WebSphere® DataPower XML Accelerator XA35

IBM

Version 3.7.2

Release Notes

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IBM

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Contents

Chapter 1. About this release

This section provides information about IBM® WebSphere® DataPower® XML Accelerator XA35, version 3.7.2.

New features

Version 3.7.2 introduces the following new features and enhancements:

Documentation
Reorganized the documentation set based on roles and goals. See "Publications" on page 2.

Reliability, Availability, and Serviceability (RAS)
Improved RAS diagnostic tools for troubleshooting the appliance under the explicit direction of an IBM Support representative.

Changes to default values

Version 3.7.2 contains no changes to default values.

Deprecated functionality

The following functionality is deprecated:

WSDL Tools
The option **Services** → **Miscellaneous** → **WSDL Tools** has been deprecated. This tool was used to import or fetch a WSDL file service in a service view through task templates and selectively enable one or more operations.

Changes to default behavior

This section provides information about changes to default behavior.

Certificates

In upgrade situations, the following certificates are not part of the upgrade image:

- DST-Global-CA-2.pem
- DST-Global-CA-4.pem
- DST-NRF-RootCA.pem
- DST-RootCA-X1.pem
- DST-RootCA-X2.pem
- DST-UPS-RootCA.pem

Timestamp of logs changed to Zulu
From the command line, the log uses UTC time zone, not the local time zone. The format of the timestamp is yyyymmddThhmmssZ, not day-of-week month day year hh:mm:ss. In other words if the time is 7:10:22 Eastern Time on December 5, 2008, the format is 20081205T121022Z, not Fri Dec 05 2008 7:10:22.

Publications

The IBM WebSphere DataPower library is organized into the following categories:

- "Installation and upgrade documentation"
- "Administration documentation"
- "Development documentation"
- "Reference documentation" on page 3
- "Integration documentation" on page 3
- "Problem determination documentation" on page 4
- "Supplemental documentations" on page 4

Installation and upgrade documentation

- *IBM WebSphere DataPower SOA Appliances: 9003: Installation Guide*

  Provides instructions for installing and powering up the Type 7993 (9003) appliance, creating a startup configuration script, and placing the appliance in operation.

- *IBM WebSphere DataPower SOA Appliances: Type 9235: Installation Guide*

  Provides instructions for installing and powering up the Type 9235 appliance, creating a startup configuration script, and placing the appliance in operation.

- *IBM WebSphere DataPower SOA Appliances: Type 9235: Hardware Problem Determination and Service Guide*

  Provides information about diagnosing and troubleshooting hardware problems, ordering consumable replacement parts, and replacing parts.

- *IBM WebSphere DataPower SOA Appliances: Upgrade and Rollback Guide: Generation 2 Firmware*

  Provides instructions for upgrading Generation 2 firmware and for rolling back firmware upgrades.

Administration documentation

- *IBM WebSphere DataPower SOA Appliances: Appliance Overview*

  Provides an introduction and understanding of the IBM Websphere DataPower SOA appliances.

- *IBM WebSphere DataPower SOA Appliances: Administrators Guide*

  Provides instructions for using the DataPower GUI for managing user access, network access, appliance configuration and system configuration of the appliance.

- *IBM WebSphere DataPower SOA Appliances: Hardware Security Module Guide*

  A user guide for using a Hardware Security Module (HSM) installed in the appliance.

Development documentation

- *IBM WebSphere DataPower SOA Appliances: XSL Accelerator Developers Guide*

  Provides instructions for using the WebGUI to configure XSL Proxy and XSL Co-Processor services.

- *IBM WebSphere DataPower SOA Appliances: XML Firewall Developers Guide*

  Provides instructions for using the WebGUI to configure XML Firewall services.

- *IBM WebSphere DataPower SOA Appliances: Web Application Firewall Developers Guide*

Provides instructions for using the WebGUI to configure Web Application Firewall services.

- *IBM WebSphere DataPower SOA Appliances: Multi-Protocol Gateway Developers Guide*

  Provides instructions for using the WebGUI to configure Multiple-Protocol Gateway services.

- *IBM WebSphere DataPower SOA Appliances: Web Service Proxy Developers Guide*

  Provides instructions for using the WebGUI to configure Web Service Proxy services.

