BreakingPoint Firmware Release Notes

Monthly Release 8.0.4, Apr. 2016

Release Notes Version 2.0

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Overview

Document Purpose

These release notes provide information regarding the Breaking Point 8.0.4 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 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	https://strikecenter.ixiacom.com/docs/BPS_UserGuide_8.0.1.pdf
Ixia BreakingPoint Virtual Edition (VE) User Guide	https://strikecenter.ixiacom.com/docs/BPS_VirtualEdition_UserGuide_8.0.1.pdf
Ixia BreakingPoint Storm Installation Guide	https://strikecenter.ixiacom.com/docs/BPS_Storm_InstallationGuide_8.0.1.pdf
Ixia BreakingPoint FireStorm Installation Guide	https://strikecenter.ixiacom.com/docs/BPS_FS_InstallationGuide_8.0.1.pdf
Ixia BreakingPoint FireStorm ONE Installation Guide	https://strikecenter.ixiacom.com/docs/BPS_FS_ONE_InstallationGuide_8.0.1.pdf
Ixia BreakingPoint 20 Installation Guide	https://strikecenter.ixiacom.com/docs/BPS_20_InstallationGuide_8.0.1.pdf
Ixia BreakingPoint Virtual Edition (VE) Installation Guide	https://strikecenter.ixiacom.com/docs/BPS_VirtualEdition_InstallationGuide_8.0.1.pdf

PerfectStorm - XGS12 Chassis Platform Assembly Guide	http://www.ixiacom.com/support-services/product-support/user-guides#All_Software_-IxLoad

New Features

BreakingPoint 8.0.4 is the first monthly firmware release that follows the last major firmware release, BreakingPoint 8.0.1. It includes the additional features listed below. These features will also be rolled into the next major firmware release, BreakingPoint 8.10.

Security Vulnerability Fixes

The BreakingPoint 8.0.4 release addresses a series of security vulnerabilities. This improves the stability and security of BreakingPoint deployments.

The full list of addressed vulnerabilities is: CVE-2015-0204, CVE-2015-0292, CVE-2014-8176, CVE-2014-3513, CVE-2014-3567, CVE-2014-3566, CVE-2014-3568, CVE-2015-1788, CVE2015-1789, CVE-2011-3389, CVE-2015-1790, CVE-2015-1791, CVE-2015-1792, CVE-2013-2566, and CVE-2015-2808.

Usability Enhancements

BreakingPoint 8.0.4 continues an ongoing series of usability enhancements aimed to improve the overall user experience. Please see resolved defects for more details.

Software Compatibility

BreakingPoint 8.0.4 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 8.0.4	Not applicable	
Firestorm ONE appliance	BreakingPoint 8.0.4		
XGS12-HS chassis (PerfectStorm Load Modules)	BreakingPoint 8.0.4	IxOS 8.01 EA Patch 1	Flix OS 2015.2.1001.99
PerfectStorm ONE Fusion appliances	BreakingPoint 8.0.4	IxOS 8.01 EA Patch 1	Flix OS 2015.2.1001.99
BreakingPoint Virtual	BreakingPoint 8.0.4	Not Applicable	

Hardware Compatibility

The BreakingPoint 8.0.4 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

Firmware Release 8.0.4 continues Ixia's transition to an HTML5-based architecture for the Ixia BreakingPoint user interface. Mac users with OS 10.8.2 can use Firefox or Google Chrome as their browser. Safari, Internet Explorer, Opera and beta versions of HTML browsers are not supported.

Browser	Recommendation for Windows	Recommendation for MAC
Google Chrome	45 & 46	45 & 46
Firefox	38.01 & 39.03	38.01 & 39.03
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).

Upgrading to Release 8.0.4

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

Release Compatibility

BreakingPoint	8.0.4
IxLoad	8.01 EA
IxNetwork	8.01 EA
IxOS	8.01 EA Patch1
FlixOS	2015.2.1001.99
Licensing	4.30 EA Patch1
HLTAPI	8.01 EA
IxANVL	8.95 EA
IxChariot	9.20 EA, 7.30 EA SP3
Test Conductor	3.60 GA

General Notes

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

Backing Up the Ixia BreakingPoint to a NFS Server

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

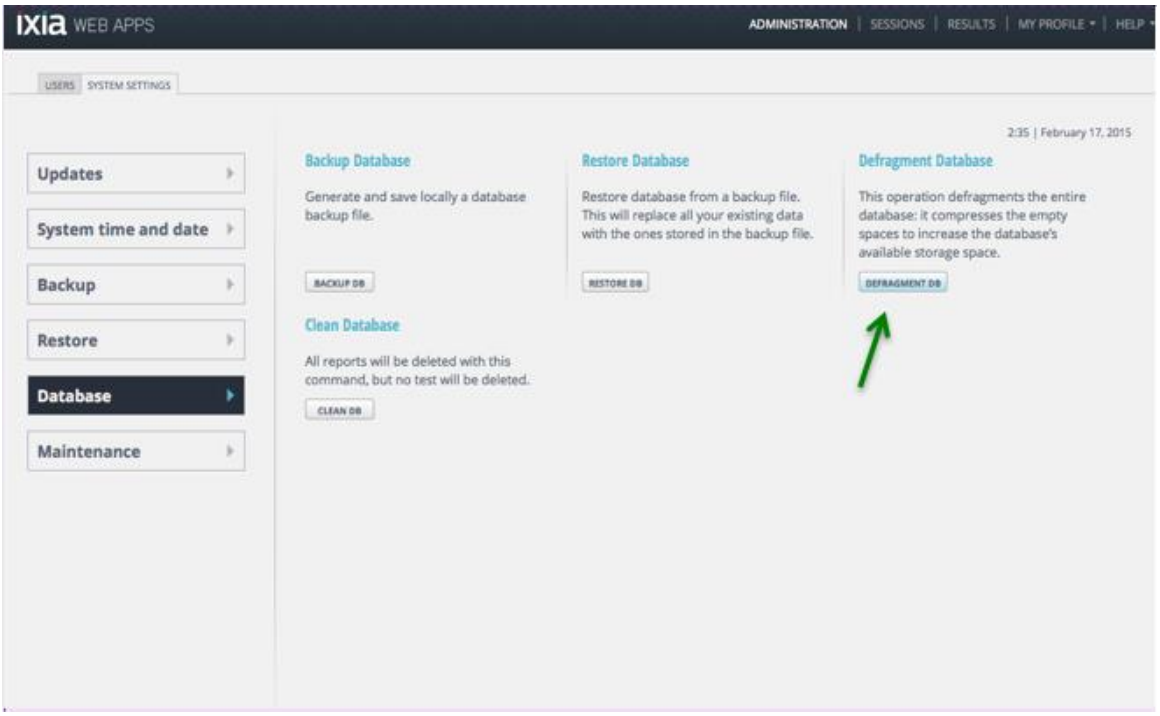
<u>Starting from the Linux computer:</u>

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 12.33.44.555(rw,sync,no_subtree_check,insecure)
5. Export the Shared Directory

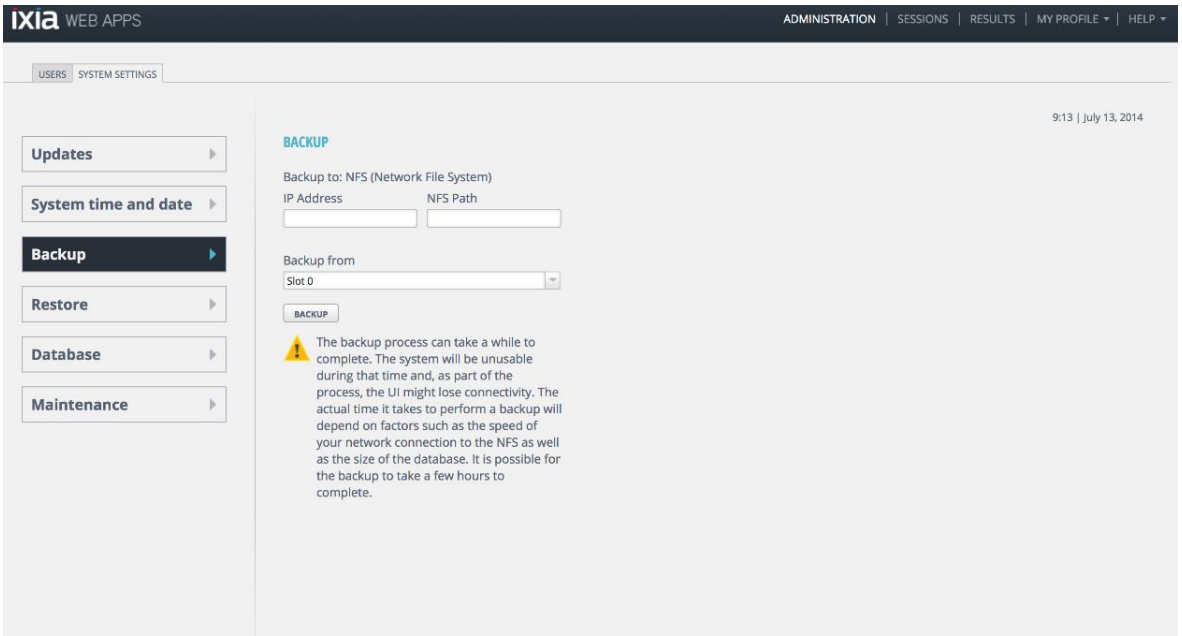
a. sudo exportfs -a

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 **Defragment Database** option (this may take some time to complete).

