

SteelCentral™ AppResponse 11

AppResponse Release 11.2.0: Compatibility, Feature, and Upgrade Process Overview

Version 11.2.0

July 2017

riverbed®

© 2014-2017 Riverbed Technology. All rights reserved.
Riverbed®, SteelApp™, SteelCentral™, SteelFusion™, SteelHead™, SteelScript™, SteelStore™, Steelhead®, Cloud Steelhead®, Virtual Steelhead®, Granite™, Interceptor®, Stingray™, Whitewater®, WWOS™, RiOS®, Think Fast®, AirPcap®, BlockStream™, FlyScript™, SkipWare®, TrafficScript®, TurboCap®, WinPcap®, Mazu®, OPNET®, and Cascade® are all trademarks or registered trademarks of Riverbed Technology, Inc. (Riverbed) in the United States and other countries. Riverbed and any Riverbed product or service name or logo used herein are trademarks of Riverbed. All other trademarks used herein belong to their respective owners. The trademarks and logos displayed herein cannot be used without the prior written consent of Riverbed or their respective owners.

The logo for Riverbed, featuring the word "riverbed" in a lowercase, bold, orange sans-serif font.

Riverbed Technology
680 Folsom Street
San Francisco, CA 94107
www.riverbed.com

AppResponse Release 11.2.0: Compatibility, Feature, and Upgrade Process Overview

AppResponse 11 is Riverbed's next generation of application-aware packet analysis NPM software. It delivers in one unified software package the power, flexibility and value of what used to be two separate products: AppResponse 9 and NetShark 10. In building this new generation of software, Riverbed Engineering has redesigned and re-architected core aspects of AppResponse 11 to support a vastly richer set of features on a new common technology foundation.

This document covers critical information you need to know before you upgrade to AppResponse release 11.2.0.

What Release You Should Be Running Before You Upgrade to AppResponse 11.2.0

There are two paths to upgrading your appliance to the 11.2.0 release. First, you can upgrade to 11.2.0 from any previous ARX 9.x or 8.x release. Second, you can upgrade to 11.2.0 from the previous 11.1.0 release. When you upgrade from a ARX 9.x or 8.x release, the upgrade process will erase all on-disk content on your appliance. You may want to save/archive your current performance data so you don't lose it permanently. To do that, please read "Archiving AppResponse 9 Performance Data" on page 3 before you upgrade to release 11.2.0. When you upgrade to 11.2.0 from 11.1.0, your performance data and configuration is preserved by the upgrade process.

AppResponse Hardware Model Support

Release 11.2.0 is supported on AppResponse models 1200, 2200, 3300, 3800, 4300, 5100, 6000 and SCAN xx70 hardware models.

Upgrading AppResponse 9 Virtual Appliances

If you are running an AppResponse 9 VMon virtual appliance (under current maintenance), upgrading to AppResponse 11.2.0 means you will be installing and running a new instance of **SteelCentral AppResponse 11 500v - 2 TB Disk** in its place. Please see the **AppResponse 11 Installation Guide - Virtual Edition for VMware ESXi 5.5 and ESXi 6.0** for release 11.2.0 for install and setup instructions.

If you are running an AppResponse 9 v2000 virtual appliance (under current maintenance), upgrading to AppResponse 11.2.0 means you will be installing and running a new instance of **SteelCentral AppResponse 11 2000v - 8 TB Disk** in its place. Please see the **AppResponse 11 Installation Guide - Virtual Edition for VMware ESXi 5.5 and ESXi 6.0** for release 11.2.0 for install and setup instructions.

You will need license keys to turn on each instance of SteelCentral AppResponse 11 500v/2000v that you install. You can get those license keys via a zero-dollar zero-cost Riverbed Trade Up program. Please contact your Riverbed sales team to initiate this Trade Up process. You will get one set of 500v/2000v license keys for each actively maintained instance of AppResponse 9 VMon/v2000 you have.

One-way AppResponse 11 Upgrade Process

As was the case with release 11.1.0, upgrading to release 11.2.0 from ARX 8.x/9.x continues to be a one-way process, i.e., there is no downgrade path/option. Please read this document in its entirety (including content this article links to) before making the decision to upgrade.

Obtaining AppResponse 11 License Keys

After you upgrade to 11.2.0 (from an AppResponse 9.x or earlier release), you will need three license keys to enable basic packet capture/analysis, Application Stream Analysis, and Web Transaction Analysis features. (These were built-in “base” features in AppResponse 8.x/9.x that did not require individual license keys. They do, starting in AppResponse 11.) Please read the 11.2.0 Installation Guide for details on how to do that. You don’t need new license keys if you are upgrading to 11.2.0 from the 11.1.0 release.