- *IBM WebSphere DataPower SOA Appliances: B2B Gateway Developers Guide*

  Provides instructions for using the WebGUI to configure B2B Gateway services.

- *IBM WebSphere DataPower SOA Appliances: Low Latency Messaging Developers Guide*

  Provides instructions for using the WebGUI to configure a DataPower appliance for low latency messaging.

Reference documentation

- Product-specific documentation for using commands from the command line. The documentation is specific to each of the following products. Each document provides an alphabetical listing of all commands with syntactical and functional descriptions.
  - *IBM WebSphere DataPower XML Accelerator XA35: Command Reference*
  - *IBM WebSphere DataPower XML Security Gateway XS40: Command Reference*
  - *IBM WebSphere DataPower XML Integration Appliance XI50: Command Reference*
  - *IBM WebSphere DataPower B2B Appliance XB60: Command Reference*
  - *IBM WebSphere DataPower Low Latency Messaging Appliance XM70: Command Reference*
- *IBM WebSphere DataPower SOA Appliances: Extension Elements and Functions Catalog*

  Provides programming information about the usage of DataPower XSLT extension elements and extension functions.

Integration documentation

The following documents are available for managing the integration of related products that can be associated with the DataPower appliance:

- *IBM WebSphere DataPower SOA Appliances: Integrating with ITCAM*

  Provides concepts for integrating the DataPower appliance with IBM Tivoli Composite Application Management for SOA.

- *IBM WebSphere DataPower SOA Appliances: Integrating with WebSphere Transformation Extender*

  Provides concepts for integrating the DataPower appliance with WebSphere Transformer Extender.

- *IBM WebSphere DataPower XML Integration Appliance XI50: WebSphere MQ Interoperability*

  Explains the concepts and common use patterns for connecting DataPower services to WebSphere MQ systems.

Problem determination documentation

- *IBM WebSphere DataPower SOA Appliances: Problem Determination Guide*

  Provides troubleshooting and debugging tools.

Supplemental documentations

- *IBM WebSphere DataPower SOA Appliances: Understanding Web Services Policy*

  Provides conceptual information about how the DataPower appliance can use Web Services Policy (WS-Policy).

- *IBM WebSphere DataPower SOA Appliances: Understanding WS-Addressing*

  Provides conceptual information about how the DataPower appliance can use WS-Addressing.

- *IBM WebSphere DataPower SOA Appliances: Understanding LTPA*

  Provides conceptual information about how the DataPower appliance can use Lightweight Third Party Authentication.

- *IBM WebSphere DataPower SOA Appliances: Understanding SPNEGO*

  Provides conceptual information about how the DataPower appliance can use SPNEGO.

- *IBM WebSphere DataPower SOA Appliances: Optimizing through Streaming*

  Provides conceptual information about and procedures for optimizing the DataPower appliance through streaming.

- *IBM WebSphere DataPower SOA Appliances: Securing the Last Mile*

  Provides conceptual information about and procedures for understanding the DataPower appliance while securing the last mile.

- *IBM WebSphere DataPower SOA Appliances: Configuring the DoD PKI*

  Provides conceptual information about and procedures for configuring the DataPower appliance with Department of Defense Public Key Infrastructure.

Models types

Table 1 displays the IBM WebSphere DataPower XML Accelerator XA35 model types that are available for Type 7993.

Table 1. Model types for DataPower XA35

Model type	Description
22X	XA35 green

Table 2 displays the IBM WebSphere DataPower XML Accelerator XA35 model types that are available for Type 9235.

Table 2. Model types for DataPower XA35

Model type	Description
22X	XA35 green: CF[1]
[1] Has a compact flash for auxiliary data storage.	

Product compatibility

Version 3.7.2 is compatible with the following products:

Application and Web servers

Any backend server that conforms to the standards that the DataPower appliance supports.

LDAP servers

Any LDAP server that is compliant with LDAP version 2 or with LDAP version 3.

Web browsers

Microsoft® Internet Explorer, version 6.2 or earlier, and Firefox, version 2 or earlier.

XML Tools

Any XML tool that generates XSLT 1.0 for XML-to-XML.

Chapter 2. Limitations and known problems

The following limitations and problems are known to exist in the current version of DataPower SOA appliances. A workaround is provided, if available.