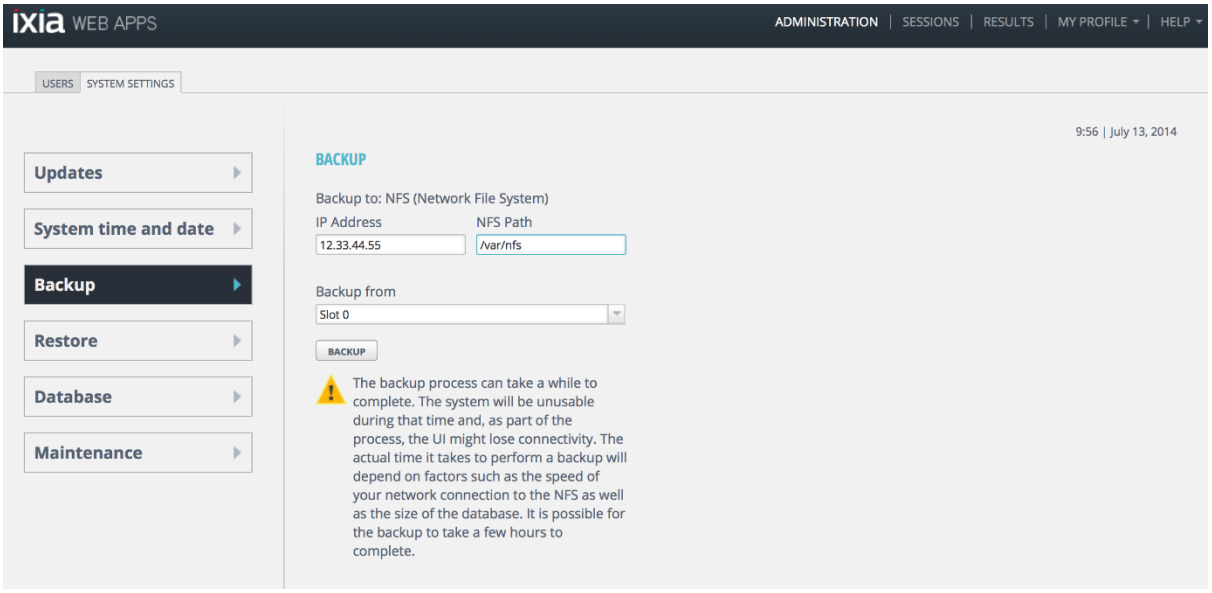


3. Log in to the Ixia BreakingPoint and navigate to **Backup** within the Ixia Web Apps:



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 8.0.4 Firmware release *and* after upgrading to the 8.0.4 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 8.0.4 from earlier BreakingPoint Firmware releases.

Current BreakingPoint Firmware	Upgrade Path to BreakingPoint 8.0.4 Firmware
8.0.1	-> 8.0.4
3.5.1	-> 8.0.1 -> 8.0.4
3.5	-> 8.0.1 -> 8.0.4
3.4.2	-> 8.0.1 -> 8.0.4
3.4.1	-> 8.0.1 -> 8.0.4

3.4	-> 8.0.1 -> 8.0.4
3.3.1	-> 3.5.1 -> 8.0.1 -> 8.0.4
3.3	-> 3.4.2 -> 8.0.1 -> 8.0.4
3.2	-> 3.3 (or higher version) -> 3.4.2 -> 8.0.1 -> 8.0.4
3.1	-> 3.3 (or higher version) -> 3.4.2 -> 8.0.1 -> 8.0.4
3.0.1	-> 3.3 (or higher version) -> 3.4.2 -> 8.0.1 -> 8.0.4
3.0	-> 3.3 (or higher version) -> 3.4.2 -> 8.0.1 -> 8.0.4

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 8.0.4, you must restart the system in order for all of the subsystems to initialize.

Upgrading multi-blade FireStorm systems to Release 8.0.4, 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 XGS12-HS Chassis and PerfectStorm ONE Fusion Appliances

To install BreakingPoint 8.0.4, you must perform the following steps:

1. Upgrade the FLIX OS to version 2015.2.1001.99.
2. Upgrade the IxOS version to 8.01 EA Patch 1
3. Upgrade BreakingPoint software to firmware 8.0.4.
4. After the BreakingPoint software upgrade has completed, we recommend that you perform a backup.

Upgrading FLIX OS

In order to install BreakingPoint 8.0.4 on a XGS12-HS chassis the operating system running the chassis controller must be updated to FLIX OS 2015.2.1001.99. The update procedure is described in a document named, "FlixOS-2015.2.1001.99 Upgrade Guide", which is available on the StrikeCenter BreakingPoint OS Updates site.

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 8.01 EA Patch 1

Software and Installation Instructions are located at the following location:

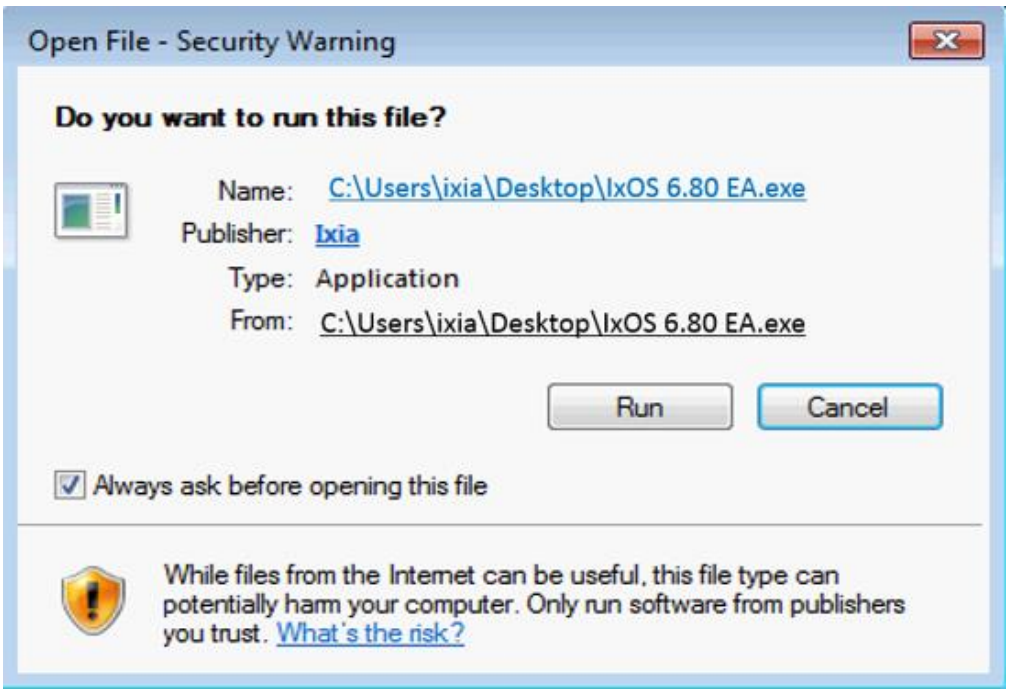
http://support.ixiacom.com/support-overview/product-support/downloads-updates/versions/21

Note: The version numbers displayed in the images below may differ from the version numbers that are displayed when you upgrade IxOS 8.01 EA Patch 1.

