



# BreakingPoint Firmware Release Notes

Release 8.13, Oct. 2016

Release Notes Version 1.0



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# Table of Contents

<b>Overview .....</b>	<b>5</b>
Document Purpose.....	5
Background .....	5
Technical Support .....	5
Documentation .....	5
<b>New Features .....</b>	<b>6</b>
Support for the new Native IxOS on all PerfectStorm ONE appliances .....	6
Support for the New Native IxOS on the New XGS2-HSL and XGS12-HSL Chassis .....	6
New Easy-to-use CLI.....	6
New Backup and Restore Mechanism.....	7
Restore to Factory Defaults .....	7
NAT support for BPS VE.....	7
<b>Software Compatibility .....</b>	<b>8</b>
<b>Hardware Compatibility.....</b>	<b>8</b>
<b>Browser Compatibility.....</b>	<b>10</b>
<b>Upgrading to Release 8.13 .....</b>	<b>11</b>
General Notes .....	11
Upgrading BreakingPoint Virtual Edition .....	29
Upgrading the BreakingPoint System.....	30
Update Packages .....	30
Switching to BreakingPoint Mode .....	31
To Transition from IxLoad Mode to BreakingPoint Mode: .....	31
<b>Resolved Defects.....</b>	<b>33</b>
<b>Known Issues and Defects.....</b>	<b>33</b>
<b>Operational Considerations .....</b>	<b>34</b>

# Overview

## Document Purpose

These release notes provide information regarding the Breaking Point 8.13 release. This includes information about new features, resolved SRs, known defects and workarounds (if available).

## Background

Powered by Application and Threat Intelligence, BreakingPoint enables companies to maintain resilient IT infrastructures against escalating threats. Only BreakingPoint security and performance testing products stress and optimize end-to-end IT infrastructures by creating real user actions with a blend of application and attack traffic including malware, mobile malware, DDoS, and more.

## Technical Support

To contact the BreakingPoint Support team, e-mail them at [support@ixiacom.com](mailto:support@ixiacom.com) or call them at 1-818 595 2599.

## Documentation

The following table lists the latest documentation for all BreakingPoint products.

Document	Location
Ixia BreakingPoint User Guide	<a href="https://strikecenter.ixiacom.com/docs/BPS_UserGuide_8.13.pdf">https://strikecenter.ixiacom.com/docs/BPS_UserGuide_8.13.pdf</a>
Ixia BreakingPoint Storm Installation Guide	<a href="https://strikecenter.ixiacom.com/docs/BPSStorm_InstallationGuide_8.13.pdf">https://strikecenter.ixiacom.com/docs/BPSStorm_InstallationGuide_8.13.pdf</a>
Ixia BreakingPoint FireStorm Installation Guide	<a href="https://strikecenter.ixiacom.com/docs/BPS_FS_InstallationGuide_8.13.pdf">https://strikecenter.ixiacom.com/docs/BPS_FS_InstallationGuide_8.13.pdf</a>
Ixia BreakingPoint FireStorm ONE Installation Guide	<a href="https://strikecenter.ixiacom.com/docs/BPS_FS_ONE_InstallationGuide_8.13.pdf">https://strikecenter.ixiacom.com/docs/BPS_FS_ONE_InstallationGuide_8.13.pdf</a>
Ixia BreakingPoint 20 Installation Guide	<a href="https://strikecenter.ixiacom.com/docs/BPS_20_InstallationGuide_8.13.pdf">https://strikecenter.ixiacom.com/docs/BPS_20_InstallationGuide_8.13.pdf</a>
Ixia BreakingPoint Virtual Edition (VE) Installation Guide	<a href="https://strikecenter.ixiacom.com/docs/BPS_VirtualEdition_InstallationGuide_8.13.pdf">https://strikecenter.ixiacom.com/docs/BPS_VirtualEdition_InstallationGuide_8.13.pdf</a>
PerfectStorm - XGS12 Chassis Platform Assembly Guide	<a href="http://downloads.ixiacom.com/library/user_guides/IxOS/8.00/EA_8.00_Rev_A/XGS12ChassisPlatformAssemblyGuide/XGS12ChassisPlatformAssemblyGuide.pdf">http://downloads.ixiacom.com/library/user_guides/IxOS/8.00/EA_8.00_Rev_A/XGS12ChassisPlatformAssemblyGuide/XGS12ChassisPlatformAssemblyGuide.pdf</a>

# New Features

This release adds support for the new Native IxOS (Linux-based) on the PerfectStorm ONE appliances as well as on the new XGS2-HSL and XGS12-HSL chassis.

With the IxOS 8.13 EA release, Ixia hardware chassis (XGS2-HS and XGS12-HS) and PerfectStorm ONE users will see a significant improvement in security and operational efficiency of the chassis.

Productivity and Operational Gains with Native IxOS are:

- Single management IP
- Improvements across the board – IxNetwork, IxLoad, BreakingPoint
- Faster system boot up time and BPS test initialization time
- Better system performance for higher-scale configurations on BreakingPoint
- Much improved Security over Windows

## Support for the new Native IxOS on all PerfectStorm ONE appliances

IxOS now runs natively on the PerfectStorm ONE appliances shipped from the factory. No more Windows OS. There is also a software option to field-convert existing PerfectStorm ONE (Windows) appliances to the PerfectStorm ONE (Linux) appliances. The software and documentation on converting the appliances can be downloaded from the Ixia Support page (go to: <https://support.ixiacom.com/> and then log in. Click **Software Downloads** > **IxOS** (IxServer, IxTCLServer, IxExplorer)).

## Support for the New Native IxOS on the New XGS2-HSL and XGS12-HSL Chassis

IxOS now runs natively on the HSL chassis. No more Windows OS. There is also a software option to field-convert existing XGS2-HS and XGS12-HS (Windows) chassis to the XGS2-HSL and XGS12-HSL (Linux) chassis. The software and documentation on converting the chassis can be downloaded from the Ixia Support page (go to: <https://support.ixiacom.com/> and then log in. Click **Software Downloads** > **IxOS** (IxServer, IxTCLServer, IxExplorer)).

## New Easy-to-use Web User Interface

The Native IxOS chassis and appliances include a new easy-to-use HTML5 Web Interface so users can simply browse to the BreakingPoint application and/or the new Chassis management UI (HTML5 UI for IxServer-related functionalities).

## New Easy-to-use CLI

A new Command Line Interface (CLI) is also being introduced with the new Native IxOS chassis for detailed configuration and troubleshooting. It is replacing the

previous FlixOS admin screen and functionalities. Additionally, it also adds new options and functionalities for IxOS-related operations. The CLI is consistent with Ixia's IxNetwork VE, IxLoad VE, and Ixia Developer.

### **New Backup and Restore Mechanism**

The Native IxOS chassis introduces a new highly optimized Backup and Restore mechanism. Using the new procedure, customers can now export and import user data in a more reliable, faster and flexible manner. The new exported file contains custom data like BPS custom test configs and elements, BPS results database and Ixia Web UI User accounts. The file can be downloaded to either on the Local computer, NFS Share or USB Drive.

### **Restore to Factory Defaults**

PerfectStorm One appliances and XGS12-HSL/XGS2-HSL chassis shipped with native IxOS have an option to restore the system to factory defaults. This functionality allows customers to revert the system back to the factory configuration it was shipped with. This option is not available for systems that have been upgraded to Native IxOS in the field.

### **NAT support for BPS VE**

The major NAT improvements introduced on hardware platforms in the BPS 8.0.1 release are now available on the BPS Virtual Edition. These improvements seamlessly address NAT scenarios using simple 2-arm configurations. Users will no longer have to follow the complicated workflow of splitting the test in dual 1-arm configurations and synchronizing the client and server Superflow actions with conditional requests. Predefined Superflows and App profiles that have been qualified for NAT testing are tagged accordingly. Please note AppSim and SessionSender are the only components that benefit from this redesign.

## Software Compatibility

BreakingPoint 8.13 Firmware Release is a cross-platform release. Please review the following table to identify the software required for your hardware platform.

Platform	BreakingPoint Firmware	IxOS Software	Flix OS Software
Firestorm chassis (Storm, Firestorm, Firestorm20)	BreakingPoint 8.13	Not applicable	
Firestorm ONE appliance	BreakingPoint 8.13		
XGS12-HS chassis (PerfectStorm Load Modules)	BreakingPoint 8.13	IxOS 8.13 EA	FlixOS Linux: 2016.1.72.101 FlixOS Windows: 2016.2.0.28
PerfectStorm ONE Fusion appliances	BreakingPoint 8.13	IxOS 8.13 EA	FlixOS Linux: 2016.1.72.101 Note: Starting with 8.13, PerfectStorm ONE does not support Windows-based software. To support 8.13 releases, PerfectStorm ONE appliances need to be <a href="#">converted to Native IxOS</a> .
BreakingPoint Virtual	BreakingPoint 8.13	Not Applicable	

## Hardware Compatibility

The BreakingPoint 8.13 Release is supported on all hardware platforms and BreakingPoint VE.

### 3-slot Firestorm Chassis and Firestorm ONE appliance

Part Number	Description
981-0001	BreakingPoint Firestorm, 3-slot chassis
981-0058	BreakingPoint Firestorm ONE, 4-port 10/1 GigE SFP+ appliance
982-0001	BreakingPoint Firestorm 4-port 10/1GigE SFP+ blade
982-0021	BreakingPoint System Controller

982-0037	BreakingPoint Storm, 1 GigE 4-port blade
982-0026	BreakingPoint Storm, 1 GigE 8-port blade
982-0027	BreakingPoint Storm, 10 GigE 4-port blade
982-0040	BreakingPoint Firestorm 20, 20-port 10/1GigE SFP+ blade

## 12-slot XGS12 chassis and PerfectStorm Fusion Load Modules

Part Number	Description
940-0006	XGS12-HS 12-slot, Chassis Bundle
944-1201	PerfectStorm Fusion, 2-port 40/10GE QSFP+ Load Module (PS40GE2NG)
944-1200	PerfectStorm Fusion, 8-port 10/1 GE SFP+ Load Module (PS10GE8NG)
944-1209	PerfectStorm Fusion, 4-port 10/1 GE SFP+ Load Module (PS10GE4NG)
944-1210	PerfectStorm Fusion, 2-port 10/1 GE SFP+ Load Module (PS10GE2NG)
944-1202	PerfectStorm Fusion, 1-port 100GE CXP Load Module (PS100GE1NG)

## PerfectStorm ONE Fusion Appliances

Part Number	Description
941-0028	PerfectStorm ONE Fusion, 40GE 2-port QSFP+ appliance (PS40GE2NG)
941-0027	PerfectStorm ONE Fusion, 8-port 10/1 GE SFP+ appliance (PS10GE8NG)
941-0031	PerfectStorm ONE Fusion, 4-port 10/1 GE SFP+ appliance (PS10GE4NG)
941-0032	PerfectStorm ONE Fusion, 2-port 10/1 GE SFP+ appliance (PS10GE2NG)
941-0033	PerfectStorm ONE Fusion, 8-port 1 GE SFP+ appliance (PS1GE8NG)
941-0034	PerfectStorm ONE Fusion, 4-port 1 GE SFP+ appliance (PS1GE4NG)

For PerfectStorm platform, please refer to the [Product Compatibility Matrix](#) available on Ixia's website. An Ixia website account is required before accessing.