License Key for AppResponse 11 Database Analysis Module

If you are running the AppResponse 9 version of the DB module, you will get a new AppResponse 11 license key (at no cost) so you can upgrade to the more powerful and enhanced AppResponse 11 version of the DB module.

Upgrading to and Licensing the AppResponse 11.2 UCA Module

Release 11.2.0 delivers the first AppResponse 11 version of the VoIP/Video analysis module, called the Unified Communications Analysis (UCA) module. The UCA module supports analysis of both VoIP-only and VoIP-and-Video calls. In addition, the UCA module does not enforce a limit on the number of calls it can analyze. As a result, the AR11 UCA feature module is not a direct equivalent for the following AR9 VoIP-only call-capped feature modules:

ARXVOI250: SteelCentral AppResponse VoIP Module 1-250 Concurrent Calls

ARXVOI500: SteelCentral AppResponse VoIP Module 1-500 Concurrent Calls

ARXVOI1K: SteelCentral AppResponse VoIP Module 1-1000 Concurrent Calls

Customers who have any actively maintained ARX-VOI* licenses (in the list above) will have to trade up to obtain a license of the AR11 UCA module. Please contact your Riverbed sales team for more information on this trade up program.

****IMPORTANT**** Upgrading to 11.2.0 (without initiating a trade-up for one of these licenses) will permanently erase these ARXVOI* licenses from your system.

The AR11 UCA feature module is a direct equivalent to the following AppResponse 9.x feature module:

ARX-UCMM: SteelCentral AppResponse UC Monitoring Module.

Customers who have actively maintained ARX-UCMM licenses will get a free AR11 UCA module license key when they upgrade an appliance running AR9 UCMM to the 11.2.0 release.

CX-Tracer Module

Release 11.2.0 does not support the CX-Tracer feature module in AppResponse 9.

The AppResponse 11 equivalent for CX-Tracer will be covered in a future AppResponse 11 release. Please contact Riverbed Product Management through your sales team for more information.

Compatibility with AppResponse Director

Appliances running release 11.2.0 (or any previous 11.x release) will not work with AppResponse 9 Director. An AppResponse 9 appliance that is upgraded to 11.2.0 has to be managed as an individual appliance. (That is, the customer has to interact directly with the appliance to make general administration and/or configuration changes.)

We are working on a new SteelCentral Portal-based Central Manager that will take over the role of AppResponse 9 Director. Please contact Riverbed Product Management through your Riverbed sales team for more information.

Compatibility With Legacy RPM Dashboards and Portal

AppResponse release 11.2.0 will work only with the SteelCentral Portal 1.5.0 (and later) releases.

Archiving AppResponse 9 Performance Data

Upgrading to release 11.2.0 will erase all on-disk content from your AppResponse 9 appliance, including all configuration and performance data. However, AppResponse 9 release 9.6.2 and later includes an Archive VM feature that lets you create an offline archive of this data, which you can access via the AppResponse 9 Java/web consoles. Release 9.6.2 or later is available on the regular [AppResponse release download page](#).

Ensuring Disk Drive Health Before Upgrading

Please check the disk drive status of your compatible AppResponse 9 appliance before upgrading. All disks should be healthy in order for the upgrade to be successful.

Log in to your AppResponse 9 appliance via command line interface and run the “raid” and “status” commands as shown below to ensure all drives are in healthy state.

```
yourappliance_cli> raid
Scanning bus 10 ARX RAID
control
    status - display RAID array status rebuild -
            rebuild the RAID array
    wait - wait for rebuild operation to complete smartstatus - display
           the SMART data from a specific drive
    blink - toggle drive LED blinking for LSI/Intel controllers quit - exit this
           program
RAID menu: status
ARX2200-000000 (rev. 2013-08)
mfi0/0 status as of 2017/03/31-13:52:05 GMT: ONLINE ModelSerialSMART Port
Name          Number          Number          Status          Status
0:252:00      ST31000524NS9WK04PEG  OK   Online, Spun Up
0:252:01      ST31000524NS          9WK0GHLQ          OK   Online, Spun Up
0:252:02      HUA722010CLA330      JPW9L0N008HRGV    OK   Online, Spun Up
Volume        VolumeRAID      Volume  Volume ID  Name
Level         Size            Status
VD0/0                5    1.8TB    Optimal
RAID menu:
```

If you notice a failed or missing drive, please open a case with [Riverbed Technical Support](#) for assistance.