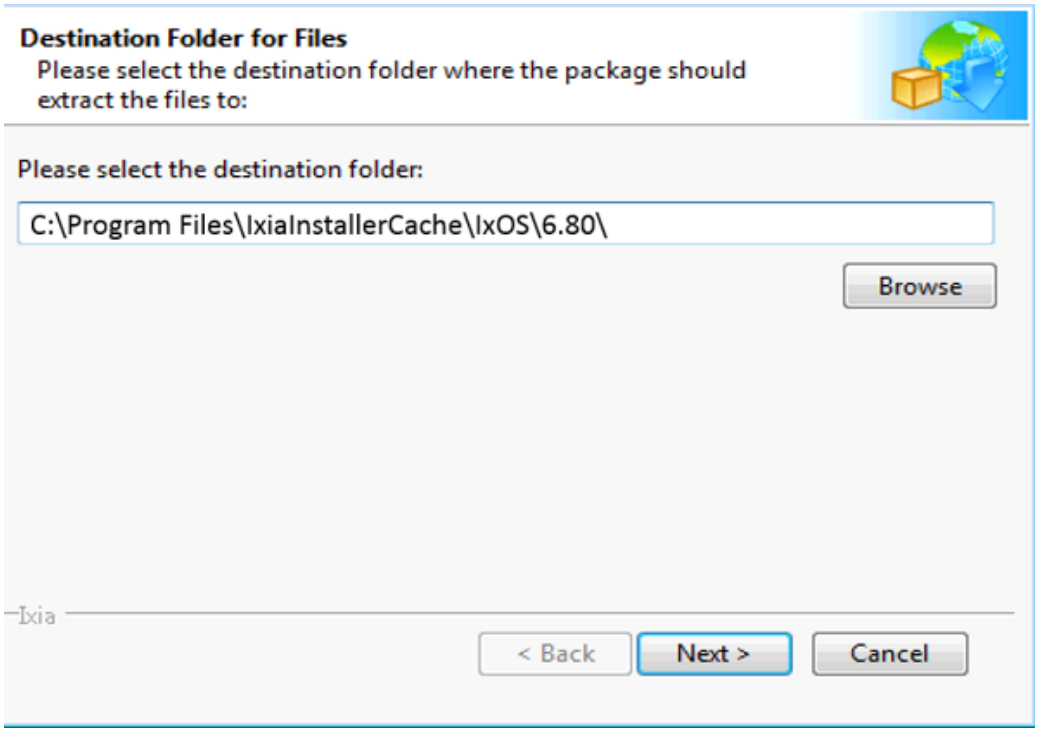
Note: BUG1354074: A Stop Error (Blue Screen) may occur while upgrading IxOS due to a Microsoft Windows issue. A Microsoft hotfix is available to resolve this issue, see Windows Update kb2675806.

Starting From the Windows VM:

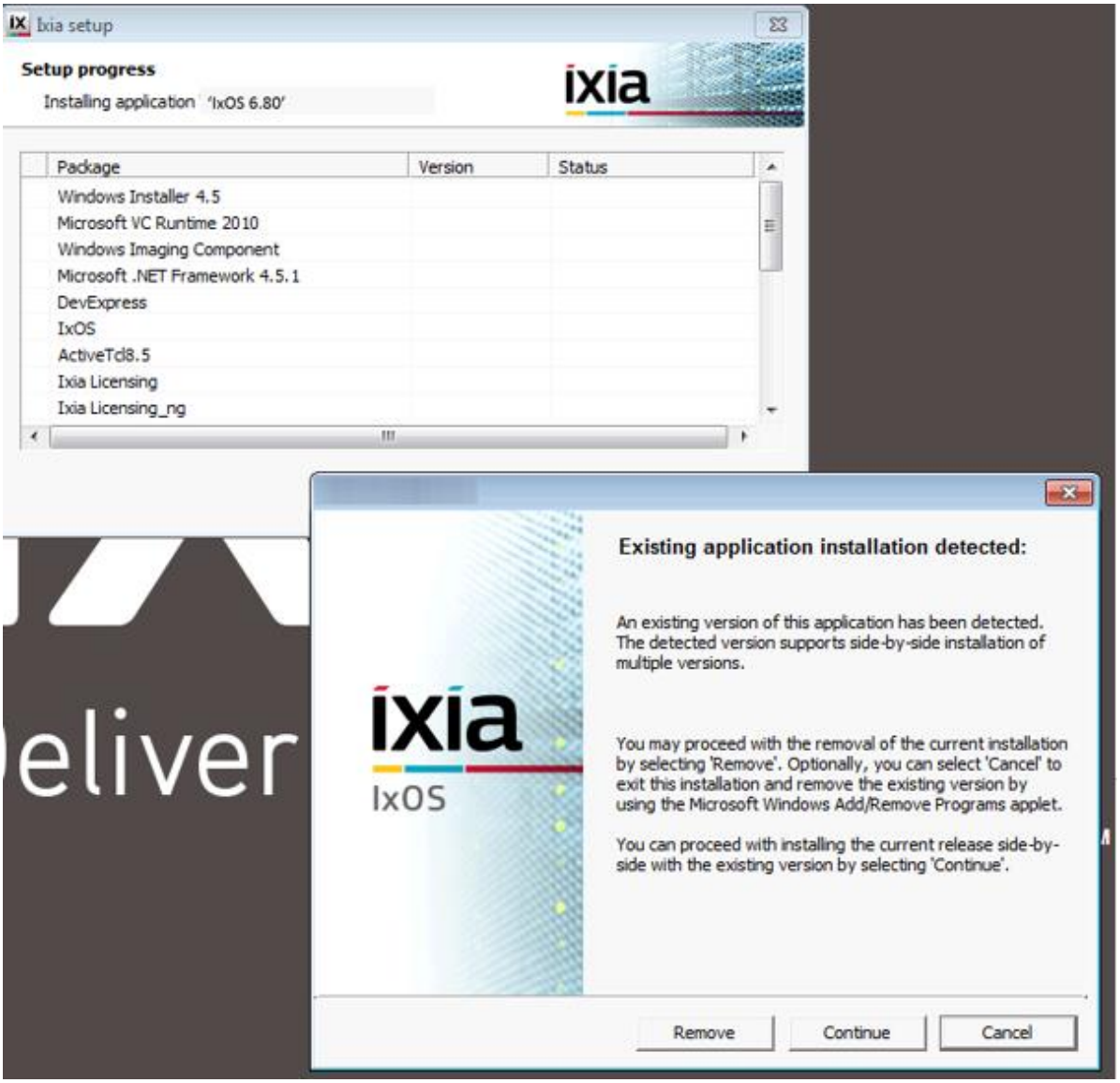
1. Open Remote Desktop and Login to the Ixia Windows VM.
2. Copy the IxOS executable to the Desktop.
    a. You may need to copy the *.exe file onto the Ixia Windows VM.
    b. The file can be directly downloaded on the VM using the link above.
    c. If no direct network access to ixiacom exists, then 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.