## Browser Compatibility

The table below lists the HTML browsers supported by BreakingPoint. Browser versions that are more current than the versions listed in the table may work, but have not been tested at this time. Beta versions of HTML browsers are not supported.

Browser	Recommendation for Windows	Recommendation for MAC
Google Chrome	51.0.2704.84 (64-bit)	51.0.2704.84 (64-bit)
Firefox	47.0	47.0
Microsoft Edge	20	N/A
Safari	Not supported	Not supported
Internet Explorer	Not supported	Not supported

**Note:** In BreakingPoint 3.5.1, and higher releases, logging in to the management UI will not be allowed from HTML browsers that have a maximum SSL version setting that is limited to only sslv3 (ssl3).

**Note:** Mac users with OS 10.8.2 can use Firefox or Google Chrome as their browser.

# Upgrading to Release 8.13

Before you upgrade to a new firmware release, please create a backup of your current system.

## There are 2 backup scenarios:

- **Backup before Native IxOS conversion** - If you plan to convert a system to the Native IxOS, the proper way to backup data before conversion is documented in the conversion guide (which can be downloaded from the Ixia support web page (go to: <https://support.ixiacom.com/> and then log in. Click **Software Downloads** > **IxOS** (IxServer, IxTCLServer, IxExplorer)).

**Note:** After conversion to Native IxOS there may not be enough available disk space to restore a previously exported backup (especially for files larger than 1GB). If there is not enough disk space available, you can delete the pre-conversion BPS-VM using the IxOS CLI command in Disk Space Management (frees up about ~250GB). Be aware that reverting back to a Windows-based architecture will no longer be possible after deleting the pre-conversion BPS-VM.7

- **BreakingPoint Backup for Non-Native IxOS** – Use the [BPS Backup for Non-Native IxOS to a NFS Server](#) procedure (described below) if you are **NOT** converting your system to the Native IxOS. This is the backup procedure that has been used prior to the 8.13 release.

BreakingPoint	8.13
IxOS	8.13EA
Flix OS	FlixOS Linux: 2016.1.72.101 FlixOS Windows: 2016.2.0.28
IxLoad	8.13EA
IxNetwork	8.13EA
Licensing	4.40EA Patch 1

## General Notes

Specific instructions for installation on PerfectStorm and FireStorm systems are contained in the sections below.

**Note:** Be aware that you must upgrade your BreakingPoint system to the latest ATI package before initiating Security component testing.

## BPS Backup for Non-Native IxOS to a NFS Server

**Note:** You should not backup your existing data using this method if you plan to convert your system to Native IxOS. The proper way to backup data before conversion is documented in the conversion guide which can be downloaded from Ixia support web page (go to: <https://support.ixiacom.com/> and then log in. Click **Software Downloads** > **IxOS** (IxServer, IxTCLServer, IxExplorer)).

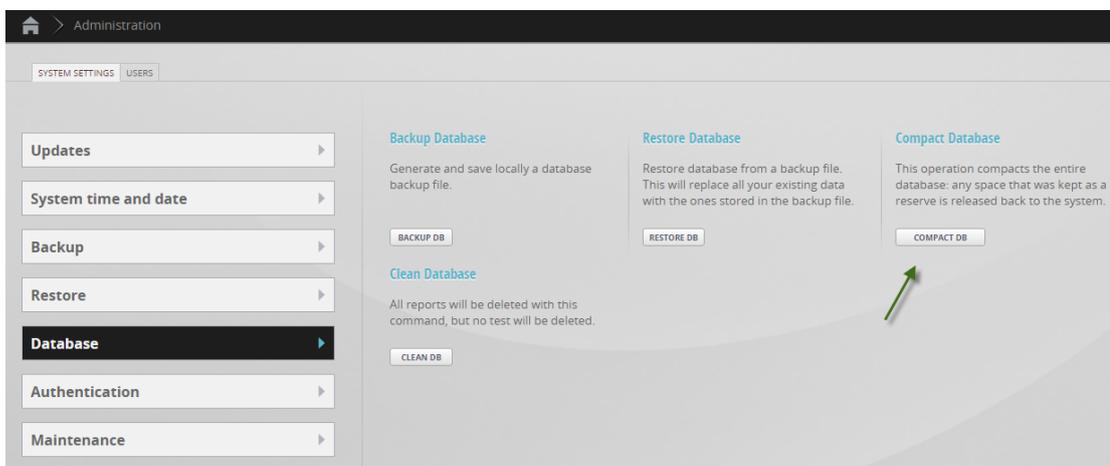
This example uses an Ubuntu Linux computer and the Ixia BreakingPoint system.

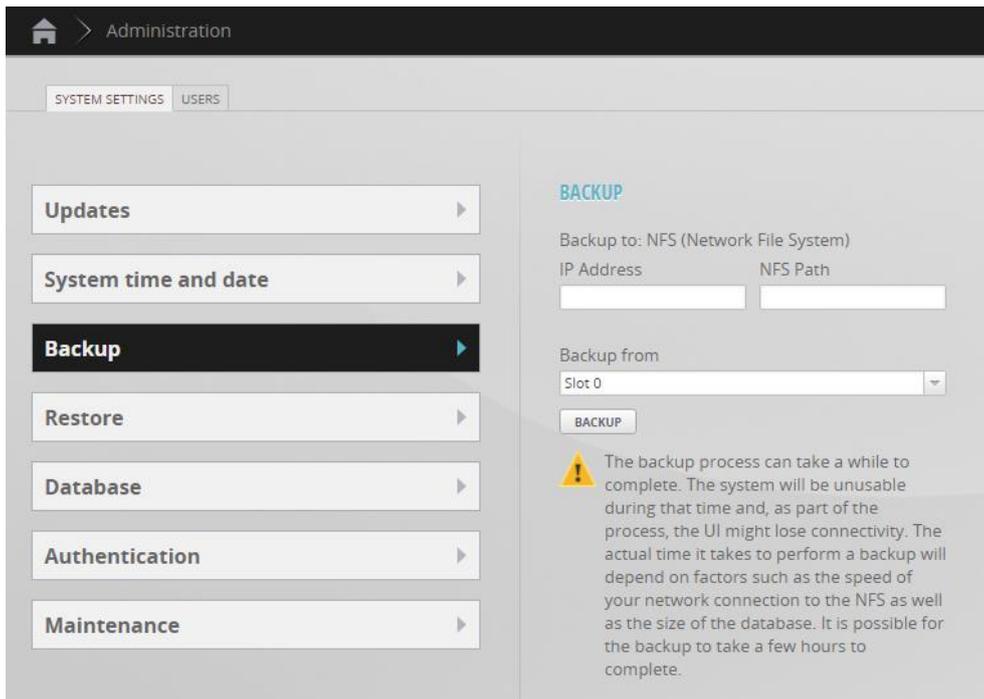
### Starting from the Linux computer:

1. Download the required software
  - a. `sudo apt-get install nfs-kernel-server portmap`
  - b. `sudo /etc/init.d/nfs-kernel-server start`
2. Export the shared directory
  - a. `sudo mkdir /var/nfs/`
  - b. `sudo chown nobody:nogroup /var/nfs`
  - c. `sudo chmod 777 /var/nfs`
3. Allow Directory Exporting
  - a. `sudo vi /etc/exports`
4. Add the Following Line to /etc/exports
  - a. `/var/nfs 12.33.44.55(rw,sync,no_subtree_check,insecure)`
5. Export the Shared Directory
  - a. `sudo exportfs -a`

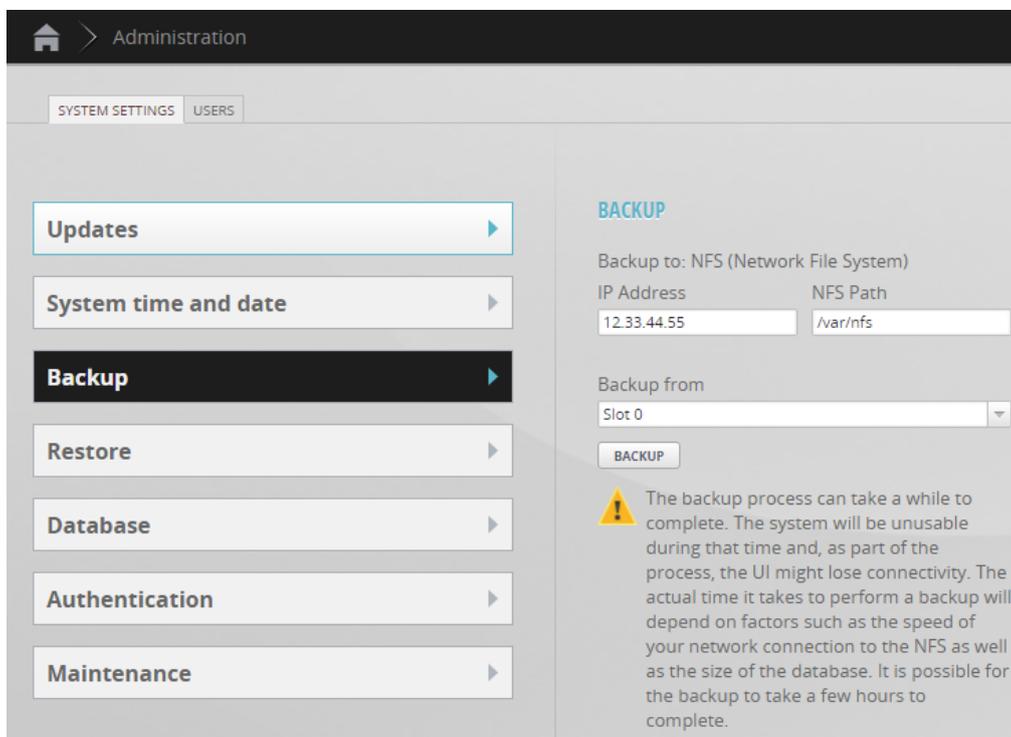
### Setup NFS Backup on the Ixia BreakingPoint System

1. Log in to the Ixia BreakingPoint and navigate to **Database** within the Ixia Web Apps (Administration > System Settings).
2. Run the **Compact Database** option (this may take some time to complete).
3. Log in to the Ixia BreakingPoint and navigate to **Backup** within the Ixia Web Apps:





4. Enter the IP address of the NFS Server and the Location of the Shared Directory:
  - a. (example) IP Address: 12.33.44.55
  - b. (example) NFS Path: /var/nfs
  - c. (example) Backup From: Slot 0



## Installation on BreakingPoint FireStorm

Ixia strongly recommends that you create backups of your system before upgrading to the 8.13 Firmware release *and* after upgrading to the 8.13 Firmware release.