Migrating Your Defined App and Business Group (BG) Definitions

After you upgrade, one of the first tasks in setting up your 11.2.0 appliance will involve configuring Host Groups (formerly called “Business Groups”) and Application Definitions. To make that process easier, 11.2.0 allows you to import you existing AppResponse 9 Business Group and Defined App definitions. You will need to export these definitions (into CSV files) before you upgrade to 11.2.0. Please see the SteelCentral AppResponse 9.6.2 and later Release Notes for more information.

Migrating AppResponse 9.x Web Transaction Analysis (WTA) Advanced Configuration

If you are using the WTA feature, you may have configured this feature using advanced configuration rules and/or you may be using Riverbed-provided hidden configuration rules. Please see the SteelCentral AppResponse 9.6.2 and later Release Notes for more information to find out how you have configured WTA and what to do if you are using advanced configuration. Release 9.6.2 and later is available on the regular [AppResponse release download page](#).

Policies/Alerting

The Policy/Alerting feature in release 11.2.0 can be configured to send Email notifications when policy triggers are tripped. Support for syslog notifications is not available in release 11.2.0. Support for SNMP trap alert notifications was missing in 11.1.0, but is available now in release 11.2.0.

11.2.0 now supports the ability to export your AppResponse 9 alert definitions and import them into release 11.2.0. This capability was not available in 11.1.0.

Administration/Troubleshooting

Release 11.2.0 does not support backup/restore of performance data. It does support on-demand backup/restore of configuration data.

11.2.0 now includes a Traffic Diagnosis Insight that shows various aspects of traffic load. In addition, 11.2.0 also delivers the ability for you to interactively view the status of the disk sub-system.

Reporting

Release 11.1.0 supported on-demand creation of snapshots (formerly known as reports). 11.2.0 delivers support for scheduled snapshots, including support for PDF snapshots.

Integration

11.2.0 supports direct contextual launch to Transaction Analyzer via a new Transaction Analyzer Launcher utility. Please see the 11.2.0 download page for more information.

VLAN/MIFG Groups/Drilldowns and Metrics

Like 11.1.0, release 11.2.0 does not include performance data for VLANs and Monitoring Interface Groups (MifGs). Support for these is planned for a future AppResponse 11 release.

Performance Data Retention in AppResponse 11.2.0

The performance data in AppResponse 11 releases generally is richer than what was available in AppResponse 9. For instance, AppResponse 11 stores individual TCP connection summary information which was not supported in AppResponse 9. However, compared to AppResponse 9, the factory-default disk storage allocation in the 11.2.0 release will result in lower retention times for 1-min, 5-min, 1-hour, and 1-day metrics, as well as the number of WTA Individual page views, and database queries, etc. The tables below show the retention times/space used in 11.2.0. (Before you upgrade to an 11.x release, you can compare these retention times to the retention times you are getting on your current AppResponse 9 appliance by choosing View > Appliance Info in the Java Console.

IMPORTANT: The values in the tables below should be used as rough and general guidelines. Actual retention time will depend on the specific (absolute and relative) volume of various types of traffic in your environment, and how that volume and traffic mix varies over time, e.g., TCP versus non-TCP, number of new TCP connections seen per unit time, and so on.

For models 5100, 6000, 6170, and 8170, 11.2.0 now delivers a new configuration option to change storage allocation to increase the amount of space used for performance data at the expense of packet storage. The retention you get in this new “metric priority” storage allocation mode is shown in the second column in the tables below for the supported hardware models. Please see the 11.2.0 Release Notes for more information.

Virtual AppResponse 11 Model 100V

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~97 GB	Metric Priority mode not supported for this model
1-min metrics (ASA, WTA, and UCA)	1 day	
5-min metrics (ASA, WTA, and UCA)	5 days	
1-hour metrics (ASA, WTA, and UCA)	18 days	
1-day metrics (ASA, WTA, and UCA)	90 days	
ASA (TCP Connection transactions)	15 hours	
WTA Individual Page Views	7 hours	
DBA (Query transactions)	15 minutes	
UCA (Calls/Channel transactions)	1 day	

Virtual AppResponse 11 Model 500V

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~1.9 TB	Metric Priority mode not supported for this model
1-min metrics (ASA, WTA, and UCA)	1 day	
5-min metrics (ASA, WTA, and UCA)	5 days	
1-hour metrics (ASA, WTA, and UCA)	18 days	
1-day metrics (ASA, WTA, and UCA)	90 days	
ASA (TCP Connection transactions)	15 hours	
WTA Individual Page Views	7 hours	
DBA (Query transactions)	15 minutes	
UCA (Calls/Channel transactions)	1 day	

