It is easier to use than the serial port.

Please note that when serial port is used to connect to PC, a cross-over NULL modem cable is needed for computer to establish connection to FlowMagic-3200-12.

The following table lists the necessary parameters that are required to be set.

Parameter	Meaning	Importance	Command
Management IP	Management IP address and netmask	Mandatory	config interface mgmt ip
Gateway	Gateway	Optional	Config interface mgmt gateway
Date	Date and Time	Optional	Config system date
Host name	Name of the appliance	Optional	Config system hostname
Description	Description about the appliance	Optional	Config system desc
Location	Location of the appliance	Optional	Config system location
Contact	Administrator Contact Information	Optional	Config system contact

The following sections will guide you through the setup.

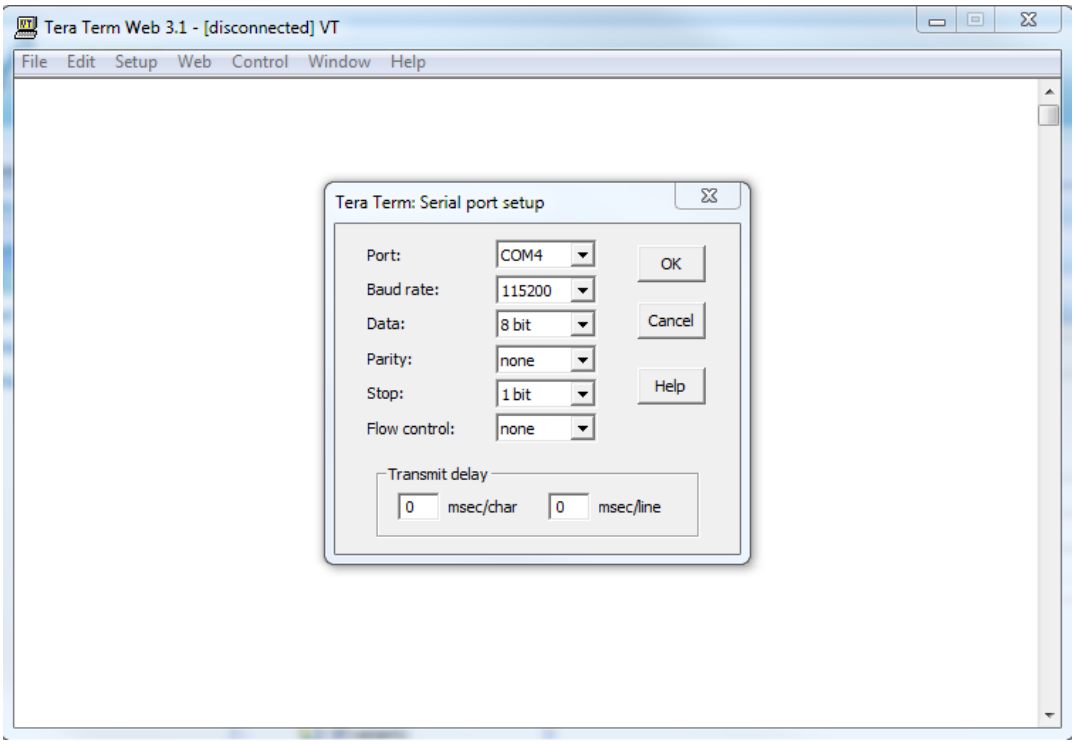
5.1 Set up serial port on PC

The console port of FlowMagic-3200-12 Appliance runs at the following settings.

- Baud Rate: 115200
- Data Bits: 8 bit
- Stop Bits: 1 bit
- Parity: No
- Flow Control: No

The serial port setting used by your console application needs to match the setting above for successfully communication. The following is screen shots of the port setting using Tera Term and Microsoft HyperTerminal.

5.1.1 Tera Term Serial Port Setting Window



5.1.2 Hyper Terminal Port Setting Window

Configure Hyper Terminal similiarly to the settings shown in the 5.1.1.