**Note:** After upgrading to 3.4.1 and above, Backup and Restore to USB is supported on Firestorm and Firestorm ONE.

The table below describes the steps that are required to upgrade to 8.13 from earlier BreakingPoint Firmware releases.

Current BreakingPoint Firmware	Upgrade Path to BreakingPoint 8.13 Firmware
8.10	-> 8.13
8.0.x	-> 8.13
3.5.x	-> 8.0.x -> 8.13
3.4.x	-> 8.0.x -> 8.13
3.3.x	-> 8.0.x -> 8.13
3.2 or earlier	-> 3.3.x -> 8.0.x -> 8.13

**Note:** During an update from 3.0, the user may encounter the following system error: "Nov 21 16:03:54 localhost [dbchecker] database connection not functional, restarting". This is a normal occurrence. Ignore the message and continue with the upgrade.

After upgrading the FireStorm system to version 8.13, you must restart the system in order for all of the subsystems to initialize.

Upgrading multi-blade FireStorm systems to Release 8.13, requires installation of the new firmware to all Firestorm blades. For example, if the Ixia BreakingPoint software needs to upgrade a Firestorm in slots 0, 1, and 2, all blades must be checked before upgrading. The FireStorm in slot 0 will upgrade at a relatively shorter time than the Firestorms in slots 1 and 2.

## Installation on XGS2-HS, XGS12-HS Chassis and PerfectStorm ONE Fusion Appliances

There are two procedures available depending on your update scenario:

- [For XGS2-HS, XGS12-HS XGS chassis that will remain on Windows IxOS](#)
- [For XGS2-HS, XGS12-HS chassis that will be converted to Native IxOS and PerfectStorm ONE appliances](#) – This procedure is mandatory for PerfectStorm ONE to run BPS 8.13.

### For XGS2-HS, XGS12-HS chassis that will remain on Windows IxOS:

To install BreakingPoint 8.13, you must perform the following steps:

1. Upgrade the FLIX OS to version 2016.2.0.28 (the standard FLIX Upgrade – the update procedure is described in a document named, "FlixOS-2016.2.0.28 Upgrade Guide", which is available on the [StrikeCenter BreakingPoint OS Updates](#) site).
2. Upgrade the IxOS version to 8.13 EA.
3. Upgrade BreakingPoint software to firmware 8.13.
4. After the BreakingPoint software upgrade has completed, we recommend that you perform a backup.

### For XGS2-HS, XGS12-HS chassis that will be converted to Native IxOS and PerfectStorm appliances:

**Note:** If your chassis will be converted to Native IxOS, please read the detailed information provided in the document that describes how to convert the chassis. This document can be downloaded from the Ixia support web page (go to: <https://support.ixiacom.com/> and then log in. Click **Software Downloads** > **IxOS** (IxServer, IxTCLServer, IxExplorer)).

In summary, to install BreakingPoint 8.13, you must perform the following steps (make sure to read and follow the [conversion guide](#) for the complete, detailed instructions):

1. Upgrade the FLIX OS to version 2016.2.0.28 (the standard FLIX Upgrade – the update procedure is described in a document named, "FlixOS-2016.2.0.28 Upgrade Guide", which is available on the [StrikeCenter BreakingPoint OS Updates](#) site).
2. Convert the system to Native IxOS using FlixOS 2016.1.72.101 (as described in the [conversion guide](#)). After the chassis is converted to Native IxOS, the IxOS version will be IxOS 8.13.1261.16.

**Note:** New PerfectStorm and PerfectStorm ONE systems currently shipped to customers do not require a FLIX OS update. The systems ship with the latest FLIX OS version. Customers who currently use the PerfectStorm system must upgrade the FLIX OS.

## Upgrading IxOS 8.13 EA

**Note:** For systems that will be converted to Native IxOS, the FlixOS 2016.1.72.101 will also contain the IxOS 8.13 EA.

There are two paths for upgrading IxOS. Select the upgrade path that applies based on your current operating system.

- [Upgrading IxOS on Native IxOS](#)
- [Upgrading IxOS 8.13 EA on Windows IxOS](#)

### Upgrading IxOS on Native IxOS

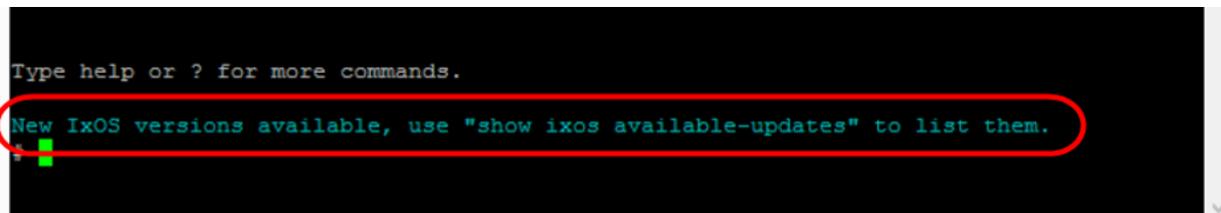
**Note:** This procedure applies for upgrading to IxOS versions post 8.13EA since systems that will be converted to Native IxOS using FlixOS 2016.1.72.101 will also contain the IxOS 8.13 EA.

There are 2 methods for upgrading.

#### Online:

1. Access the IxOS CLI - `ssh admin@<chassisIP> -p 8022, password: admin`

You will be notified through the CLI when new builds of IxOS are available.

A screenshot of the IxOS CLI interface. The background is black with white text. At the top, it says "Type help or ? for more commands." Below that, a message is displayed: "New IxOS versions available, use 'show ixos available-updates' to list them." This message is enclosed in a red oval. A green cursor is visible at the end of the line.

2. Run the `install ixos <version>` command to perform the install. The build will be installed automatically from Ixia IxOS online repository (which is predefined in the OS).

#### Offline:

1. Download the IxOS build from <http://support.ixiacom.com/support-overview/product-support/downloads-updates/versions/21>.
2. Use FTP to put the file on to your BPS system.

```
ftp://<chassisIP>  
user: admin  
password: admin  
  
Put filexxx.xx
```

3. Access the IxOS CLI - `ssh admin@<chassisIP> -p 8022, password: admin`

4. Run the `install ixos <version>` command to perform the install. Install the version that was downloaded.

## Upgrading IxOS 8.13 EA on Windows IxOS

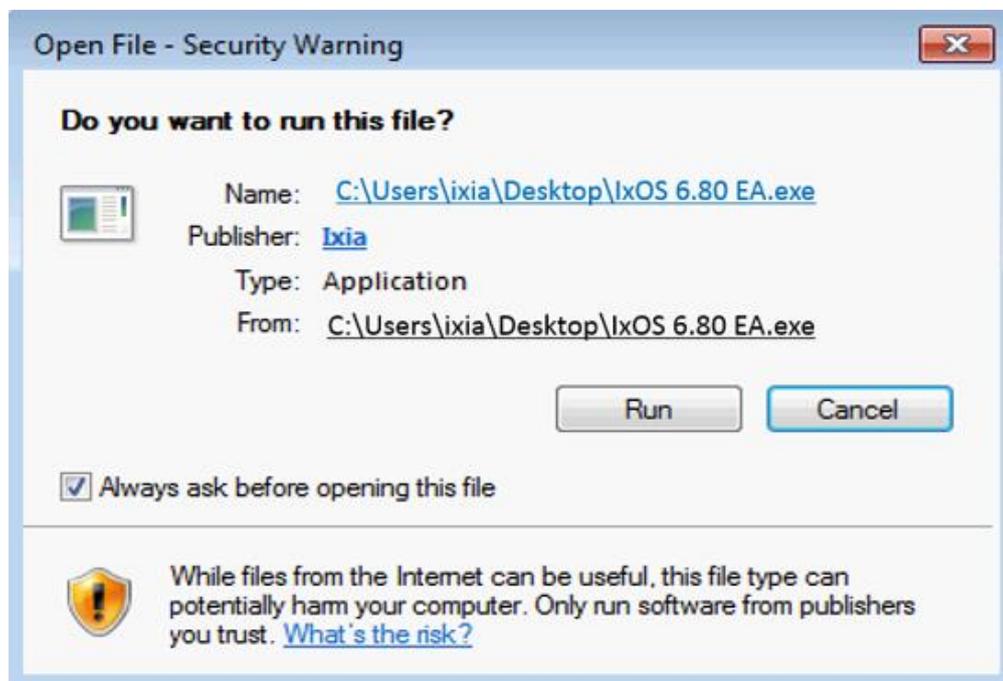
Software and Installation Instructions are located at the following location:  
<http://support.ixiacom.com/support-overview/product-support/downloads-updates/versions/21>

**Note:** The version numbers displayed in the images below may differ from the version numbers that are displayed when you upgrade IxOS 8.13 EA.

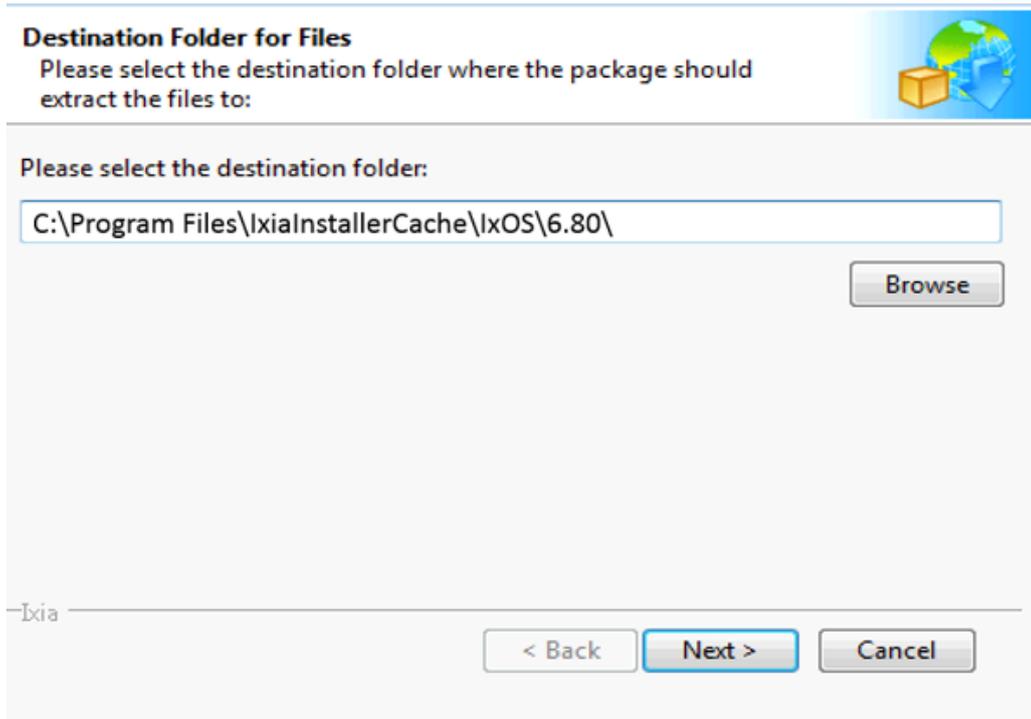
**Note:** BUG1354074: A Stop Error (Blue Screen) may occur while upgrading IxOS due to a Microsoft Windows issue. A Microsoft hotfix is available to resolve this issue, see [Windows Update kb2675806](#).