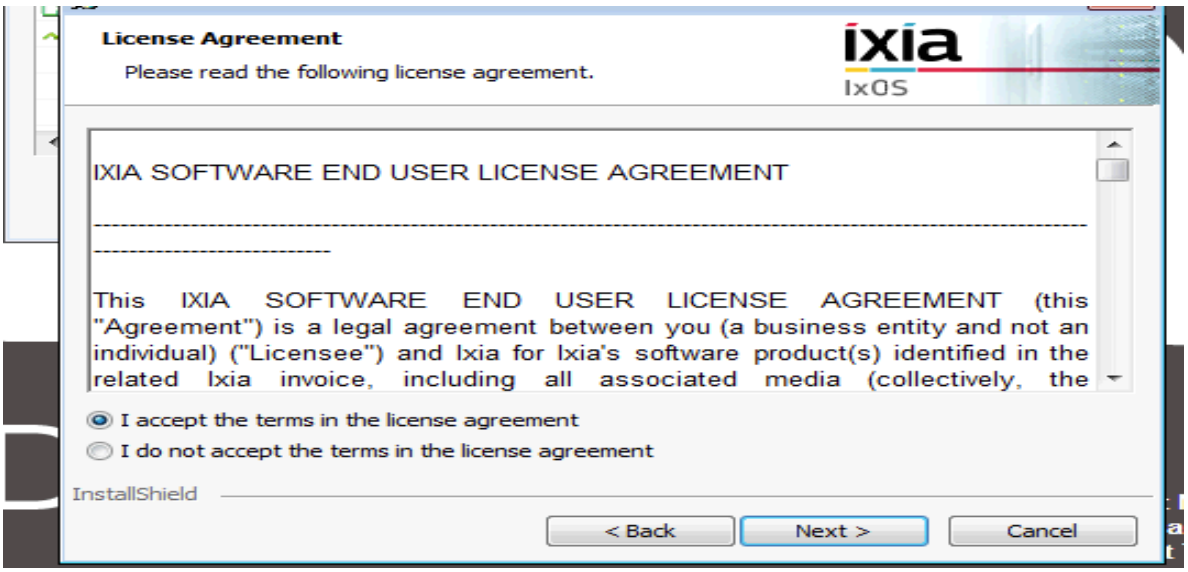


6. Accept the Default Destination Folder for the Installation. Click **Next**.

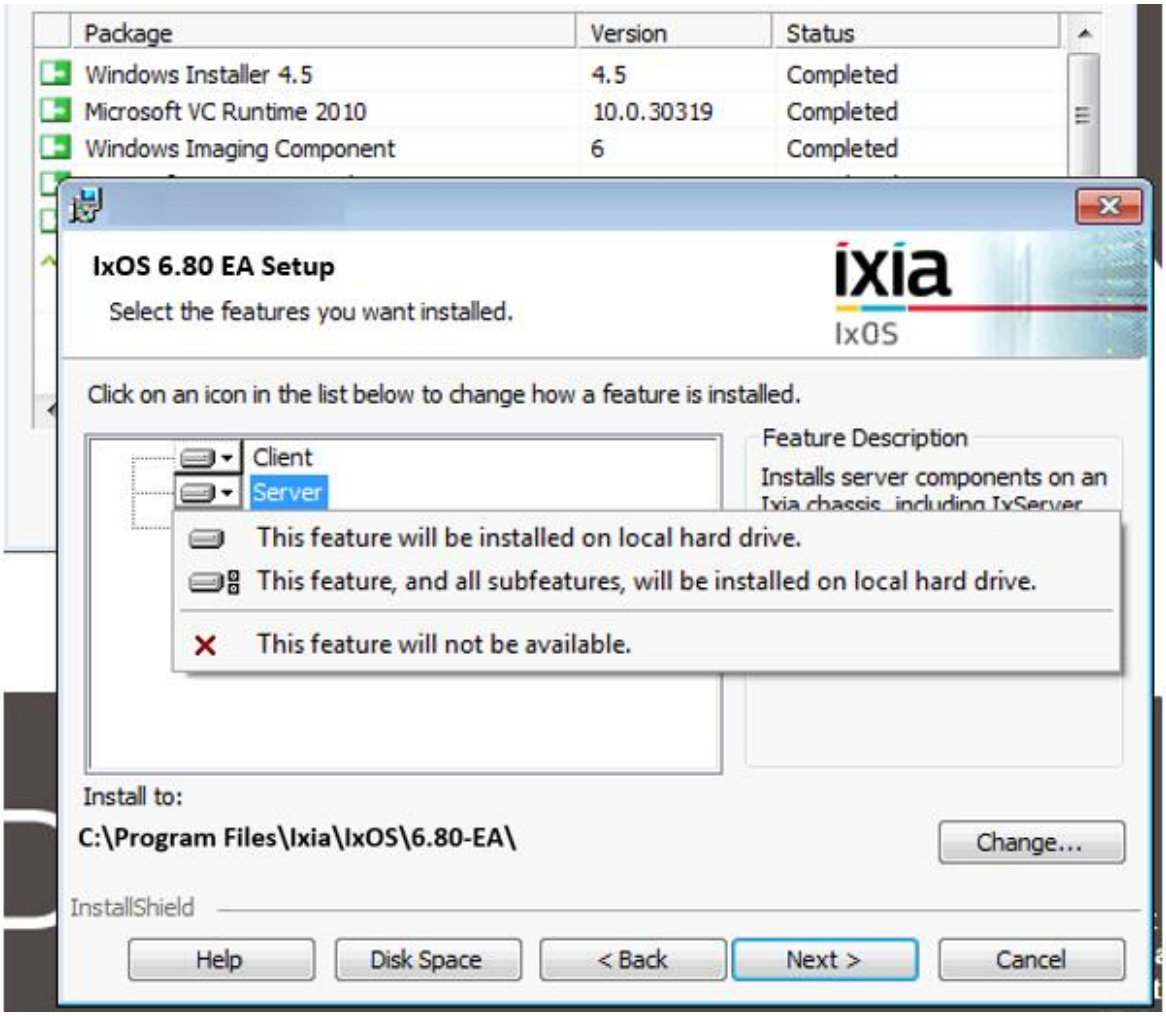


a. Select **Continue** on the "**Existing application Installation detected**:" window.

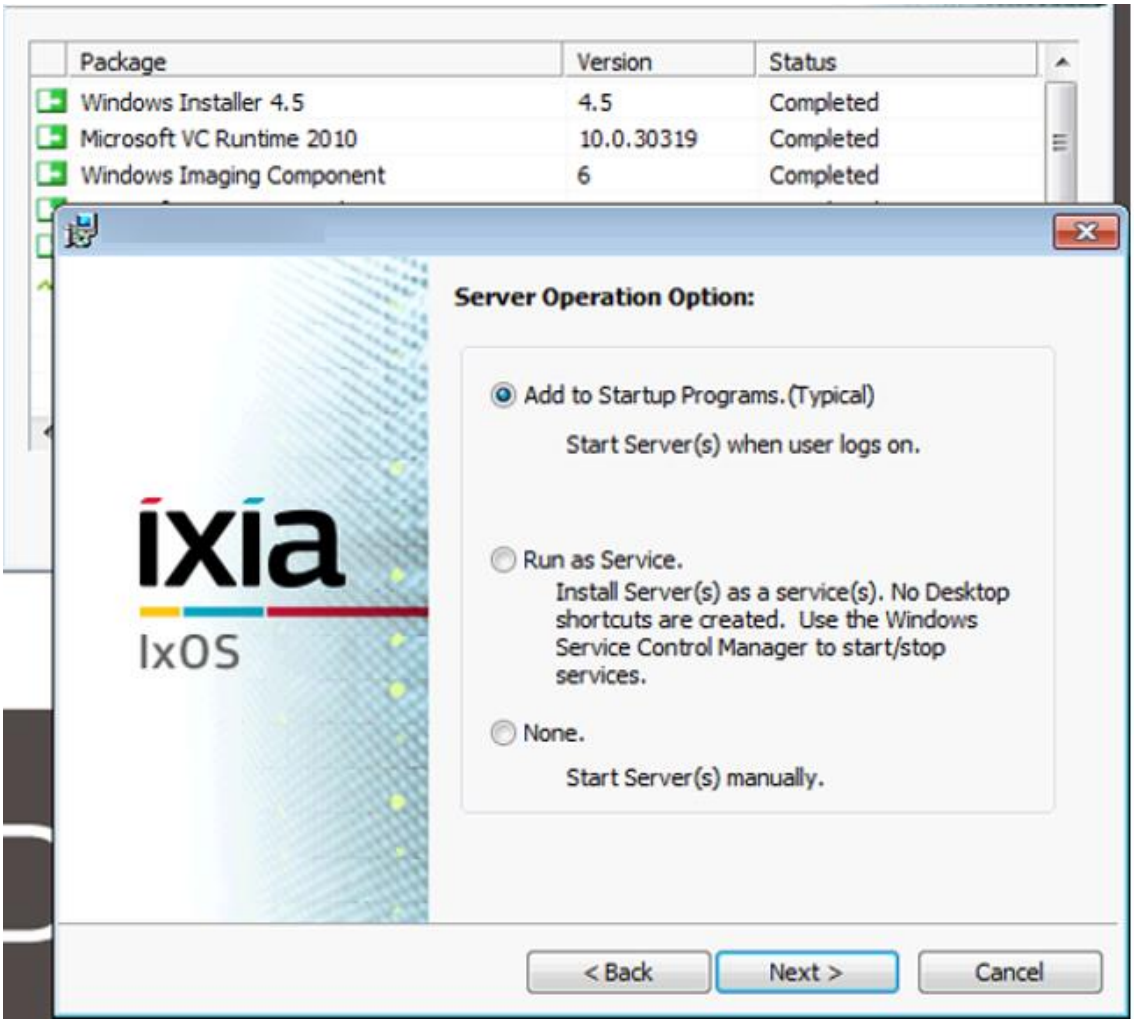
7. Click **Next** on the "**Welcome to the Setup for IxOS x.xx..**" window.