For additional information about problems in current releases, refer to the DataPower support site at the following URL:

http://www.ibm.com/software/integration/datapower/support/

Limitations

The following limitations, by category, are known at the time of this release:

Ethernet interfaces
> On Type 9235 appliances only, the mode for Ethernet interfaces `eth1` and `eth2` is always auto-negotiated and cannot be changed.

LED indicators
> The LED indicators for activity and link on the various appliances (machine and model types) differ from the documentation.

NFS file support
> Although an NFS version 3 and version 4 server has large file support and available disk space, the DataPower appliance supports a maximum file size of 2 GB.

Role-based management (RBM)
> Enabling or disabling of `file-capture` requires the following permissions:
> - `system/file-capture`
> - `debug/file-capture`

SNMPv3 settings
> When changing the **SNMPv3 Security Level** setting in the **SNMP Settings**, the selected value does not apply until a full reboot is done on the appliance.

Streaming
> Depending on load, there might be performance issues when streaming a message that is larger than 1 GB.

WebGUI and documentation
> APAR IC53864: The configuration of secure communication for an XSL Proxy service differs between the service view and the object view:
> - In the service view, you select which SSL Client Crypto Profile and SSL Server Crypto Profile to use. In this view, the assignment of these profiles creates or modifies the SSL Proxy Profile of the same name as the service.
> - In the object view, you select which SSL Proxy Profile to use. In this view, the assignment of an SSL Proxy Profile assigns the selected SSL Client Crypto Profile and the selected SSL Server Crypto Profile.
>
> Because of the design difference, you might experience the following issues when modifying the configuration of secure communication for one of these services:

- You created an SSL Proxy Profile, for example `TwoWayWAS`, that uses the `ToClient` SSL Client Crypto Profile and the `ToServer` SSL Server Crypto Profile. You then create the `TwoWayWAS` XSL Proxy service in the service view. During the configuration of the XSL Proxy service, you select the `ToWASClient` SSL Client Crypto Profile and select the `ToServer` SSL Server Crypto Profile. When you click **Apply**:
  - The configuration of the `TwoWayWAS` SSL Proxy Profile is modified to use the `ToWASClient` SSL Client Crypto Profile instead of the `ToClient` SSL Client Crypto Profile.
  - All services that use the `TwoWayWAS` SSL Proxy Profile now begin to use the `ToWASClient` SSL Client Crypto Profile.
- You created an SSL Proxy Profile, for example `TwoWayWAS`, that uses the `ToClient` SSL Client Crypto Profile and the `ToServer` SSL Server Crypto Profile. You then create the `ProxyWAS` XSL Proxy service in the service view. During the configuration of the XSL Proxy service, you select the `ToWASClient` SSL Client Crypto Profile and select the `ToServer` SSL Server Crypto Profile. When you click **Apply**:
  - The `ProxyWAS` SSL Proxy Profile is created to use the `ToWASClient` SSL Client Crypto Profile and the `ToServer` SSL Server Crypto Profile.
  - All services that use the `TwoWayWAS` SSL Proxy Profile are unaffected.
- You created an SSL Proxy Profile, for example `TwoWayWAS`, that uses the `ToClient` SSL Client Crypto Profile and the `ToServer` SSL Server Crypto Profile. You then create the `ProxyWAS` XSL Proxy service in the object view. During the configuration of the XSL Proxy service, you select the `TwoWayWAS` SSL Proxy Profile. When you click **Apply**, the `ProxyWAS` XSL Proxy service uses the `TwoWayWAS` SSL Proxy Profile.

  At a later date, you modify the configuration of the `ProxyWAS` XSL Proxy service in the service view. When you click **Apply**:
  - The `ProxyWAS` SSL Proxy Profile is created to use the `ToClient` SSL Client Crypto Profile and the `ToServer` SSL Server Crypto Profile.
  - The `ProxyWAS` XSL Proxy service now uses the `ProxyWAS` SSL Proxy Profile.
  - Other service that use the `TwoWayWAS` SSL Proxy Profile are unaffected.

Known problems and workarounds

Version 3.7.2 contains the following known problems and issues. Where applicable, the information provides the workaround for the specific problem.

Ethernet interfaces
On Type 9235 appliances only, when configuring a standby configuration that involves Ethernet interfaces `eth1` and `eth2` or, more rarely, when modifying the configuration of one of these interfaces, the appliance might experience a hang followed by a reboot.