### Starting From the Windows VM:

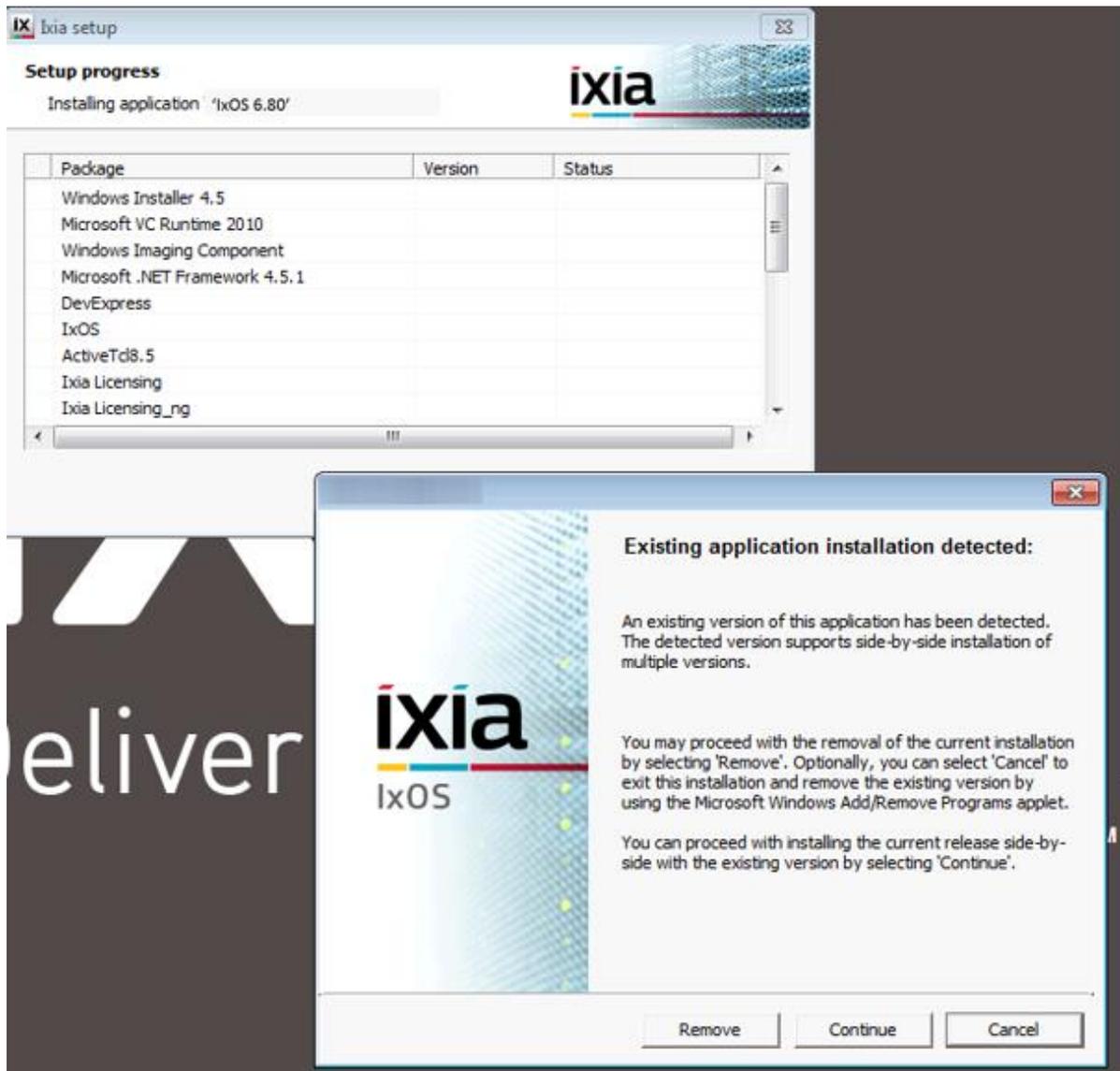
1. Open Remote Desktop and Login to the Ixia Windows VM.
2. Copy the IxOS executable to the Desktop.
  - a. You may need to copy the \*.exe file onto the Ixia Windows VM.
  - b. The file can be directly downloaded on the VM using the link above.
  - c. If no direct network access to ixiacom exists, then a shared file system with the Ixia Windows VM is needed to gain access to the VM.
3. Stop IxExplorer and IxServer.
  - a. Use a graceful shutdown, File -> Exit
4. Run \*.exe.



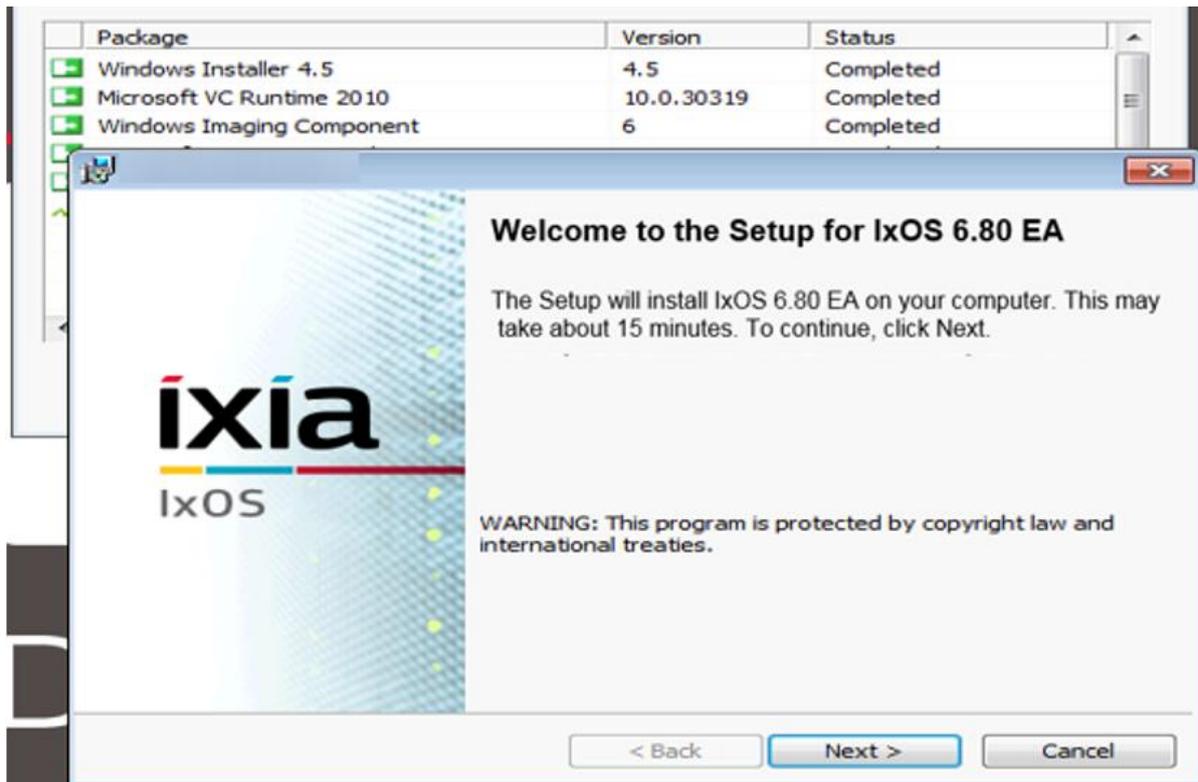
5. Click the **Run** button.



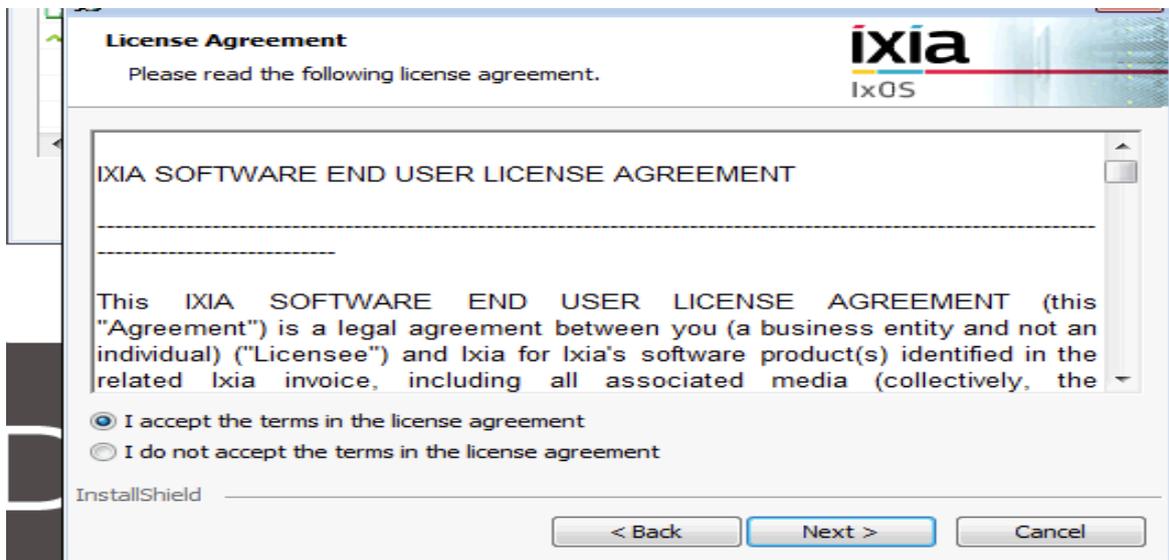
6. Accept the Default Destination Folder for the Installation. Click **Next**.