5.2 Login to Command line interface

Each FlowMagic Appliance comes with default administrator account WITHOUT password:

Username: admin

Password:

5.3 Navigation Keys used in Command Line Interface

The command line interface embedded in FlowMagic-3200-12 Appliance follows popular Cisco CLI style. One can get help information by pressing "?" key at any time.

```
FlowMagic# help keys

..       : Up one command level
Backspace: Delete one character before cursor
Enter    : execute command
Ctrl+z   : Back to the top level command
Ctrl+c   : Discard current input line

FlowMagic#
FlowMagic# show running
```

```
Hardware Platform    :
Serial Number        : 04194951
InfiniOS Version     : 1.0.3

Control Plane CPU    : Intel(R) Xeon(TM) CPU @ 1.80GHz
Control Plane Version: x86-0.9.35
CP Memory Max/Free   : 516472832/309981184
CP Core Temp         : 30.0 (C)

Management IP Adress : 192.168.0.221
Netmask              : 255.255.255.0
Gateway              : 192.168.0.1
```

5.4 Configure the network parameters and system parameters

The following commands are used as an example to complete the setting of the following parameters:

- IP address: 192.168.0.155/255.255.255.0
- Gateway: 192.168.0.1
- Hostname: QC01
- Location: QClab02-Rack1
- Administrator Contact: "x613 admin"
- Date: 2013-02-29 16:28:00

```
FlowMagic# config interface mgmt ip 192.168.0.155/24
System IP address set to 192.168.0.155 with netmask 255.255.255.0
FlowMagic# config interface mgmt gateway 192.168.0.1
Default gateway address is set to 192.168.0.1
FlowMagic# config system
FlowMagic# system# ?

hostname        - name of the system
description     - description of the system
location        - location of the system
contact         - adminstrator contact
date            - Date and Time Settings

FlowMagic system# hostname QC01
QC01 system# description QC
QC01 system# location QClab02-Rack1
QC01 system# contact x613 admin
QC01 system# date 2013-02-29 16:28:00
QC01 system#
```

After the management IP address has been configured to the FlowMagic-3200-12 Appliance, the appliance is expected to be accessible through the network.

Chapter 6 Validation of FlowMagic Appliance Hardware

After the chassis is received from shipping, it is recommended to validate functionality of critical components before commissioning the appliance into production.

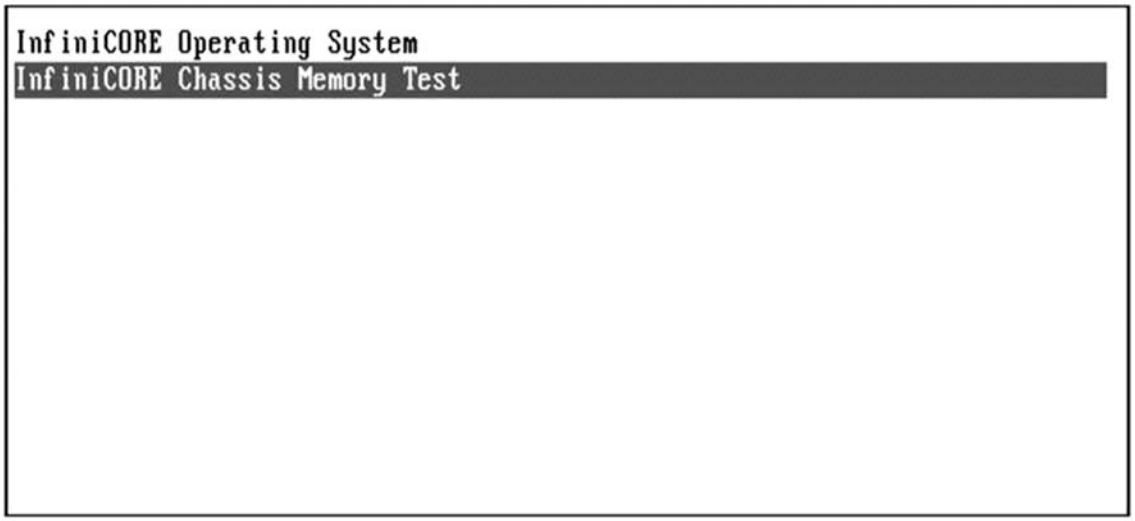
FlowMagic appliance is purposefully shipped with the following easy to use test cases.