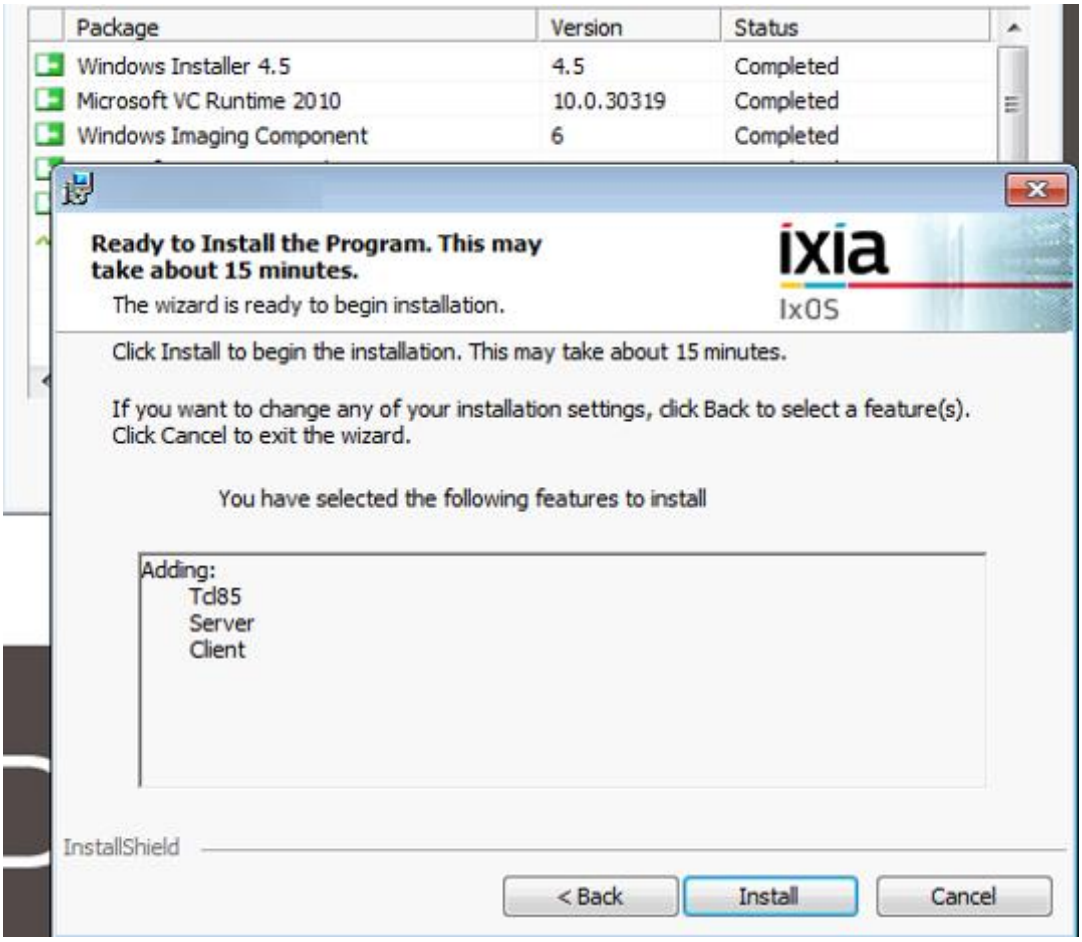
8. Accept the License Agreement, then click **Next**.



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.



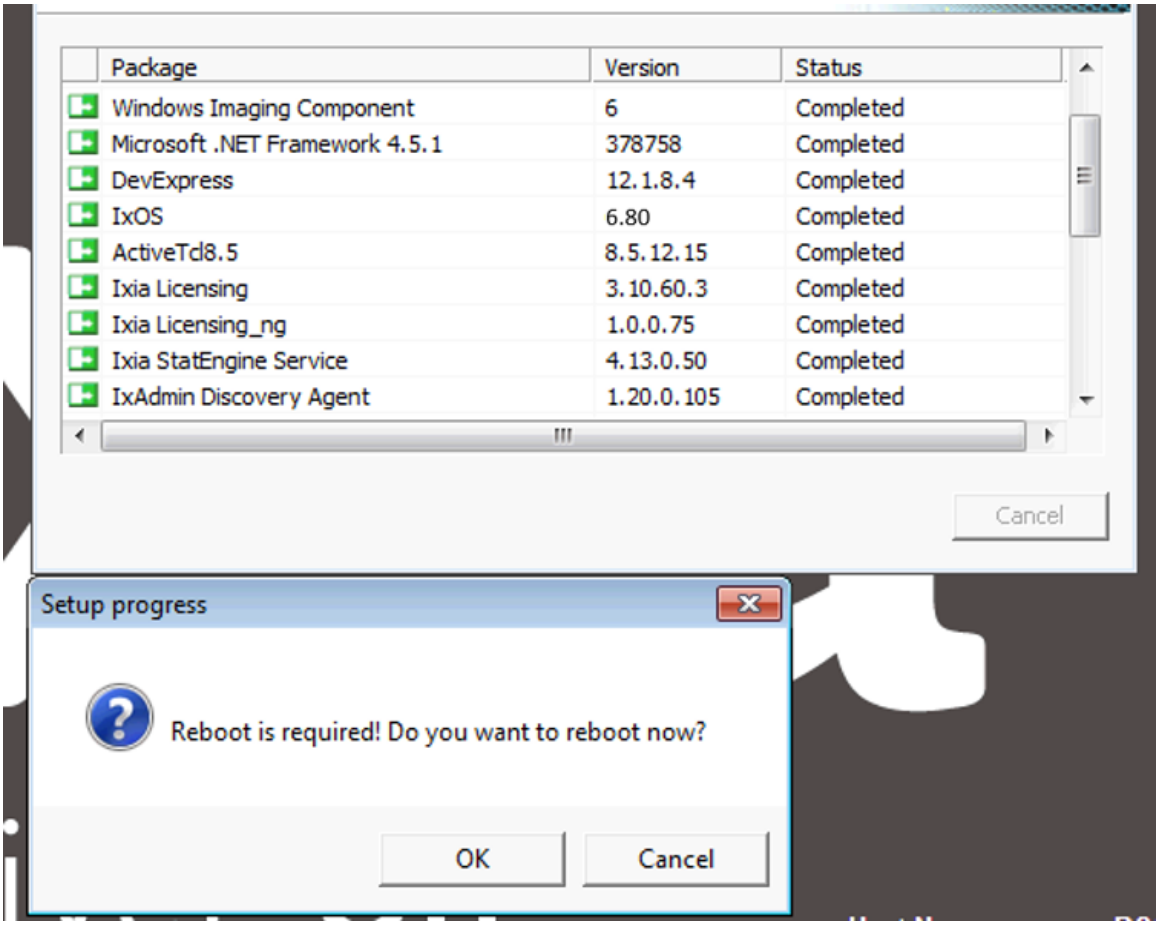
10. Select the following option: "**Add to Startup Programs.(Typical)",** then click **Next**.



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

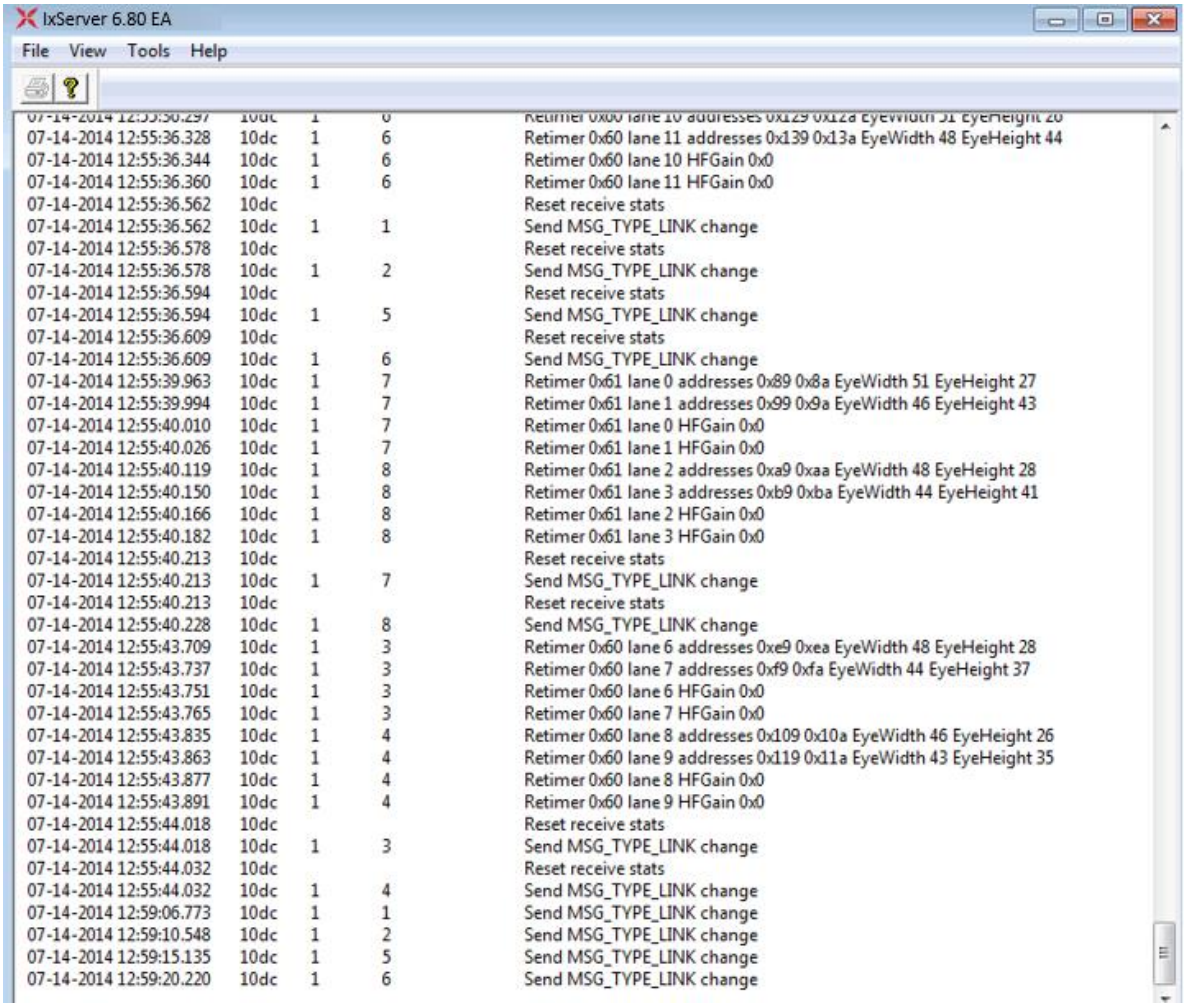
12. After several minutes of installation, new IxOS application links will be copied to the desktop.