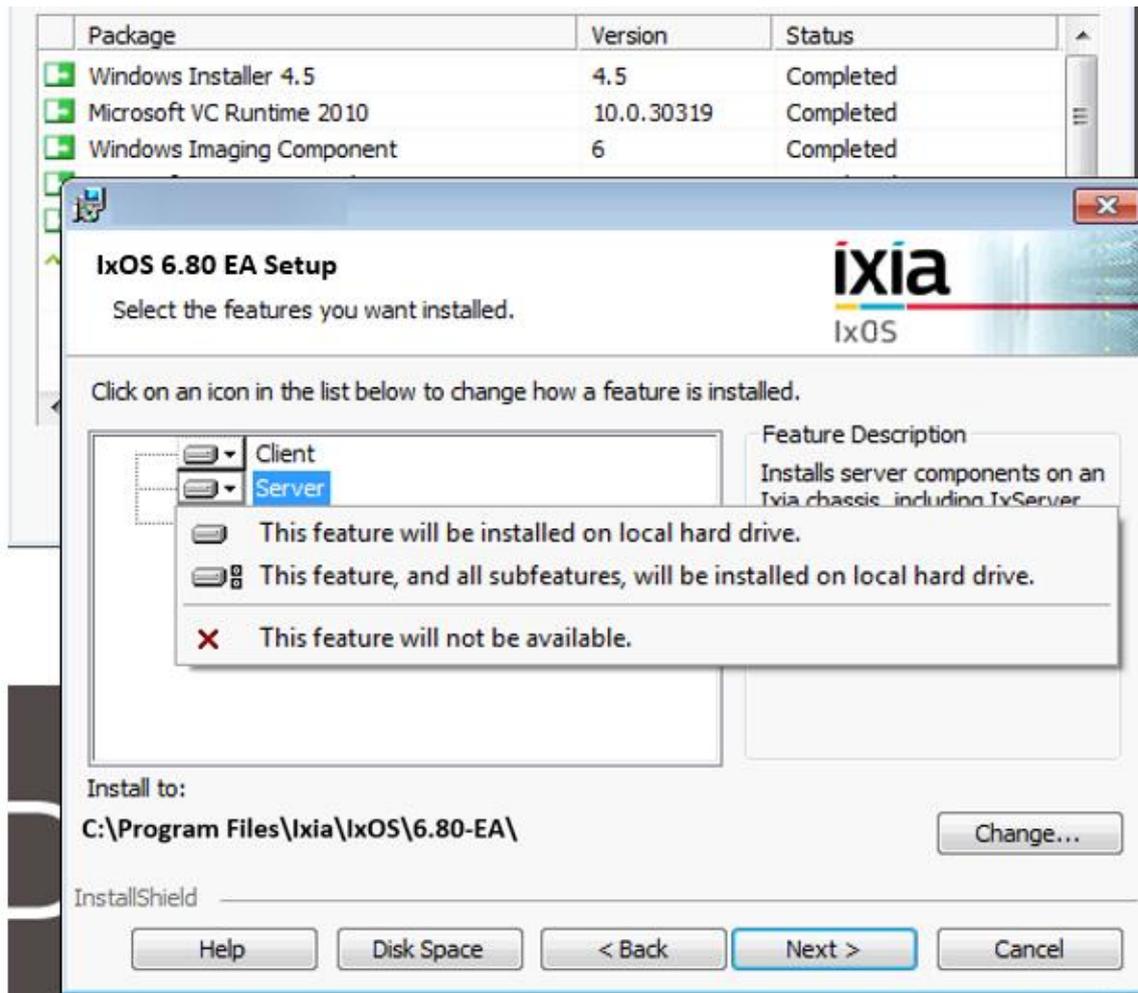
- a. Select **Continue** on the "**Existing application Installation detected:**" window.



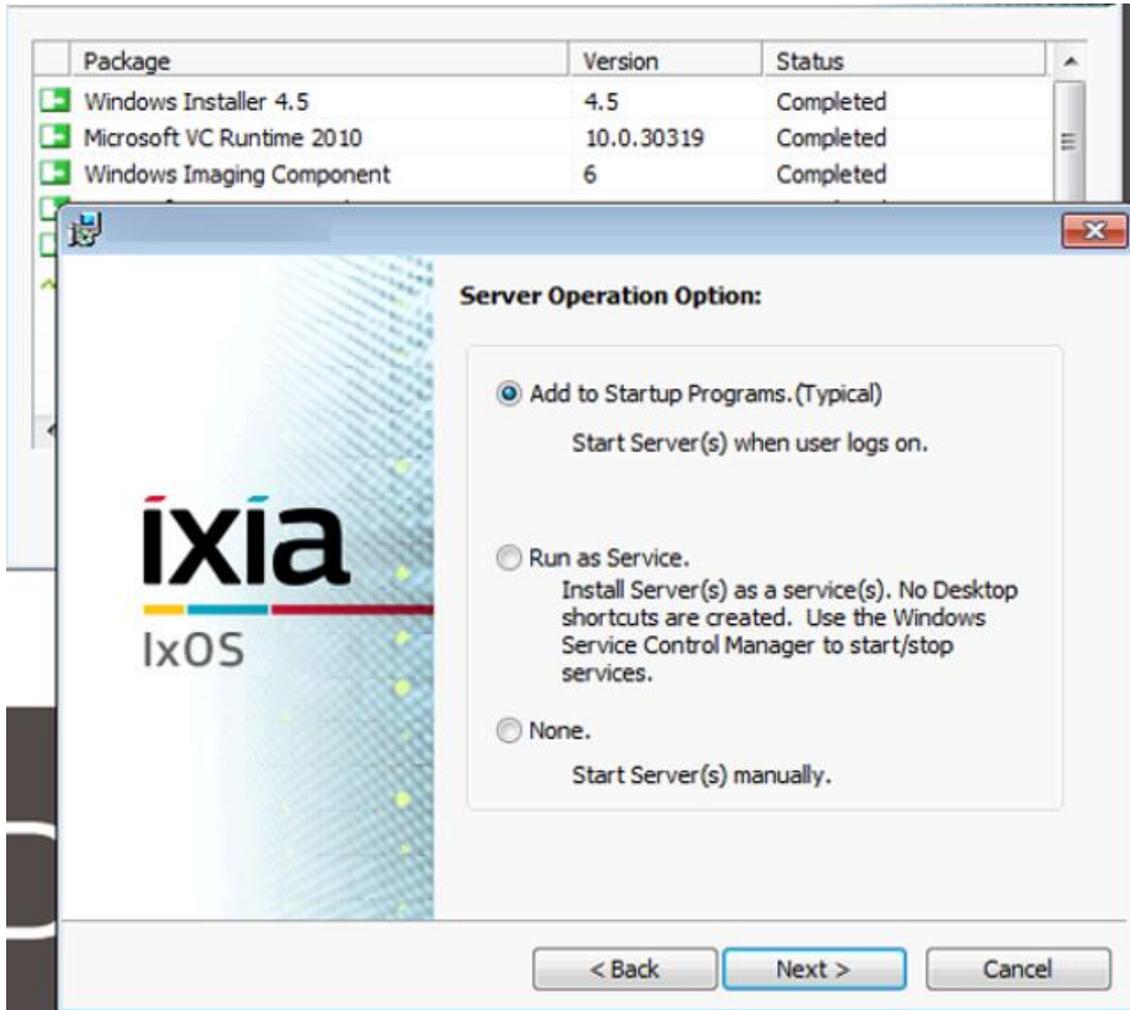
7. Click **Next** on the “**Welcome to the Setup for IxOS x.xx..**” window.



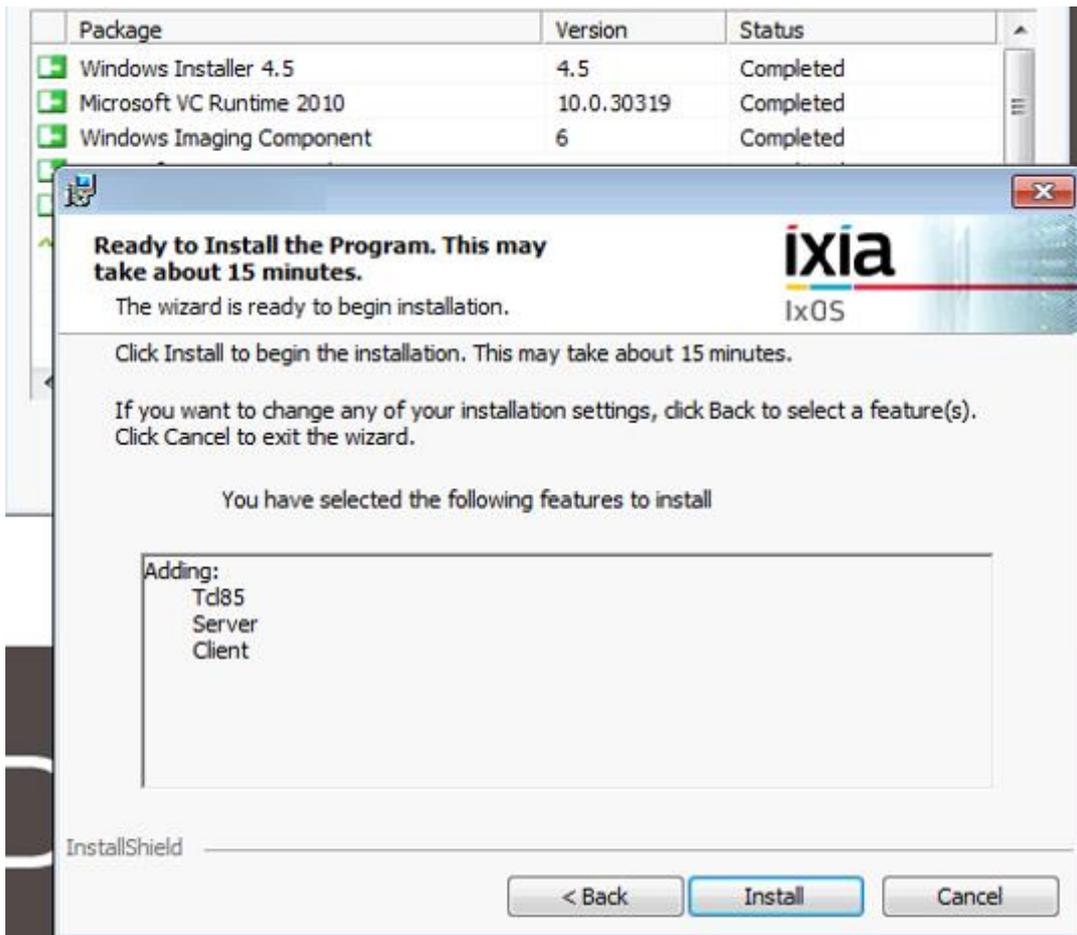
8. Accept the License Agreement, then click **Next**.