- Validation of Processor and Memory Sub System
- Validation of Hard Disk Drives

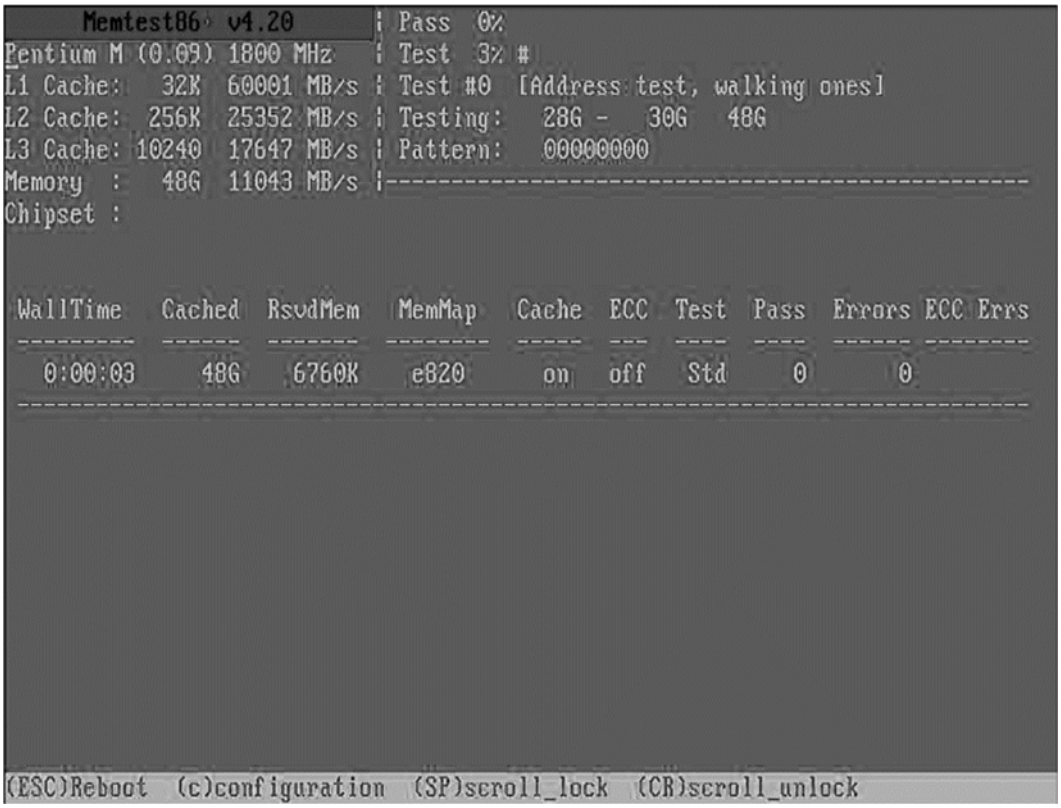
6.1 Validation of Processor and Memory Sub System

FlowMagic-3200-12 is equipped with a CPU and memory stress test that can be triggered from the boot up menu. To do this test, please have the VGA monitor and keyboard connected.

After VGA and Keyboard is connected, power on the appliance.



During the boot up pause, please choose the "InfiniCORE Chassis Memory Test" from the boot menu to invoke the memory test. Once the test starts, the following screen shot will be shown up.



This test is designed to stress the CPU and memory system.

It is recommended to have the test run for 1 hour or longer to be confident that there is not any defect in the processor sub system and memory sub system.

Press ESC any time to stop the test and reboot.