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.

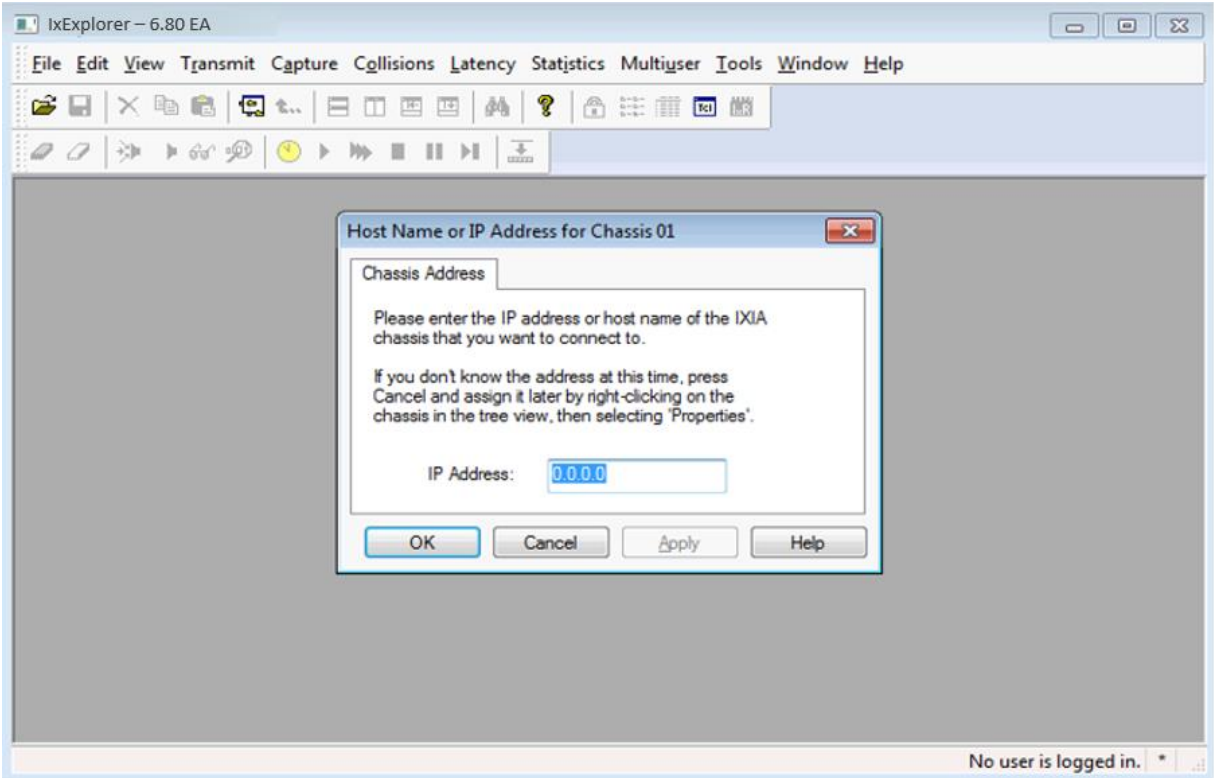


IxServer 6.80 EA

File View Tools Help

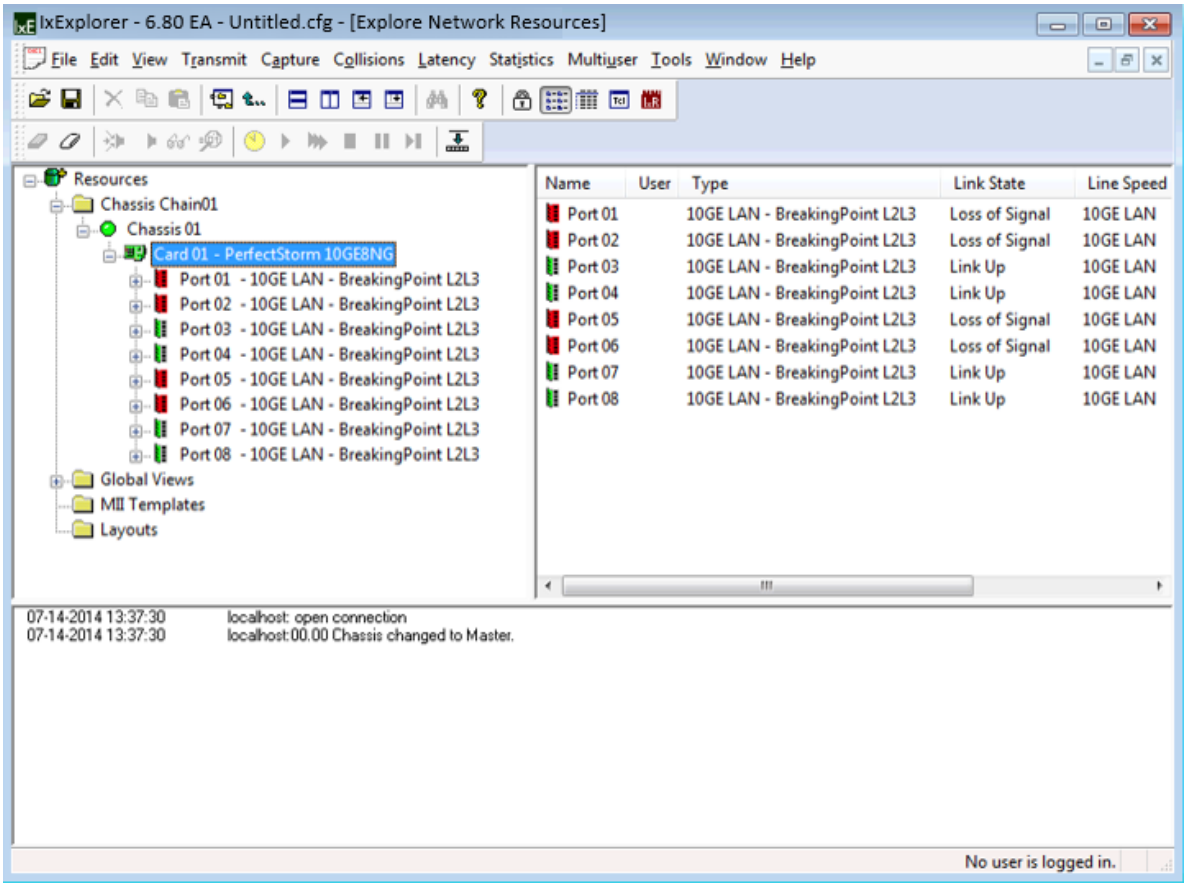
07-14-2014 12:55:36.297	10dc	1	6	Retimer 0x60 lane 10 addresses 0x129 0x12a EyeWidth 51 EyeHeight 26
07-14-2014 12:55:36.328	10dc	1	6	Retimer 0x60 lane 11 addresses 0x139 0x13a EyeWidth 48 EyeHeight 44
07-14-2014 12:55:36.344	10dc	1	6	Retimer 0x60 lane 10 HFGain 0x0
07-14-2014 12:55:36.360	10dc	1	6	Retimer 0x60 lane 11 HFGain 0x0
07-14-2014 12:55:36.562	10dc			Reset receive stats
07-14-2014 12:55:36.562	10dc	1	1	Send MSG_TYPE_LINK change
07-14-2014 12:55:36.578	10dc			Reset receive stats
07-14-2014 12:55:36.578	10dc	1	2	Send MSG_TYPE_LINK change
07-14-2014 12:55:36.594	10dc			Reset receive stats
07-14-2014 12:55:36.594	10dc	1	5	Send MSG_TYPE_LINK change
07-14-2014 12:55:36.609	10dc			Reset receive stats
07-14-2014 12:55:36.609	10dc	1	6	Send MSG_TYPE_LINK change
07-14-2014 12:55:39.963	10dc	1	7	Retimer 0x61 lane 0 addresses 0x89 0x8a EyeWidth 51 EyeHeight 27
07-14-2014 12:55:39.994	10dc	1	7	Retimer 0x61 lane 1 addresses 0x99 0x9a EyeWidth 46 EyeHeight 43
07-14-2014 12:55:40.010	10dc	1	7	Retimer 0x61 lane 0 HFGain 0x0
07-14-2014 12:55:40.026	10dc	1	7	Retimer 0x61 lane 1 HFGain 0x0
07-14-2014 12:55:40.119	10dc	1	8	Retimer 0x61 lane 2 addresses 0xa9 0xaa EyeWidth 48 EyeHeight 28
07-14-2014 12:55:40.150	10dc	1	8	Retimer 0x61 lane 3 addresses 0xb9 0xba EyeWidth 44 EyeHeight 41
07-14-2014 12:55:40.166	10dc	1	8	Retimer 0x61 lane 2 HFGain 0x0
07-14-2014 12:55:40.182	10dc	1	8	Retimer 0x61 lane 3 HFGain 0x0
07-14-2014 12:55:40.213	10dc			Reset receive stats
07-14-2014 12:55:40.213	10dc	1	7	Send MSG_TYPE_LINK change
07-14-2014 12:55:40.213	10dc			Reset receive stats
07-14-2014 12:55:40.228	10dc	1	8	Send MSG_TYPE_LINK change
07-14-2014 12:55:43.709	10dc	1	3	Retimer 0x60 lane 6 addresses 0xe9 0xea EyeWidth 48 EyeHeight 28
07-14-2014 12:55:43.737	10dc	1	3	Retimer 0x60 lane 7 addresses 0xf9 0xfa EyeWidth 44 EyeHeight 37
07-14-2014 12:55:43.751	10dc	1	3	Retimer 0x60 lane 6 HFGain 0x0
07-14-2014 12:55:43.765	10dc	1	3	Retimer 0x60 lane 7 HFGain 0x0
07-14-2014 12:55:43.835	10dc	1	4	Retimer 0x60 lane 8 addresses 0x109 0x10a EyeWidth 46 EyeHeight 26
07-14-2014 12:55:43.863	10dc	1	4	Retimer 0x60 lane 9 addresses 0x119 0x11a EyeWidth 43 EyeHeight 35
07-14-2014 12:55:43.877	10dc	1	4	Retimer 0x60 lane 8 HFGain 0x0
07-14-2014 12:55:43.891	10dc	1	4	Retimer 0x60 lane 9 HFGain 0x0
07-14-2014 12:55:44.018	10dc			Reset receive stats
07-14-2014 12:55:44.018	10dc	1	3	Send MSG_TYPE_LINK change
07-14-2014 12:55:44.032	10dc			Reset receive stats
07-14-2014 12:55:44.032	10dc	1	4	Send MSG_TYPE_LINK change
07-14-2014 12:59:06.773	10dc	1	1	Send MSG_TYPE_LINK change
07-14-2014 12:59:10.548	10dc	1	2	Send MSG_TYPE_LINK change
07-14-2014 12:59:15.135	10dc	1	5	Send MSG_TYPE_LINK change
07-14-2014 12:59:20.220	10dc	1	6	Send MSG_TYPE_LINK change