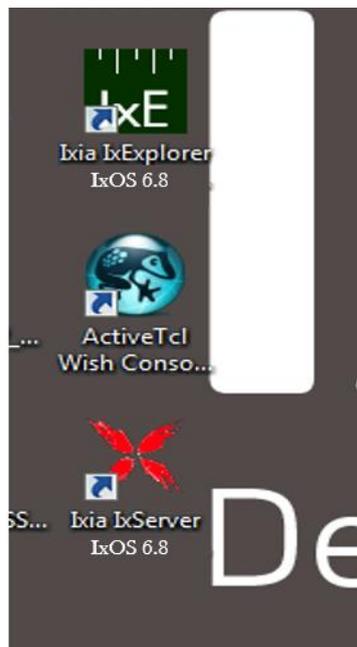
9. Set Client and Server to install and **"This feature, and all sub features, will be installed on local hard drive"**, then click **Next**.
  - a. Note: TCL server install is optional.



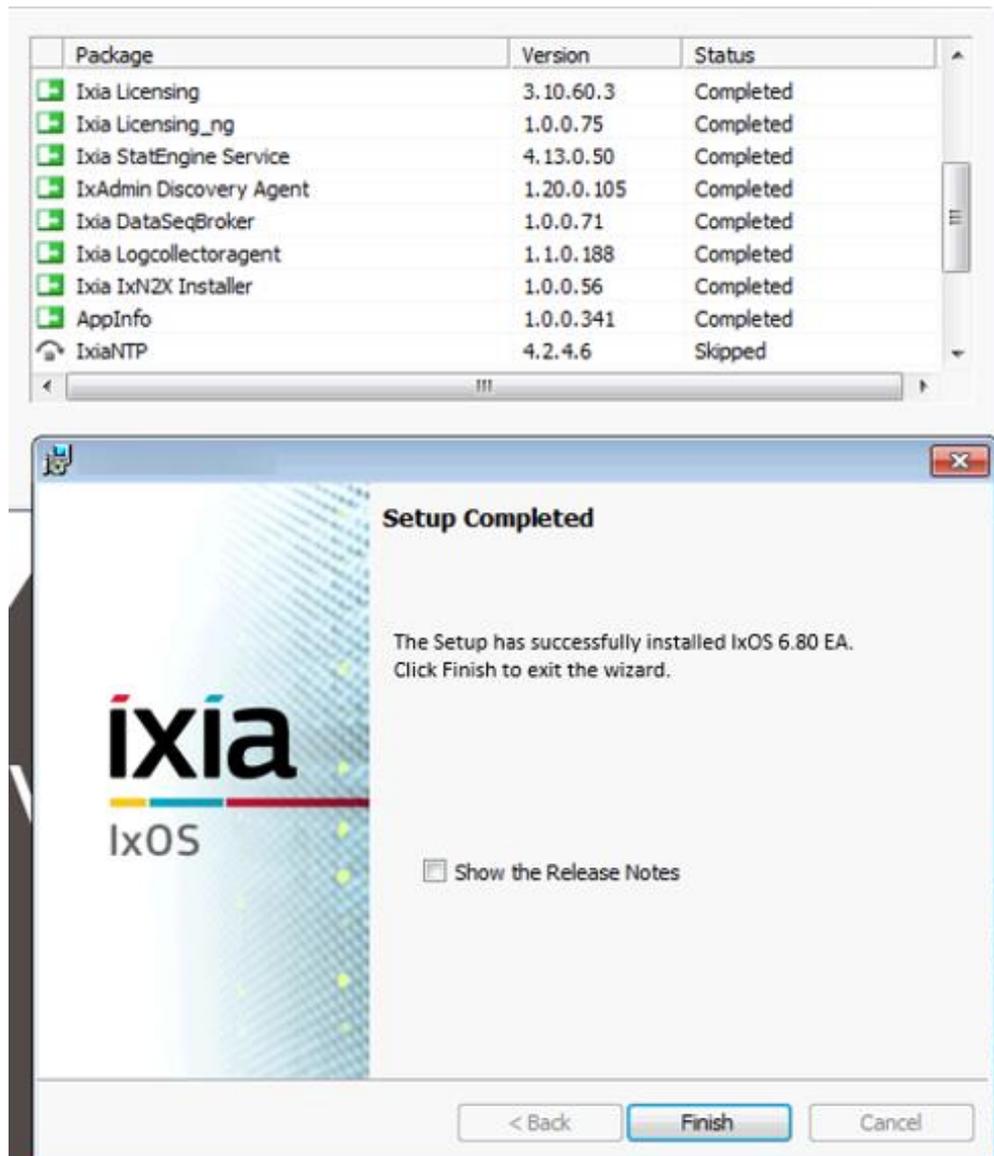
10. Select the following option: **"Add to Startup Programs.(Typical)"**, then click **Next**.



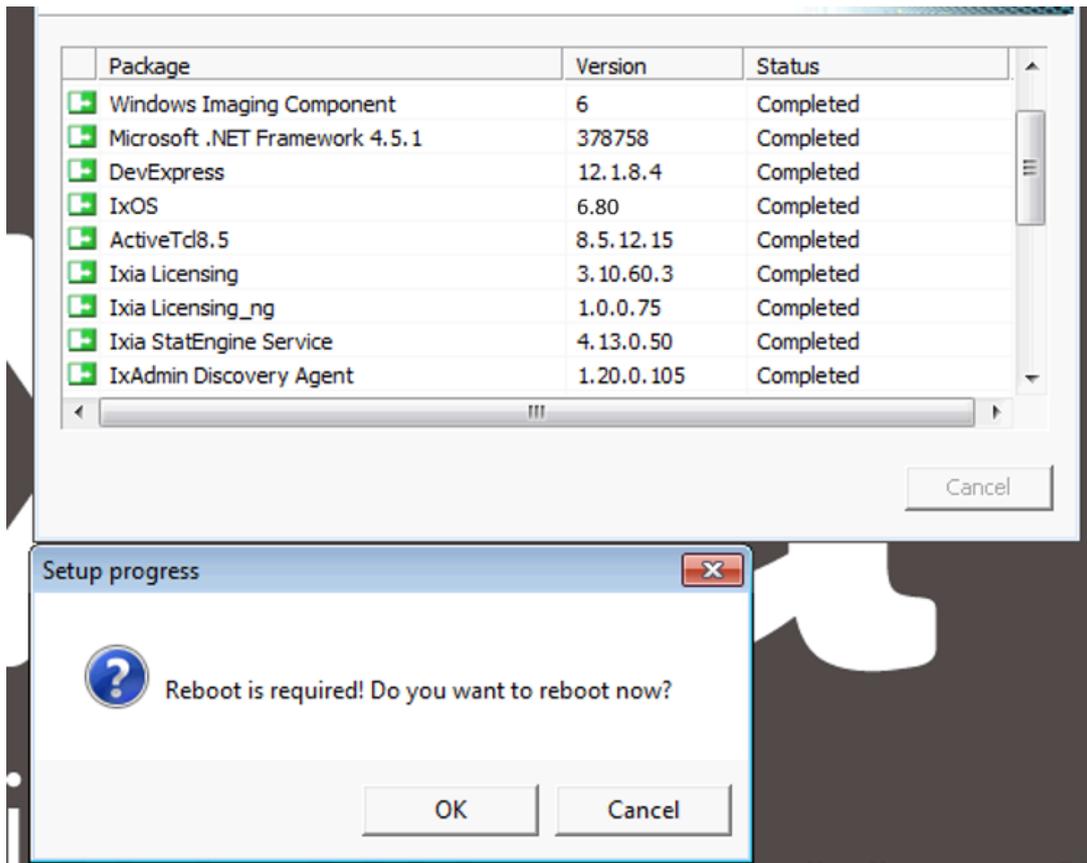
11. After some essential components complete installation, the IxOS server will be ready to install, click **Install**.



12. After several minutes of installation, new IxOS application links will be copied to the desktop.



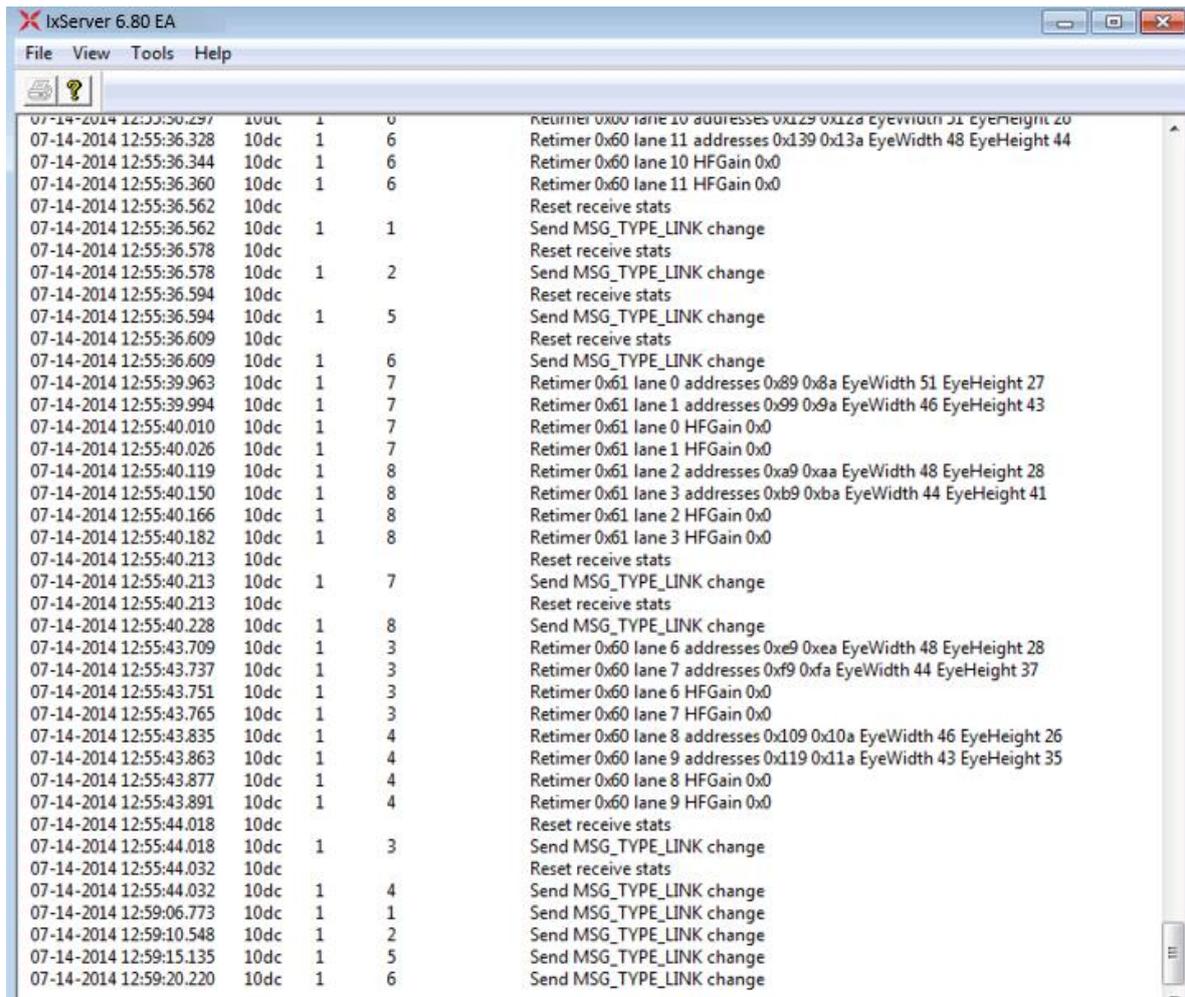
13. After the installation has completed, click **Finish**.