6.2 Validation of Hard Drive Interface

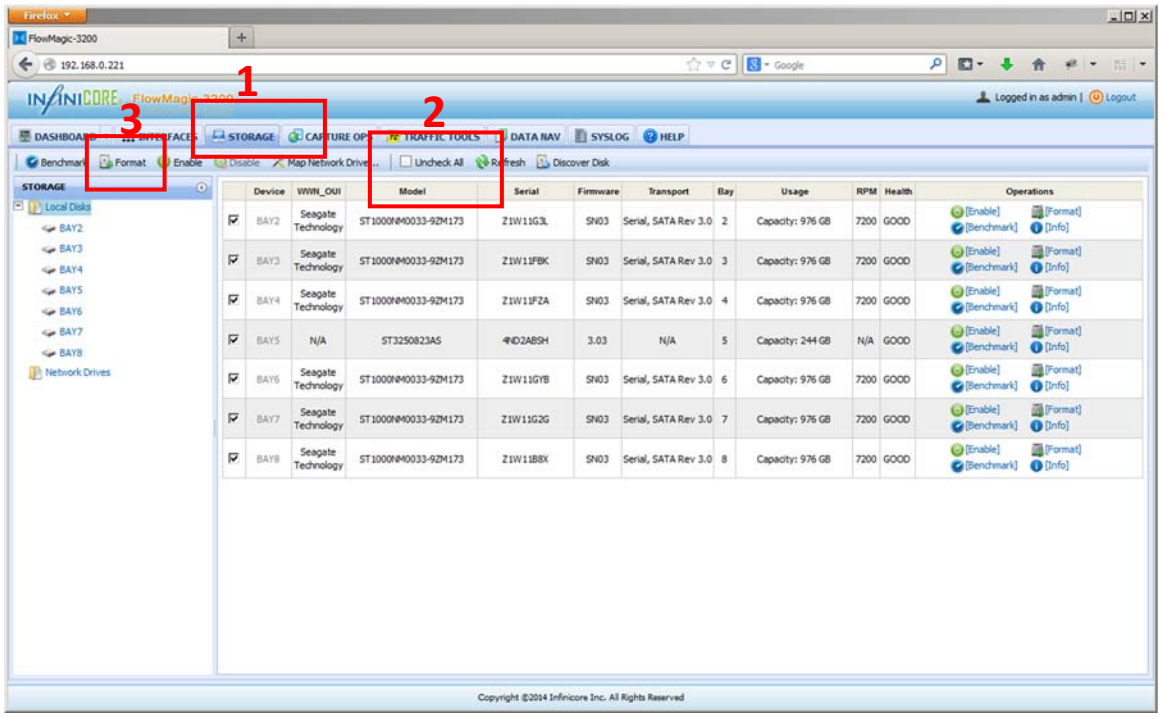
Hard Drive is a critical component to FlowMagic system. The FlowMagic System Software provides a benchmark utility that can be used to stress test hard drive interfaces and drives themselves.

Before we start to validate hard drives, please install the drives properly into the FlowMagic system and power up the FlowMagic.

6.2.1 Format the disk

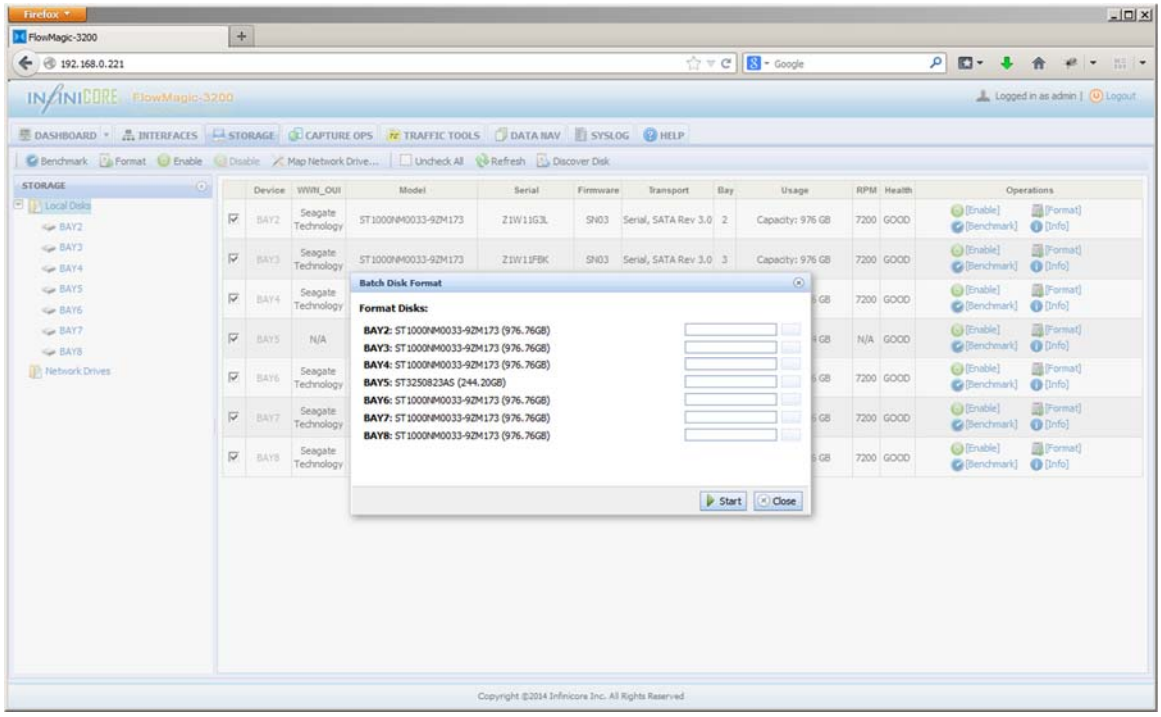
After system is boot up, navigate to “STORAGE” tab, verify the hard drives are properly detected and listed in the client area.