Virtual AppResponse 11 Model 2000V

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~7.8 TB	Metric Priority mode not supported for this model
1-min metrics (ASA, WTA, and UCA)	1 day	
5-min metrics (ASA, WTA, and UCA)	5 days	
1-hour metrics (ASA, WTA, and UCA)	18 days	
1-day metrics (ASA, WTA, and UCA)	90 days	
ASA (TCP Connection transactions)	15 hours	
WTA Individual Page Views	7 hours	
DBA (Query transactions)	15 minutes	
UCA (Calls/Channel transactions)	1 day	

Model 1200/2200

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~680 GB	Metric Priority mode not supported for this model
1-min metrics (ASA, WTA, and UCA)	10 days	
5-min metrics (ASA, WTA, and UCA)	30 days	
1-hour metrics (ASA, WTA, and UCA)	90 days	
1-day metrics (ASA, WTA, and UCA)	1 year	
ASA (TCP Connection transactions)	1.5 days	
WTA Individual Page Views	1.5 days	
DBA (Query transactions)	3.5 hours	
UCA (Calls/Channel transactions)	1 day	

Model 2170

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~7.2 TB (RAID 0)	Metric Priority mode not supported for this model
1-min metrics (ASA, WTA, and UCA)	6 days	
5-min metrics (ASA, WTA, and UCA)	30 days	
1-hour metrics (ASA, WTA, and UCA)	180 days	
1-day metrics (ASA, WTA, and UCA)	3 years	
ASA (TCP Connection transactions)	10 hours	
WTA Individual Page Views	15 hours	
DBA (Query transactions)	4.5 hours	
UCA (Calls/Channel transactions)	1 day	

Model 3300

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~2.8 TB	Metric Priority mode not supported for this model
1-min metrics (ASA, WTA, and UCA)	5 days	
5-min metrics (ASA, WTA, and UCA)	3 weeks	
1-hour metrics (ASA, WTA, and UCA)	90 days	
1-day metrics (ASA, WTA, and UCA)	1 year	
ASA (TCP Connection transactions)	10 hours	
WTA Individual Page Views	12 hours	
DBA (Query transactions)	2.5 hours	
UCA (Calls/Channel transactions)	1 day	

Model 3800

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~9 TB	Metric Priority mode not supported for this model
1-min metrics (ASA, WTA, and UCA)	18 days	
5-min metrics (ASA, WTA, and UCA)	30 days	
1-hour metrics (ASA, WTA, and UCA)	90 days	
1-day metrics (ASA, WTA, and UCA)	1 year	
ASA (TCP Connection transactions)	15 hours	
WTA Individual Page Views	20 hours	
DBA (Query transactions)	6 hours	
UCA (Calls/Channel transactions)	1 day	

Model 4170

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~29 TB	Metric Priority mode not supported for this model
1-min metrics (ASA, WTA, and UCA)	15 days	
5-min metrics (ASA, WTA, and UCA)	30 days	
1-hour metrics (ASA, WTA, and UCA)	180 days	
1-day metrics (ASA, WTA, and UCA)	3 years	
ASA (TCP Connection transactions)	1.5 days	
WTA Individual Page Views	20 hours	
DBA (Query transactions)	12 hours	
UCA (Calls/Channel transactions)	1 day	

Model 4300 (no Expansion Chassis - base unit only)

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~20 TB	Metric Priority mode not supported for this model
1-min metrics (ASA, WTA, and UCA)	20 days	
5-min metrics (ASA, WTA, and UCA)	60 days	
1-hour metrics (ASA, WTA, and UCA)	90 days	
1-day metrics (ASA, WTA, and UCA)	1 year	
ASA (TCP Connection transactions)	1 day	
WTA Individual Page Views	14 hours	
DBA (Query transactions)	4.5 hours	
UCA (Calls/Channel transactions)	1 day	

Model 5100 (no Expansion Chassis - base unit only)

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~30TB	~22.7 TB
1-min metrics (ASA, WTA, and UCA)	6 days	15 days
5-min metrics (ASA, WTA, and UCA)	30 days	30 days
1-hour metrics (ASA, WTA, and UCA)	90 days	180 days
1-day metrics (ASA, WTA, and UCA)	1 year	1095 days
ASA (TCP Connection transactions)	1 day	3 weeks
WTA Individual Page Views	14 hours	3 weeks
DBA (Query transactions)	4 hours	3 weeks
UCA (Calls/Channel transactions)	1 day	3 weeks