Workaround: Do not use Ethernet interfaces `eth1` and `eth2` for standby configurations. If possible, use Ethernet interface `eth0` for connections and standby configurations. Use Ethernet interfaces `eth1` or `eth2` for iSCSI connections only, when necessary.

iSCSI Host Bus Adapter
The command line does not enforce the specification of a static IP address and default gateway when disabling DHCP for the iSCSI Host Bus Adapter object. The setting of DHCP appears to change, but this setting is still in effect.

Workaround: Either use the WebGUI to change the setting or use the **ip-address** command to set the static IP address and the **ip default-gateway** command to set the default gateway after disabling DHCP with the **dhcp** command.

Log Targets

On startup, a log target that writes to the iSCSI volume might fail to come up.

Workaround: Disable and re-enable the log target.

Chapter 3. Product fix history

This section provides information about fixes to reported problems by version.

Version 3.7.2

The following fixes were completed for IBM WebSphere DataPower XML Accelerator XA35, version 3.7.1 Fix Packs:

- APAR IC56590: Custom error rule fails to return specified message for error 500 when handling large input files
- APAR IC56745: Appliance restarts when a style sheet with no `<xsl:key/>` declarations calls the XSLT `key()` function
- APAR IC56911: When using a Custom Time Zone, Daylight Savings Time (DST) Offset resets to default value of 1 on appliance reboot
- APAR IC56982: "Time zone config mismatch" message displays in log when default timezone is China Coast Time (CST) and the appliance is rebooted
- APAR IC57114: The appliance is unable to retrieve ICAP response header. The header from the ICAP response now will be stored in the following context variable: `var://local/_extension/response-header/X-ICAP-Body`
- APAR IC57205: `<dp:get-config>` element returns `DurationMonitor Filter` `<Type>` element which is not compliant with the `store:///xml-mgmt.xsd` schema file
- APAR IC57336: SNMP MIB objects `dpStatusReceiveKbpsThroughput`, `dpStatusReceivePacketThroughput`, `dpStatusTransmitKbpsThroughput`, and `dpStatusTransmitPacketThroughput` incorrectly set to obsolete instead of deprecated
- APAR IC57398: Device reboots on style sheet compilation when there is an `<xsl:call-template/>` call from within an EXSLT `func:function` element
- APAR IC57528: Under some circumstances, resolving system variables from style sheets causes memory to leak
- APAR IC57563: When binary data is inserted into the XML output stream, the appliance reboots; placing binary data in the XML document will now result in a `***BINARY NODE***` text node being placed into the XML document.
- APAR IC57660: Text for syslog messages is missing or is in the wrong format
- APAR IC57764: The appliance shows slow response time during high load
- APAR IC57818: XML Schema validation incorrectly passes values of derived `xs:ID` type that begin with a digit.
- APAR IC57824: When `xs:attribute type` value is unspecified and defaults to `xs:anySimpleType`, the appliance restarts during schema validation
- APAR IC57882: An SNMP walk fails with "OID not increasing" error. The SNMP MIB object `dpStatusStylesheetCachingSummaryTable` now shows in the correct order when viewed with an SNMP walk or a MIB browser.
- APAR IC57919: Under certain circumstances, the check for XML Schema restriction "Schema Component Constraint: Particle Valid (Restriction)" is incorrect. Now, the check is done correctly for model groups whose definition appears before any of the definitions or declarations of the model groups and before any elements among its members.

- APAR IC57940: **Use WSDL Tool** opens an error page when using the **Validate Document via WSDL URL** method or the **Validate Document via Schema URL** method in a Validate action
- APAR IC57962: Defining an `include-config` object to fetch the configuration from a remote URL fails. This fix ensures that the configuration can be fetched both from the local file system and from a remote URL.
- APAR IC58091: The appliance crashes when a temporary variable (RTF) is used as the keyed document in an XSL `key()` expression.
- APAR IC58179: Fixed a race condition with active SSL Proxy Service sessions that could result in an erroneous shutdown of the service due to too many sessions.
- APAR IC58204: FTP errors that occur when writing files, reading files, reading directories, deleting files, or renaming files might hang the FTP client and also might hang either the FTP Poller or a transaction.
- APAR IC58222: SSL Proxy Profile is not enabled after a domain restart. Now, when using a syslog-ng log target with an SSL Proxy Profile, the SSL Proxy Profile and the log target return to the up operational state after disabling and enabling the domain.
- APAR IC58226: Fixed the validation of an XML Schema `<all>` group in which one of the members of the `<all>` group is the head of a substitution group.
- APAR IC58243: If a domain is configured to fetch its configuration from a remote URL, the fetch might occur before the required network interface is enabled requiring the domain to be manually restarted.
- APAR IC58289: Invoking the **crypto-import** command fails when the RBM property **Enforce on CLI** is enabled.
- APAR IC58310: Log target messages sent to a syslog facility contain incorrect message data.