Choose “Check All” then click “Format”



Once “Format” is clicked, the format dialog will show up.

Click on “Start” to start format all drives.

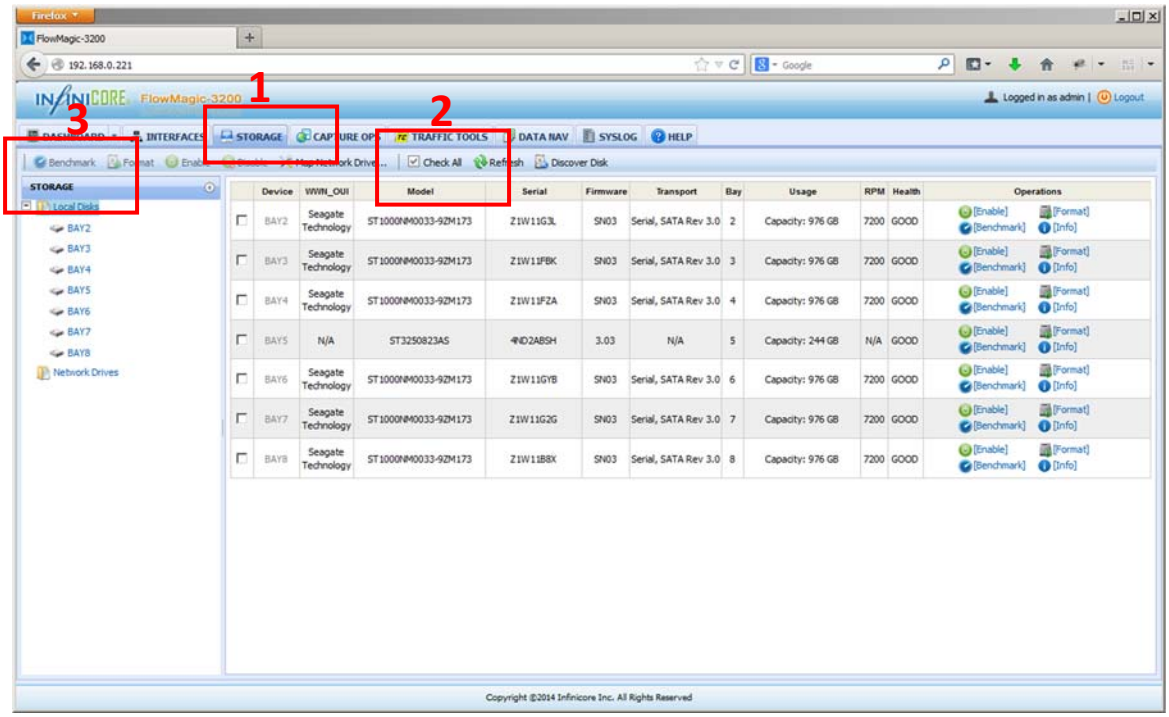


6.2.2 Benchmark and Validate Disk Drives

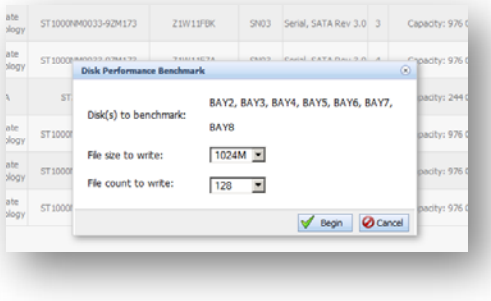
After disk drives are properly formatted. Please navigate to “STORAGE” TAB by clicking “STORAGE” as shown below.