Model 5100 (3 x Expansion Chassis 300 - fully loaded)

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~117 TB	~136 TB TB
1-min metrics (ASA, WTA, and UCA)	6 days	15 days
5-min metrics (ASA, WTA, and UCA)	30 days	30 days
1-hour metrics (ASA, WTA, and UCA)	90 days	180 days
1-day metrics (ASA, WTA, and UCA)	1 year	3 years
ASA (TCP Connection transactions)	1 day	3 weeks
WTA Individual Page Views	14 hours	3 weeks
DBA (Query transactions)	4 hours	3 weeks
UCA (Calls/Channel transactions)	1 day	3 weeks

Model 6000 (no Expansion Chassis - base unit only)

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~36.3 TB	~29.6 TB
1-min metrics (ASA, WTA, and UCA)	6 days	7 days
5-min metrics (ASA, WTA, and UCA)	30 days	30 days
1-hour metrics (ASA, WTA, and UCA)	90 days	180 days
1-day metrics (ASA, WTA, and UCA)	1 year	3 years
ASA (TCP Connection transactions)	12 hours	3 weeks
WTA Individual Page Views	7 hours	3 weeks
DBA (Query transactions)	4 hours	3 weeks
UCA (Calls/Channel transactions)	1 day	3 weeks

Model 6000 (3 x Expansion Chassis 300 - fully loaded)

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~168 TB	~199 TB
1-min metrics (ASA, WTA, and UCA)	6 days	7 days
5-min metrics (ASA, WTA, and UCA)	30 days	30 days
1-hour metrics (ASA, WTA, and UCA)	90 days	180 days
1-day metrics (ASA, WTA, and UCA)	1 year	3 years
ASA (TCP Connection transactions)	12 hours	3 weeks
WTA Individual Page Views	7 hours	3 weeks
DBA (Query transactions)	4 hours	3 weeks
UCA (Calls/Channel transactions)	1 day	3 weeks

Model 6170 (1 x 48 TB SU)

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~43.6 TB	~13.2 TB
1-min metrics (ASA, WTA, and UCA)	15 days	20 days
5-min metrics (ASA, WTA, and UCA)	30 days	60 days
1-hour metrics (ASA, WTA, and UCA)	180 days	180 days
1-day metrics (ASA, WTA, and UCA)	3 years	3 years
ASA (TCP Connection transactions)	1 day	3 weeks
WTA Individual Page Views	14 hours	3 weeks
DBA (Query transactions)	12 hours	3 weeks
UCA (Calls/Channel transactions)	1 day	3 weeks

Model 6170 (1 x 72 TB SU)

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~65.5 TB	~35 TB
1-min metrics (ASA, WTA, and UCA)	15 days	20 days
5-min metrics (ASA, WTA, and UCA)	30 days	60 days
1-hour metrics (ASA, WTA, and UCA)	180 days	180 days
1-day metrics (ASA, WTA, and UCA)	3 years	3 years
ASA (TCP Connection transactions)	1 day	3 weeks
WTA Individual Page Views	14 hours	3 weeks
DBA (Query transactions)	12 hours	3 weeks
UCA (Calls/Channel transactions)	1 day	3 weeks

Model 8170 (2 x 48 TB SU is minimum required configuration)

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	87.3 TB	47.6 TB
1-min metrics (ASA, WTA, and UCA)	15 days	20 days
5-min metrics (ASA, WTA, and UCA)	30 days	60 days
1-hour metrics (ASA, WTA, and UCA)	180 days	180 days
1-day metrics (ASA, WTA, and UCA)	3 years	3 years
ASA (TCP Connection transactions)	1 day	3 weeks
WTA Individual Page Views	14 hours	3 weeks
DBA (Query transactions)	12 hours	3 weeks
UCA (Calls/Channel transactions)	1 day	3 weeks

Model 8170 (16 x 72 TB SU, fully loaded)

Type of Performance Data	Retention 11.2.0 (Packet Priority)	Retention 11.2.0 (Metric Priority)
Packets	~1 PB	~1 PB
1-min metrics (ASA, WTA, and UCA)	15 days	20 days
5-min metrics (ASA, WTA, and UCA)	30 days	60 days
1-hour metrics (ASA, WTA, and UCA)	180 days	180 days
1-day metrics (ASA, WTA, and UCA)	3 years	3 years
ASA (TCP Connection transactions)	1 day	3 weeks
WTA Individual Page Views	14 hours	3 weeks
DBA (Query transactions)	12 hours	3 weeks
UCA (Calls/Channel transactions)	1 day	3 weeks