WebSphere DataPower XML Integration Appliance XI50

IBM

Version 3.7.2

Release Notes

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First Edition (January 2009)

This edition applies to version 3, release 7, modification 2, level 0 of IBM WebSphere DataPower XML Integration Appliance XI50 and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Chapter 1. About this release

This section provides information about IBM® WebSphere® DataPower® XML Integration Appliance XI50, 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.

RACF® support
Added support for RACF, the IBM implementation of the Security Authorization Facility (SAF). RACF provides authentication and authorization through z/OS® Network Security Services (NSS).

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

SFTP Server Front Side Handler
Added support for SSH File Transfer Protocol (SFTP) using SSH-2 as the secure channel. With this feature, SFTP clients can post to and retrieve files from a remote FTP server.

TAM Integration
Added support for version 6.1 of IBM Tivoli® Access Manager (TAM). Use of TAM requires a license on the DataPower appliance.

TFIM Integration
Added support for version 6.2 of IBM Tivoli Federated Identity Manager (TFIM).

WebSphere Transformation Extender Integration
Added **DPA** as a supported **WTX Map Mode** for map files that were compiled in WTX using DataPower mode. **DPA** is the recommended option for **WTX Map Mode**.

Changes to default values

Version 3.7.2 contains changes to the following default value:

WTX Integration
The default value for **WTX Map Mode** was changed. In previous releases, the default value was **Exported Files**. In this release, the default value is **DPA**.

Deprecated functionality

The following functionality is deprecated:

TAM Integration
Deprecated support for version TAM 5.1.

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.

WTX Map Mode

Exported Files
Deprecated support for Exported Files.

Exported Files - Mapping Logic Disabled
Deprecated support for Exported Files - Mapping Logic Disabled.

Note: Existing maps that use one of the deprecated map modes will continue to work. Refer to the migration procedure in *IBM WebSphere DataPower SOA Appliances: Integrating with WebSphere Transformation Extender* to upgrade existing maps to use the DPA mode.

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" on page 3
- "Development documentation" on page 3
- "Reference documentation" on page 4
- "Integration documentation" on page 4
- "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 Integration Appliance XI50 model types that are available for Type 7993.

Table 1. Model types for DataPower XI50

Model type	Description
42X	XI50 blue
43X	XI50 blue: XG4[2]
44X	XI50 blue: HSM[1]
45X	XI50 blue: HSM[1], XG4[2]
[1] Has the hardware security module. [2] Has the XG4 accelerator card.	

Table 2 displays the IBM WebSphere DataPower XML Integration Appliance XI50 model types that are available for Type 9235.

Table 2. Model types for DataPower XI50

Model type	Description
42X	XI50 blue: CF[1]
4BX	XI50 blue: HDD[2]
43X	XI50 blue: CF[1], XG4[4]
4CX	XI50 blue: HDD[2], XG4[4]
44X	XI50 blue: CF[1], HSM[3]
4DX	XI50 blue: HDD[2], HSM[3]
45X	XI50 blue: CF[1], HSM[3], XG4[4]
4FX	XI50 blue: HDD[2], HSM[3], XG4[4]
[1] Has a compact flash for auxiliary data storage. [2] Has a hard disk array for auxiliary data storage. [3] Has the hardware security module. [4] Has the XG4 accelerator card.	

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.

Database server

Support is provided for the following database servers:
- DB2®: all supported versions up to 9.5
- Microsoft® SQL Server: all supported versions up to 2008
- Oracle: all supported versions up to 11g
- Sybase: all supported versions up to 15

LDAP servers

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

SFTP clients

The following SFTP clients are supported:
- CuteFTP Professional 8.3
- OpenSSH 3.1p1 (Red Hat Linux® 7.3)
- OpenSSH 4.6p1 (Ubuntu Linux)
- OpenSSH 5.1
- PuTTY PSFTP, version 0.60
- SmartFTP, version 3.0
- WinSCP, version 4.1.6

Some client logs might display the server SSH protocol version. For interoperability, the appliance declares server version SSH-2.0-OpenSSH_3.8.1p1 as required by the protocol.

SSH File Transfer Protocol (SFTP) Support

The supported protocols are as follows:
- SSH-2 protocol defined by IETF RFC 4251
- SFTP version 3 defined by the draft-ietf-secsh-filexfer-02.txt Internet-Draft

Web browsers

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

WebSphere Service Registry and Repository (WSRR)

WSRR Server 6.0 or later.

WebSphere Transformation Extender (WTX)

To use **DPA** WTX Map mode, apply IBM WebSphere Transformation Extender DataPower Extension Update to version 8.2.0.3 of WTX Design Studio. Contact WTX Technical Support to obtain this patch.

XML Tools

Any XML tool that generates XSLT 1.0 for XML-to-XML. For non-XML, WebSphere Transformation Extender (WTX) version 8.1.0.3 and version 8.2.0.4.

z/OS Communications Server Network Security Server

z/OS Communications Server, V1R10

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.