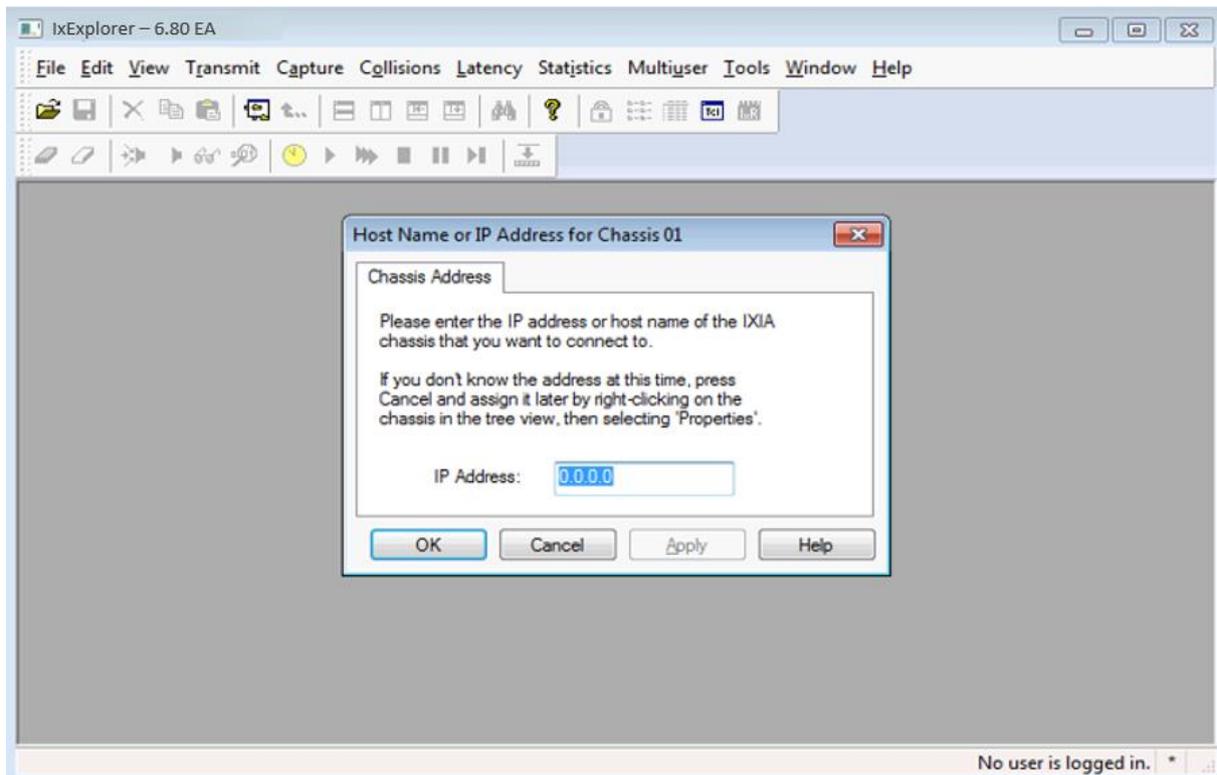
14.The system will ask the user to reboot the Windows VM.

15.After the Windows VM reboots IxServer will start automatically and will continue setting up the system hardware.

- a. Note: Starting IxServer the first time after installation will be slower and may take more than 10 minutes for each slot to be prepared to run with the new IxOS version.



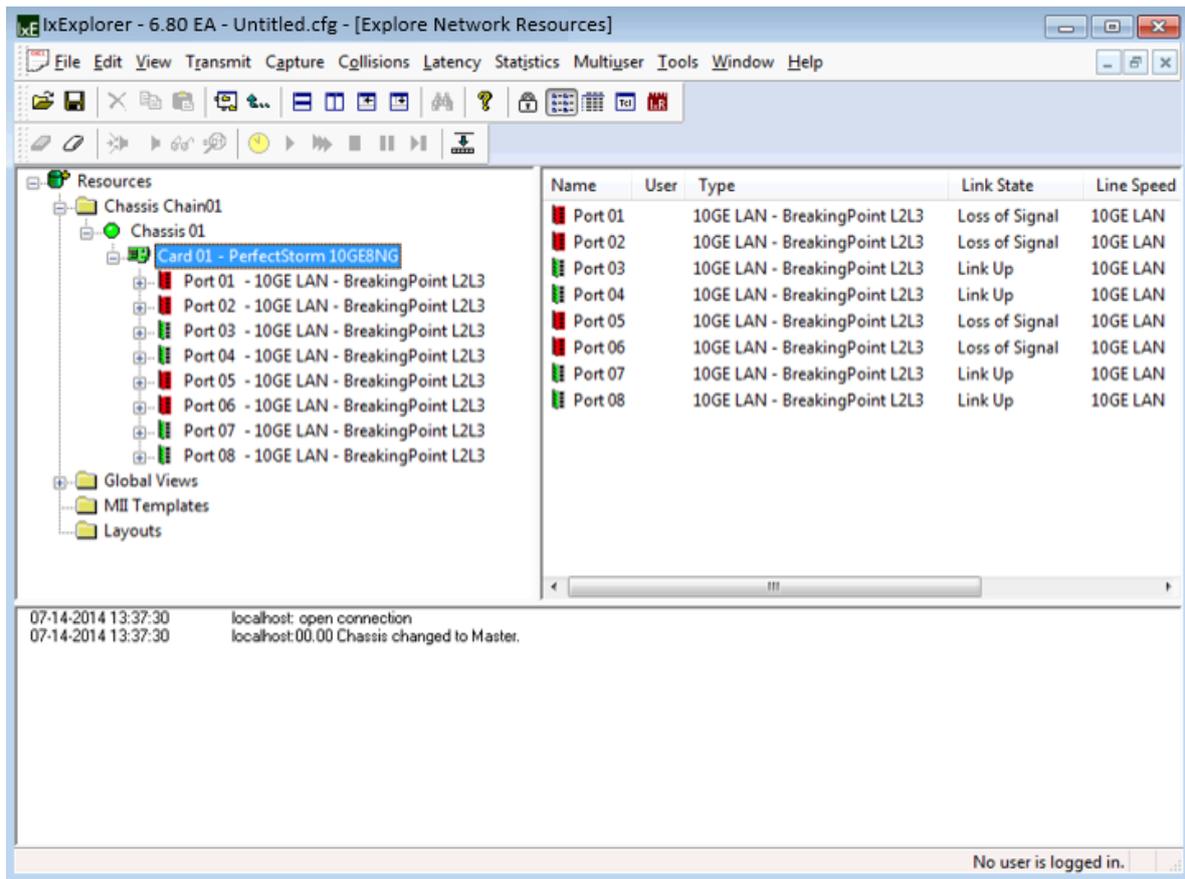
16. The image above shows an example of an IxServer that has completed initialization.



17. Then open IxExplorer and make sure that it is the same version as IxServer.

- a. In the **IP Address** field, type: `localhost`
- b. **Click OK.**

Saving the configuration for a later time is optional, we selected **No** for this example.



18. IxExplorer will show the status of the blades connected to the chassis along with the mode they are running in.

- a. Seeing a green status indicator for Chassis indicates the blade is communicating with IxServer.
- b. Green Ports indicate Link Up status.
- c. Red Ports indicate Link Down status.

## Upgrading BreakingPoint Virtual Edition

**Note:** You must have BreakingPoint VE controller version 3.4.2 or higher to perform this upgrade.

1. Download the BreakingPoint Virtual Edition VM update file.
2. Log in to the Ixia BreakingPoint VE System.
3. Navigate to **ADMINISTRATION -> SYSTEM SETTINGS -> UPDATES.**
4. Select **UPDATE SYSTEM** and then see the image below.
  - a. After you have created a backup of your vController, select the, **I already created a backup**, option.
  - b. **Browse** to the location of the BreakingPoint VE update file and select **OK** to start the update.

**UPDATE SYSTEM**

⚠ Please make sure you created a backup of your vController before starting the update process!

I already created a backup

	SLOT	VERSION	PROD BUILD	STRIKE BUILD
<input checked="" type="checkbox"/>	0	3.4.2	236924	236208

Local File  **BROWSE**

Web Location

Server Location

OK CANCEL

5. The BreakingPoint VE update will take 15-20 minutes to complete.
6. To verify that the update has been installed, see the version information in the **Installed Applications** section of the **UPDATES** tab.