Please click “Check All”;

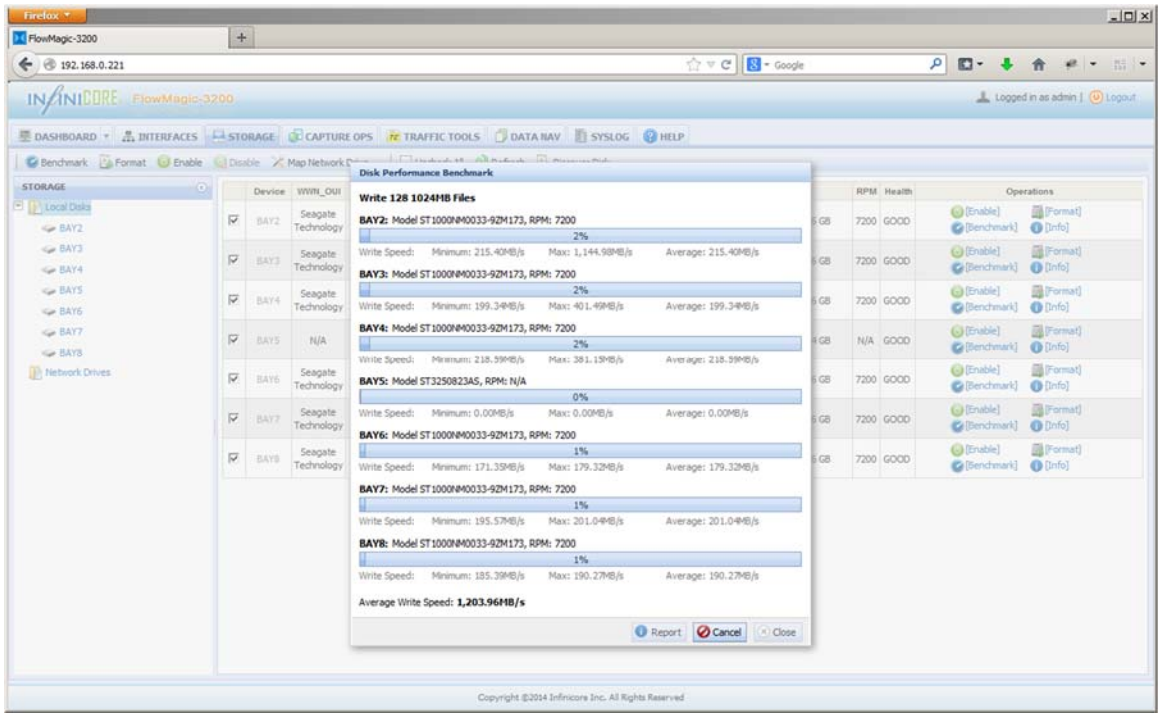
Please click “Benchmark”.



After click “Benchmark”, a dialog will pop up and display the settings for the benchmark.



Select desired file size and count. Please note that the total number of bytes should be smaller than the drive size.



Wait until the test is finished and free of error.

Chapter 7 Overview of FlowMagic-3200-12 Web User Interface

Once user configured the IP address and FlowMagic-3200-12 is accessible through network. User can access the FlowMagic-3200-12 WEB UI by pointing a browser to the IP address of FlowMagic-3200-12 Appliance. The Web User Interface uses the same administrator account as the command line interface, which is admin WITHOUT a password. Please see the following figure for log in window.