SOAP mediation
> SOAP 1.1 mediation returns the SOAP 1.2 Namespace and the SOAP 1.2 `Content-Type`. Instead of using the SOAP 1.1 Namespace and returning a `Content-Type` of `text/xml`, mediation uses the SOAP 1.2 namespace and returns `application/soap+xml`.

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, an XML Firewall, or a Multi-Protocol Gateway 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.

WebSphere Transformation Extender

This section contains information about unsupported WTX functions and limitations in DataPower. Depending on the **WTX Map Mode** you are using, refer to **DPA** Mode or **Exported Files** Mode.

DPA mode

DPA is the recommended **WTX Map Mode** in 3.7.2. To use this mode, you must be running version 8.2.0.3 with the IBM WebSphere Transformation Extender DataPower Extension Update patch or later of WTX Design Studio. If you are using **DPA** as the **WTX Map Mode** in the WebGUI (or **dpa** as the **tx-mode** command), the following functionality is supported by WTX, but not by DataPower:

- WTX Custom functions
- The following WTX functions:
  - DBLOOKUP
  - DBQUERY
  - DDEQUERY
  - EXIT
  - FAIL
  - GET
  - GETANDSET
  - GETDIRECTORY
  - GETFILENAME
  - GETRESOURCENAME
  - HANDLEIN
  - JEXIT
  - OFFSET
  - PUT
  - RUN
  - VALID

WTX on DataPower does not support or has limitations and known issues regarding the following functionality:

Unsupported:

- Because all text is internally represented as XML, the WTX engine does not support null characters in character text. The WTX engine supports NULL in binary text.
- DataPower does not support the WTX WSDL importer.
- The WTX engine does not support WTX industry packs.
- The WTX engine does not support non-constant component rules (anything other than $ = "*some-value*" where "*some-value*" is a string literal or a numeric constant), and they are ignored with a warning message during map compilation for DataPower.
- The WTX engine does not handle data in error. If the input contains invalid data, the WTX engine aborts the transaction and cannot continue processing. In other words, the WTX engine does not support functions that deal with errors. Examples of this type of function are the CONTAINSERRORS, COUNTABS, ISERROR, ONERROR, or REJECT function.

Limitations and known issues:

- Because all dates and times are internally represented with the XML schema xs:dateTime function, these values cannot have a value with year zero.
- Although the native WTX implementation ignores trailing data that is not valid with a warning message, the WTX engine rejects the entire input as invalid.

Exported Files and Mapping Logic Disabled modes
Exported Files and **Exported Files - Mapping Logic Disabled** as the **WTX Map Mode** are deprecated in 3.7.2. With the **tx-mode**

command in the CLI, **Exported Files** is the **default** value and **Exported Files – Mapping Logic Disabled** is the **no-map** value.

If you are using either of these modes, the following functionality is supported by WTX, but not by DataPower:

- WTX Custom functions
- The following WTX functions:
  - DBLOOKUP
  - DBQUERY
  - DDEQUERY
  - EXIT
  - FAIL
  - GET
  - GETANDSET
  - GETDIRECTORY
  - GETFILENAME
  - GETRESOURCENAME
  - HANDLEIN
  - JEXIT
  - OFFSET
  - PUT
  - RUN
  - VALID

WTX on DataPower does not support or has limitations and known issues regarding the following functionality:

Unsupported:

- Because all text is internally represented as XML, the WTX engine does not support null characters in character text. The WTX engine supports NULL in binary text.
- DataPower does not support the WTX WSDL importer.
- The WTX engine does not support WTX industry packs.
- Component syntax is not supported for unordered groups or for choice groups. Syntax must be attached to the components of the choice group or unordered group.
- The WTX engine does not support non-constant component rules (anything other than $ = "*some-value*" where "*some-value*" is a string literal), and they are ignored during compilation of the exported files on DataPower with a warning message. Non-constant component rules cannot be used to disambiguate optional inputs (or choice groups).
- The WTX engine does not support the **Ignore Case** property. You must enumerate all value restrictions in a case-sensitive fashion.
- In character decimals, the WTX engine does not support variable fraction separators. Fraction syntax must be a literal.
- The WTX engine does not support the <WSP> and <OWSP> special literals.
- The WTX engine does not support the **Floating Component** property of choice groups.

- The WTX engine does not handle data in error. If the input contains invalid data, the WTX engine aborts the transaction and cannot continue processing. In other words, the WTX engine does not support functions that deal with errors. Examples of this type of function are the `CONTAINSERRORS`, `COUNTABS`, `ISERROR`, `ONERROR`, or `REJECT` function.
- The WTX engine does not support the following idiom:

  boolean-expression = `TRUE` / *boolean-expression* = `FALSE`

  You can use *boolean-expression* by itself or, if appropriate, use `NOT`.