## Upgrading the BreakingPoint System

**Note:** There are 3 different types of BPS update file. Use the appropriate update file for your BreakingPoint system.

- Update\_lxc.x.x.bps should be used for PerfectStorm running in a Native IxOS system
- Update\_vm.x.x.bps should be used for BPS VE
- Update.x.x.bps should be used for PerfectStorm running on Windows IxOS and for legacy Firestorm/Storm systems

To update the Ixia BreakingPoint System:

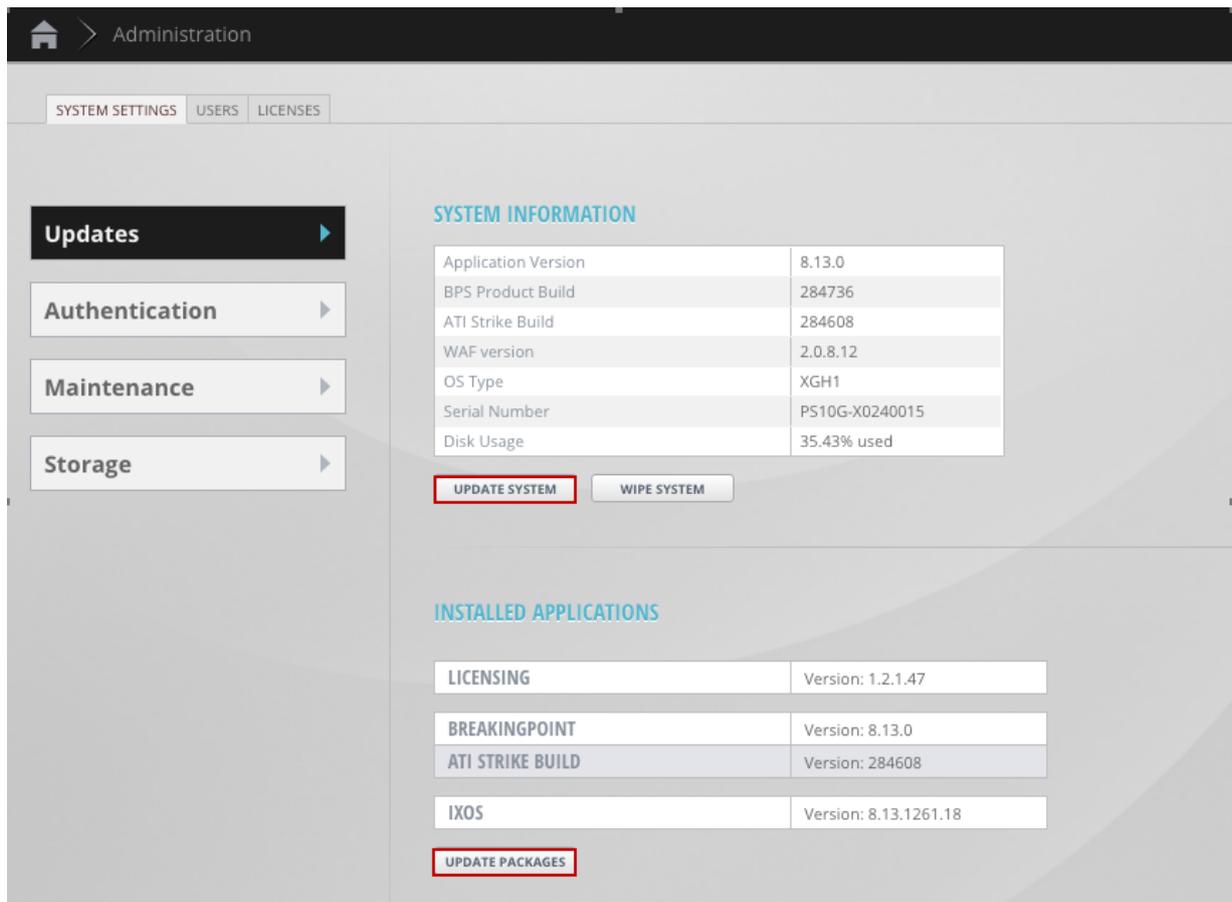
1. Download the required BPS update file.
2. Log in to the Ixia BreakingPoint System.
3. Navigate to **ADMINISTRATION -> SYSTEM SETTINGS -> UPDATES.**
4. Select **UPDATE SYSTEM** (see **figure 1** below).
5. Browse to the location of the BreakingPoint update file and select **OK.**
6. The BreakingPoint update will take 30-45 minutes to complete.

## Update Packages

The Application and Threat Intelligence (ATI) program provides updates every 2 weeks ensuring delivery of the industry's most up to date application and threat intelligence.

We recommend that customers install the latest ATI update since some BreakingPoint issues are resolved by installing ATI updates (see **Update Packages** in **figure 1** below). ATI Update Packages are obtained from the ATI Strike Center at: <https://strikecenter.ixiacom.com/bps/strikepacks>.

**Figure 1: Ixia WEB APPS Start Page**



## Switching to BreakingPoint Mode

All PerfectStorm Fusion load modules (blades) are capable of operating in IxLoad or BreakingPoint mode. When booting up, all PerfectStorm Fusion load modules default to IxLoad mode.

**Note:** Load modules retain the mode they were in prior to being rebooted.

On PerfectStorm (XGS12-HS), a red square in the upper right corner of the load module on the Device Status screen indicates that the module is in IxLoad mode. A green square indicates that the module is in BreakingPoint mode. On PerfectStorm ONE, the text "IxLoad Mode" at the bottom left side of the chassis on the Device Status screen indicates that the unit is in IxLoad mode. The text "Settings" indicates that the PerfectStorm ONE unit is in BreakingPoint mode.

### To Transition from IxLoad Mode to BreakingPoint Mode:

1. Click a port on the load module to begin the transition process. The **Reboot Slot** window will display.
2. Change the Slot Option setting to **Mode**. Select **BreakingPoint Mode** or **BreakingPoint L2/L3 Mode**.
3. Click **Apply** and wait for the mode change to complete.

**Note:** The transition from IxLoad mode to BreakingPoint mode takes approximately three minutes for each load module.

**Note:** To transition multiple load modules to BreakingPoint mode on PerfectStorm, each load module must be allowed to completely transition before the mode change process for the next load module can begin. Transitioning multiple modules simultaneously is prohibited.

## Resolved Defects

The following table lists defects from previous releases that have been resolved. If you have any concerns or questions regarding the defects listed here, please contact the BreakingPoint support team at [support@ixiacom.com](mailto:support@ixiacom.com) or call them at 1-818 595-2599.

Reference #	Description
<b>SR696099</b>	Resolved the issue where the installation of Malware packages could not be performed using Tcl.
<b>BUG1400847</b>	Resolved the issue where Routing Robot test in BPS Virtual Edition, sequence numbers were all zero rather than 0x00001234 as in hardware.
<b>BUG1400837</b>	Resolved the issue where BPS Virtual Edition did not allow users to set a Minimum Data Rate for L23 Tests to a value less than 10.

## Known Issues and Defects

The following section details the known issues and defects of Firmware Release 8.13. Workarounds are listed for each defect if they are available. If you have any concerns or questions regarding the defects listed here, please contact the BreakingPoint support team at [support@ixiacom.com](mailto:support@ixiacom.com) or call them at 1-818-595-2599.

Reference #	Description
<b>BUG1366697</b>	Certain tests, when run on the FireStorm or Storm platforms, will achieve slightly lower performance than in the BPS 3.5.1 version. The performance degradation is mainly impacting HTTP CPS Rate (sustain) with approximately 12%, GTP Throughput with approximately 7%, SSL Throughput (AES256, 2048 key) and Enterprise_Datacenter with approximately 5%, Industrial_Enterprise with approximately 8%, Sandvine_1H_2013_NA_Mobile and Sandvine_1H_2013_NA_Fixed with approximately 3%.
<b>BUG1395504</b>	On BPS VE, Session Sender produces inconsistent traffic patterns with NAT when a consistent traffic pattern is expected.
<b>BUG1397374</b>	Immediately after a Native IxOS upgrade of a PerfectStorm unit, you may observe an empty (no card) BPS Device status because the blades are not fully initialized in IxOS.  Workaround: Check the IxOS Chassis Manager Console and IxServer log to verify that blades are up in IxOS.

<b>BUG1399917</b>	On Native IxOS only, the Restart System feature now restarts the entire system instead of rebooting only the BPS system.
<b>BUG1406512</b>	On the Native IxOS chassis, changing the system date can only be reliably done from the IxOS CLI. The ability to change the date from the UI has been disabled in the current release.
<b>BUG1407324</b>	On Native IxOS, a NP security test will not stop at the time defined in the test configuration when "All Strikes" is configured. This problem does not occur when only malware strikes are configured.
<b>BUG1408034</b>	At this time, while running on Native IxOS, the <b>installUpdate</b> Tcl command will only work for ATI update packages and will not work for BPS software updates.
<b>BUG1408678</b>	Currently, the <b>Administration -&gt; Maintenance -&gt; Manage Sessions</b> menu option does not function on BPS. Note that this feature was designed for other IXIA products that use the same UI Interface.
<b>BUG1410092</b>	When using automation, 100G PerfectStorm ports momentarily remain reserved after they have been released. Attempts to run another test on the port fail. Errors indicate that the port is already reserved.  Workaround: When running automated tests, verify that ports have been released before starting another test on the port.
<b>BUG1410346</b>	While executing long duration tests, the BreakingPoint system may run out of disk space and become unresponsive. To resolve this issue, restart the chassis and then make more disk space available using one or more of the following methods. From the BPS UI: 1) Click <b>Results</b> to select and delete large reports. 2) Click <b>Administration &gt; Storage to Purge (all) Reports</b> . 3) Click <b>Administration &gt; Storage and Compact Storage</b> (optimize the disk). From the IxOS CLI, you can remove the BPS version that was stored before your system was converted to Native IxOS using the "uninstall bps legacy" command (if you do not plan to revert to Windows IxOS).
<b>BUG1416734</b>	When multiple IxNetwork sessions are configuring tests, BPS port reservations or card mode changes will be delayed until the IxNetwork port configuration is complete. In some extreme scenarios, when there are more than 10 IxNetwork instances, BPS may lose connection to the chassis and abort all running tests.

## Operational Considerations

Reference #	Description
<b>1309762</b>	When PerfectStorm is in L2/L3 mode, only one network processor is available to generate application traffic. Therefore, maximum

	performance/throughput is expected to be lower for L4/L7 test components while L2/L3 tests will perform as expected.
<b>1396164</b>	On BPS VE, in a scenario where the configured throughput of a test exceeds the link speed, the licenses that are allocated (checked out) are based on the link speed that can be achieved on the NIC.
<b>1398134</b>	Note that GTP tunnel creation is not dependent on the number of sessions. BPS creates tunnels irrespective of session rate.
<b>1399069</b>	When running BPS VE on EXSi 5.5, L2/L3 components drop a large number of packets due to the vSwitch. Workaround: To work around this issue, use ESXi 6.0.
<b>1399525</b>	On BPS VE, the Security component should be shared with other test components in order for security packets to be successfully delivered.
<b>1401796</b>	When in "Performance Acceleration" (DPDK) mode, increasing available resources for BPS VE may not help to successfully deploy vBlades.
<b>1401956</b>	When a BPS VE host supports required CPU flags, you must select "Copy host CPU configuration" in the Virtual Machine Manager in order to deploy a vBlade.
<b>1402051</b>	Due to a queuing mechanism in "Performance Acceleration" (DPDK) mode, intermittently, response times may be slow if there are a large number of requests in queue. Tests that have a short duration may appear to stop without proper closure of sessions.
<b>1402873</b>	Note that starting with 8.10 release, BPS VE support on is only available on DPDK enabled hardware.
<b>1409901</b>	The files created for backups of native IxOS databases vary in size, and can take more than an hour to backup or to restore. The main component of their size is the number and size of test reports included in the database files. If you wish to reduce the time taken by the backup and restore functions, delete unneeded test reports prior to running the backup or restore.