Username: admin

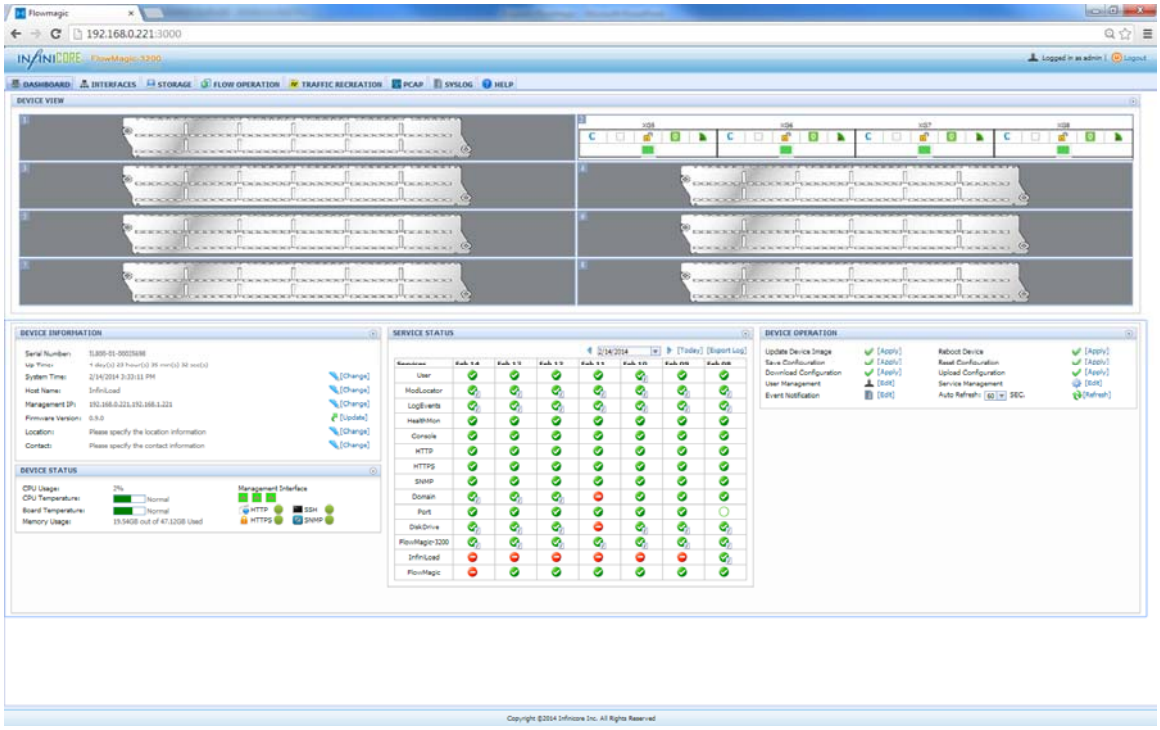
Password:

The Web user Interface is a recommended method to interact with FlowMagic appliance. In WebUI, users can perform all the operations such as the following on the device:

- The port management tasks such as allocation, reservation and state management
- Domain management tasks such as creation, deletion, enable, disable domains
- User management tasks such as creation, deletion and edition of users
- Device Information including serial number, firmware version, location and administrator's contact information
- Device operations including the ability to update device firmware, ability to save configuration and ability to reboot the appliance.

7.1 FlowMagic-3200-12 Web GUI Layout

It is beneficial for users to spend some time to get familiar with the layout of FlowMagic-3200-12 Web UI layout. Figure below displays a typical Web GUI layout.



The FlowMagic Web UI has the following eight tabbed views:

- Dashboard
  Dashboard provides bird's eye view to the device. It also provides a collection of the most frequently used operations without switching the tabs.
- Interfaces
  Interface tab allows operator to view port settings, admin status, link status, speed, data statistics, interface module types and associated attributes, and mange interface operations.
- Storage
  Storage tab allows operator to manage storage HDD settings. It also gives a complete view over all available HDDs models, serial, firmware, position, capacity, usage, speed information.
- Flow Operation
  Flow operation tab gives operator the ability to choose and mange different kind of traffic operation modes such as flow capture and archival, load balance, traffic replication, traffic aggregation with reverse switching, traffic aggregation and monitor.
- Data Navigation
  Data navigation tab provides access to analytic results and scan results of data, exported PCAPs and filtered packet data sets.
- Resource
  Resource is used to store common resources for operators' sharing and reference purpose, such as filters, IP black list, and pattern list, etc.
- Syslog
  Syslog gives the operator abilities to view, search and filter log events accumulated since appliance boots.
- Help

Help view allows operator to view online help documents about the operation of FlowMagic Appliance.

For an in-depth overview of the functionalities and typical operations of each tab, please refer to its web UI user manual.

Chapter 8 Recommended Reading Material

The following list provides further reading materials when users find the need to gain in-depth knowledge in specific area.

- UG-101 FlowMagic Firmware Update Guide
- UG-102 FlowMagic System Recovery Guide
- UG-103 FlowMagic-3200 Rack Mounting Guide
- UG-104 FlowMagic-3200 Network Packet Capture Analysis and Export Guide
- UG-105 FlowMagic-3200 Hard Disk Drive Selection and Storage Management Guide
- UG-108 FlowMagic-3200 User Rights Management Guide