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.



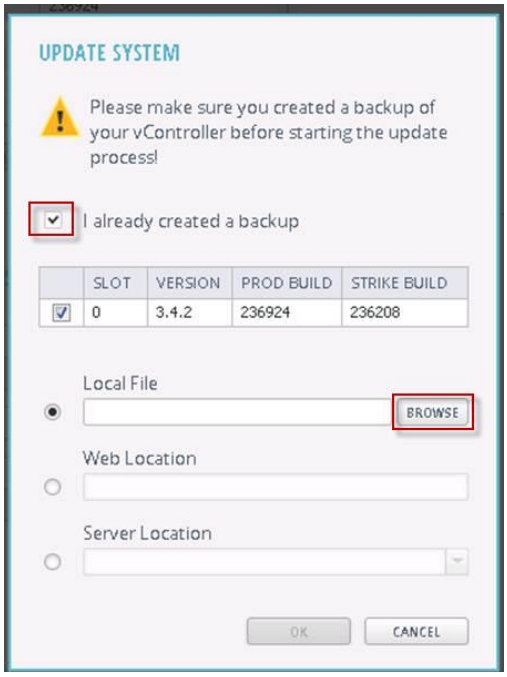
18. IxExplorer will show the status of the blades connected to the chassis along with the mode they are running in.

    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.



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

To update the Ixia BreakingPoint System.

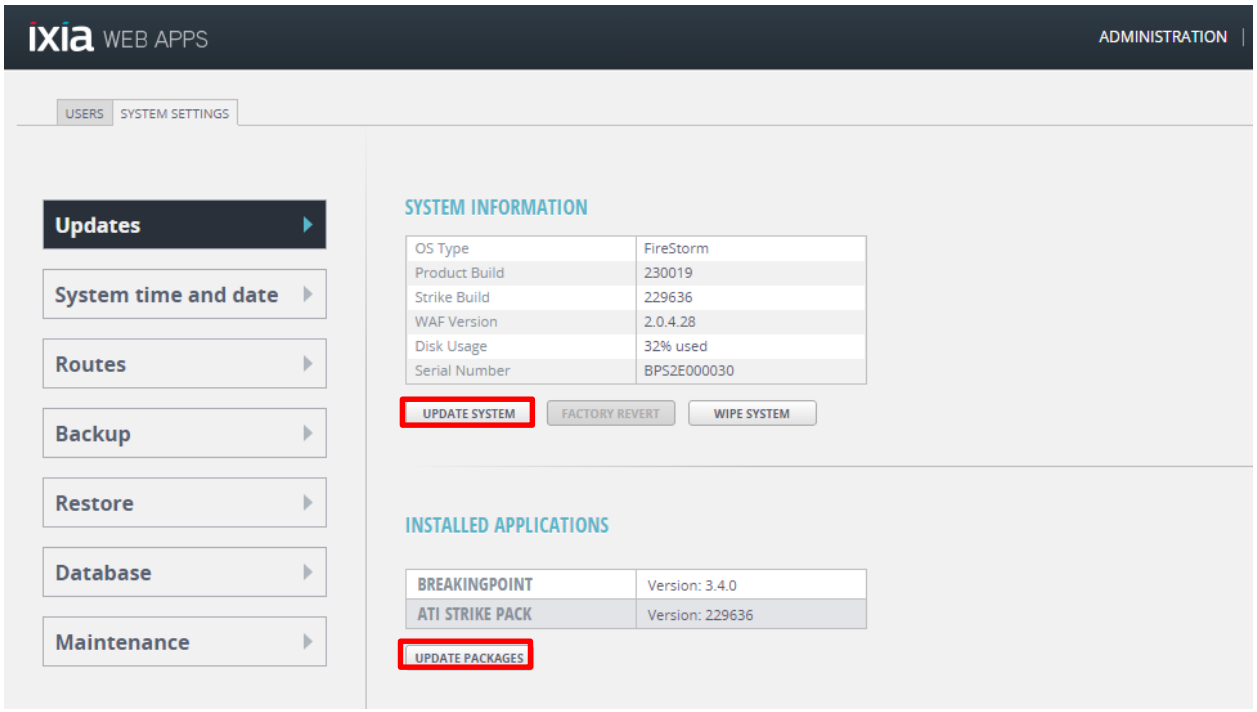
1. Download the required Ixia BreakingPoint image.
2. Log in to the Ixia BreakingPoint System.
3. Navigate to **ADMINISTRATION -> SYSTEM SETTINGS -> UPDATES**.
4. Select **UPDATE SYSTEM** (see **figure 1** below).
5. Browse to the location of the BreakingPoint update file and select **OK**.
6. The BreakingPoint 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 8.0.4 Release

The following tables list 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 or call them at 1-818 595-2599.

SR #	Description
BUG1367507	Make always visible the Port Menu button inside the Device Status page
BUG1345743	The buttons from the header menu are unavailable for some seconds after opening the Device Status
BUG1394050	HTTP ERROR 404 when pressing on Help button inside the Impairments and Packet Filter popups
BUG1395382	Fix Help Links.

Known Defects

The following section details the known defects of Firmware Release 8.0.4. 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 or call them at 1-818 595 2599.

Multiple Platforms

Defect #	Description
BUG1335995	Backup and Restore do not display operation progress while a Backup/Restore operation is running. You will only see a message indicating Backup/Restore is occurring.
BUG1355388	If you use the "unlimited" option for performance measurement while testing with this module, performance will depend on the DUT's ability to handle flow control (pause) frames.
BUG1356056	As CPU activity rises, an SSL test may not achieve amount of rate control that was configured for the test.