The following limitations no longer apply:

Ethernet interfaces
> After changing the IP address of an Ethernet interface, the Virtual IP becomes unresponsive.

Firmware reload
> On Type 9235 appliances only, if you reload the firmware, the `eth1` and `eth2` Ethernet interfaces might stop receiving packets. Reloading the firmware might prevent an iSCSI Host Bus Adapter (HBA) from coming up.

Online help
> The information for the **Always Request Client Authentication** toggle when configuring an SSL Proxy Profile object is confusing.

Chapter 4. Getting help and technical assistance

This section describes the following options for obtaining support for IBM products:

- "Searching knowledge bases"
- "Getting a fix"
- "Contacting IBM Support" on page 14

Searching knowledge bases

If you encounter a problem, you want it resolved quickly. You can search the available knowledge bases to determine whether the resolution to your problem was already encountered and is already documented.

Documentation
> The IBM WebSphere DataPower documentation library provides extensive documentation in Portable Document Format (PDF). You can use the search function of Adobe® Acrobat to query information. If you download and store the documents in a single location, you can use the search facility to find all references across the documentation set.

IBM Support
> If you cannot find an answer in the documentation, use the *Search Support* feature from the product-specific support page.

> From the **Search Support (this product)** area of the product-specific support page, you can search the following IBM resources:
> - IBM technote database
> - IBM downloads
> - IBM Redbooks®
> - IBM developerWorks®

Getting a fix

A product fix might be available to resolve your problem. To determine what fixes are available for your IBM product, check the product support site by performing the following steps:

1. Go to the IBM Support site at the following Web address:

     http://www.ibm.com/support

2. Select **Support & Downloads** → **Download** to open the Support & downloads page.
3. From the **Category** list, select **WebSphere**.
4. From the **Sub-Category** list, select **WebSphere DataPower SOA Appliances**.
5. Click the **GO** icon to display the list of most recent updates.
6. Click the link for the firmware and documentation download that is specific to your WebSphere DataPower product.
7. Follow the instructions in the technote to download the fix.

Contacting IBM Support

IBM Support provides assistance with product defects. Before contacting IBM Support, the following criteria must be met:

- Your company has an active maintenance contract.
- You are authorized to submit problems.

To contact IBM Support with a problem, use the following procedure:

1. Define the problem, gather background information, and determine the severity of the problem. For help, refer to the *Software Support Handbook*. To access the online version of this handbook, use the following procedure:

   a. Access the IBM Software Support Web page at the following Web address:

      http://www.ibm.com/software/support

   b. Scroll down to the **Additional support links** section of the page.

   c. Under **Support tools**, click the **Software Support Handbook** link.

   d. Bookmark this page for future reference.

   From this page, you can obtain a PDF copy of the handbook.

2. Gather diagnostic information.

   a. Access the product support at the following Web address:

      http://www.ibm.com/software/integration/datapower/support

   b. Locate the **Assistance** area of the product support page.

   c. Click **Information to include** to access that technote that lists the information that is required to report a problem.

3. Submit the problem in one of the following ways:

   Online

   From the IBM Support Web site (http://www.ibm.com/support), select **Support & Downloads → Open a service request**. Following the instructions.

   By phone

   For the phone number to call in your country, refer to "Contacts" in the *Software Support Handbook*. From the Software Support Handbook Web site, click **Contacts**. In the U.S. and Canada, call 1–800–IBM-SERV (1–800–426–7378) and select option 2 for software.

If the problem you should submit is for a software defect or for missing or inaccurate documentation, IBM Support creates an authorized program analysis report (APAR). The APAR describes the problem in detail. Whenever possible, IBM Support provides a workaround that you can implement until the APAR is resolved and a fix is delivered.

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