BUG1357878	Routing Robot and Bit Blaster tests on 40G PerfectStorm achieve 79.98 Gbps Bi-directional bandwidth at 9K byte Frame size or greater.
BUG1360802	For security-np tests, you should be aware that the application tab in Real-Time Statistics represents transport protocol statistics.
BUG1362229	Intermittently, BreakingPoint becomes unresponsive after a user attempts to run a database cleanup (**Administration -> System settings > Clean DB**). If the operation does not complete within 30 minutes, restart BreakingPoint (**Administration -> Maintenance-> Restart BPS**) and retry the database cleanup.
BUG1366697	Some tests on the FireStorm system will achieve slightly lower performance than earlier releases. The impacted tests are HTTP CPS, GTP Max Tput, Industrial Enterprise Tput and Industrial Data Center Tput. To achieve higher performance, Ixia recommends using PerfectStorm systems.
BUG1368440	On PerfectStorm 100G in L23 mode, a test with a combination of L23-L47 elements may become unstable because the bandwidth has exceeded the supported limit when using the bi-directional options in Routing Robot. In this scenario, the 100G modules may need to be rebooted to recover.
BUG1369555	On PerfectStorm, Reports for encrypted tests (such as NSS tests) will not provide the pass-fail criteria information that is available for a non-encrypted test.
BUG1373720	On Firestorm, if a LTE test has both IPv4 and IPv6 interfaces, packets (including the checksum) will be corrupted. This scenario may produce a large number of reported retries. The issue does not occur when the test contains only IPv4 or IPv6 interfaces.
BUG1375699	Starting with BPS release 8.0.1 and going forward, the layer 3, BreakingPoint NAT solution is not compatible with devices that open new TCP connections with their own TCP header (seqno, ack, timestamp, etc.) instead of passing through our TCP packets (with the TCP header we send with the packets).
BUG1376600	When using the GTP protocol, the user may see a few exceptions (less than 100), that are due to some corrupted frames that are not recognized as Ethernet frames. These exceptions will not have any impact on the overall test objective.
BUG1377825	For the Session Sender component. Payload packets are considered to be a portion of the padded request from the client side.
BUG1377830	Currently, when running a Session Sender test with the HTTP GET Request, the Session Sender component recognizes “200OK” as the first payload packet. This results in the payload packet count always being 1 less than the configured value.
BUG1378135	For a two component test against DNAT to run properly, it is recommended to configure the components to have different pools of IP addresses or configure different IP address ranges for the

	components in the BreakingPoint Network Neighborhood. This configuration will help prevent unexpected TCP RESETs and other anomalies from occurring.
BUG1379335	While running in NAT environment, errors with the message "Flow Update/Could not find flow" might appear if the source and destination IP and port count is not large enough to generate unique flow endpoint pairs. Workaround: To work around this issue, please set a higher count of IP addresses and port ranges.
BUG1379398	For larger configurations with 2000+ VLANs in a test, report generation may take several hours due to the number of pages in the report. You should plan on providing sufficient time for the report to generate.
BUG1379538	Some DUTs may act as a proxy device for a SIP flow (instead of simple NAT over TCP) and change the sequence number of the initial connection for a SIP Invite. In this scenario, the flow will not be recognized by the BreakingPoint server and the connection will be RESET. Ensure to closely observe the behavior of the DUT when using a SIP flow/Super Flow.
BUG1380269	For the TFTP DNAT use case, the client port is selected randomly. Intermittently, a GTP port (2123 or 2152) is selected and BreakingPoint cannot match the flow. BreakingPoint will then try the GTP path. Since the packet is not a valid GTP packet, a GTP discard is sent and the corresponding exception is thrown.
BUG1380413	At this time, the use case where a TFTP flow goes through DNAT is not supported since the server response port gets translated.
BUG1380786	When running a CC (concurrent connection) test, in some scenarios the Close Rate may be much higher than the Open Rate during the Sustain Time. This makes it difficult to maintain the desired CC value. This issue can occur more often with small payloads in both AppSim and Session sender. To avoid this issue, use a larger payload size in the Super Flow or hold the TCP session open for a longer period of time in the Load profile.
BUG1381396	In a scenario where there are consecutive GET requests from a client on the same socket (without a “wait”), the server only parses the first GET request and responds accordingly.
BUG1381487	When processing Multi-Match Response 200(OK), if the JSON option does not contain the exact file that is used in the GET, the server will go into a “mismatch match” state leading to a timeout before executing the client superflow.
BUG1381821	The BreakingPoint UI gets stuck in “loading” mode when started from a Chrome browser and the user moves to a different tab. To avoid this issue, Ixia recommends enabling "Always allowed to run"

	for the Adobe Flash Player plugin. This option can be accessed by typing "chrome://plugins/" into the Chrome browser URL field.
BUG1385205	In a scenario where a client component is working alone as a single component, there is a need to indicate a proper value for the transaction flag in order to produce correct statistics.
BUG1385672	In the Google Chrome browser for Linux, selecting Help from: **Help > Documentation > BPS Control Center** may not open the Help page correctly. Workaround: Clear the browser cache. Click **BreakingPoint New Session**. Click the "**?**" icon. When the panel opens (it may be blank) right-click in the panel area and select "Reload" or "Reload Frame".
BUG1386521	If a single test contains L23 and L47 test components and is assigned to run on more than one blade, BPS will not allow the test to run. Workaround: Create separate L23 and L47 tests and assign them on separate blades. Multiple blades can run L23 and L47 tests successfully as long as they are in separate tests.
BUG1390122	When a Vulnerability or NMAP scan runs to the IP address of a BreakingPoint system, a message appears beside the device status window. The message can be read as a warning (to alert the user) instead of an error although the title of the message displays as "Error".
BUG1392153	On PerfectStorm 100G in L23 mode, a combination of Routing Robot and Security test is not supported. Security test by itself runs as expected in L23 mode. You can also run AppSim test in combination with Security Component in L47 mode.
ENH1338532	Encrypted tests (including NSS tests) will not be able to be executed from the TCL API unless they are added to a test series.

BreakingPoint Virtual Edition

Defect #	Description
BUG1344700	A test may not run for its configured duration because of the following. Based on the configured lower/upper and step % of load it is calculated how many iterations needs to be run per frame size. Therefore, as your frame size (and required iterations) vary your test duration will vary.
BUG1352530	On KVM, after you remove a vBlade Under Manage Virtual Chassis, the UI will continue to display the "Remove virtual blades from selected slots" icon as an option that can be selected.
BUG1366073	There is no validation imposed on the number of security components that can be used in a low resource environment but using more than four components may lead to unreliable performance.

BUG1366349	In a scenario with a limited number of IP addresses and ports (TCP/UDP), some flows may not be able to initiate. This can lead to flow exceptions. In order to avoid this scenario, ensure to configure a sufficient number of IP addresses and ports.
BUG1367875	If vBlades are connected to a vSwitch where the promiscuous mode is enabled, packets will be dropped and reported as router discards. In order to avoid this scenario, the vSwitch “Notify Switches” settings need to be set to “No”.
BUG1368524	In a low memory configuration (vController and vBlades) on Linux, BreakingPoint VE may exhibit unstable behavior due to limited resources.
BUG1368553	If a single test contains multiple network neighborhoods that are connected via a VSwitch which is promiscuous enabled, the RX packet count will be greater than expected. This is due to the fact that the vSwitch has to make multiple copies of the same packet and send it to all interfaces.
BUG1369375	With a BreakingPoint VE configuration consisting of 1 vCPU, a vController with 1 GB of RAM and 4 vBlades, BreakingPoint VE may exhibit unstable behavior due to limited resources.
BUG1371218	After selecting, “Assign Virtual Blades to Empty Slots” on BreakingPoint VE, configuring an IP address and successfully verifying it (clicking Verify button), the Apply button becomes disabled. Workaround: To make the Apply button available, close and reopen the current window.
BUG1371240	At this time, a vBlade can be detached while tests are running on it.
BUG1373159	After detaching a vBlade, verification of the completion of this task in the UI may take longer than expected (up to ~1 minute).
BUG1374105	A vBlade is displayed (and can be configured) in the UI Device Status area during the time when it is being assigned to a slot (Assign Virtual Blade To Empty Slots). The vBlade should not be displayed during this process. Manage Virtual Chassis and click on "Assign Virtual Blade To Empty Slots".
BUG1379623	In some scenarios, the static IP addresses assigned to vBlades will not get incremented sequentially.
BUG1389810	If CTRL+Z is keyed in while setting the vBlade static IP address from the console, the process will only partially complete. This scenario may result in unexpected behavior.