Limitations and known issues:
- Because all dates and times are internally represented with the XML schema `xs:dateTime` function, these values cannot have a value with year zero.
- Although the native WTX implementation ignores trailing data that is not valid with a warning message, the WTX engine rejects the entire input as invalid.
- In WTX Design Studio, a variable-length component can be sized by its immediately preceding component. The DataPower WTX engine supports the sizing of simple items only. Groups, repeated items, and items with syntax (initiators, terminators, and so forth) are not allowed to be sized.
- The WTX engine ignores exclusive value and range restrictions with a warning message. The WTX engine is more lenient on input than the native WTX implementation. This discrepancy in strictness should not affect valid input.
- Binary operators (=, !=, +, and so forth) cannot be used where one operand is a series and the other is a singleton. To work around this issue, use a functional map.
- The WTX engine might not automatically convert binary text to character text on output. Use the `TEXT()` function.
- The WTX engine does not remove trailing precision on output for zoned numbers or when using the ZONE function.
- Overflow might result in ####### when outputting character numbers that have implied places.

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.

FTP Server Front Side Handler

- An ACL to explicitly deny an IP address does not work when associated with an FTP Server Front Side Handler.

  Workaround: As a workaround, instead of directly associating an ACL with a FTP Server Front Side Handler, an AAA policy action can be created in the service processing policy that checks the source IP address of the client. The IP address specified to be denied access via the ACL will be able to connect to the FTP Front Side Handler. However, the client will not be able to perform any operations as the service processing policy will deny the transaction.

- The FTP server does not free memory used by transactions until the FTP control connection is closed. Also, all transactions on one FTP control connection use the same transaction number, even though they are distinct transactions. This results in Probe only capturing the first transaction of the FTP session.

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.

SFTP Server Front Side Handler

- Directory listing requests are supported for remote FTP servers that support the **LIST** command. However, when the command returns the directory contents, owner and group information and timestamps might not be reported.

- The SmartFTP client always will prompt the user to overwrite a file transfer on PUT requests regardless of whether the file exists on the back end.

  Workaround: Continue the transfer by selecting to overwrite the target file. The prompt occurs because the SmartFTP client queries whether the target file exists before issuing the PUT or GET request. In this case, the appliance always responds that the file does exist.

- WinSCP client

  – The WinSCP client prompts that file deletion is not allowed.

    Workaround: This occurs when the WinSCP client has file transfer resume and preserve timestamp enabled and the WinSCP client attempts to delete a temporary file. Avoid the error by disabling transfer resume and preserve timestamp in the WinSCP client preferences.

  – A new line character is appended to the file name in the transfer request

    Workaround: This might occur when transferring files under the following circumstances:

    - The back end is not a Windows FTP server

- The service is using a custom AAA style sheet

  Avoid the error by specifying the exact file name rather than a wildcard for the target directory.

Tivoli Federated Identity Manager

Schema validation of WS-Trust 1.3 responses from TFIM version 6.2 servers fails due to the presence of an invalid WS-Trust namespace declaration in the response.

Transform binary action

A transform binary action that uses WTX DPA mode cannot accept non-binary input. In a transform binary action that uses explicit named inputs in DPA mode, all named input contexts must be binary. Binary contexts include:

- The `INPUT` context
- The output context of a results action that copies a MIME attachment from any other context
- The output context of a fetch or transform action whose output type is binary

Workaround: For any generic XML named context, copy the XML contents to binary with the following procedure, which assumes the WebGUI:

1. Add a transform action before the transform binary action with the following configuration:
   - **Input** set to `xmlctx`
   - **Transform** set to `store:///identity.xsl`
   - **Output** set to `xmlctx_binary`
   - **Output Type** set to **Binary**

   where `xmlctx` is the XML named input context.

2. Modify the subsequent transform binary action to use `xmlctx_binary` as the input context. `xmlctx_binary` is the output context of the previous transform action.

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 Integration Appliance XI50, 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 IC57044: When streaming is enabled, a truncated response is sent with `PIPE` context and HTTP 1.0; now, HTTP 1.0 always uses the `Content-Length` header when there is data in the response.
- APAR IC57048: When a Web Service Proxy service receives a request with HTTP/1.0 and `Connection: Keep-Alive` header, the service sends an incorrect response to the client with `Content-Length=0` and persistent connection is closed after each request
- APAR IC57053: Anti-Virus action does not reject ICAR test virus when using Trend Micro ICAP server. The appliance now expects the Trend Micro ICAP server to return a 204 response code when no virus is found.
- APAR IC57106: Appliance reboots when an on-error action with error mode set to **Continue** fails WSDL validation
- 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 IC57235: Device reboots when Multi-Protocol Gateway processing policy includes a validate action where the input field is empty and the list box has `INPUT` selected
- APAR IC57239: When a `FlushPDPCache` request is sent to the XML Management Interface, the appliance returns "Wrong number of arguments 0, expected 1" error
- APAR IC57284: WTX Engine causes the appliance to reboot when the `objectset` is `UNORDER GROUP` and the map rule is `<UNORDER GROUP> = NONE`
- APAR IC57294: AAA XACML authentication throws error "No result(s) returned" when XACML response is embedded in `SOAP:Body` element
- APAR IC57295: WSDL Cache Policy does not correctly flush the previously compiled WSDL validation program
- APAR IC57298: Editing a style policy rule that includes an SLM action from an XML Firewall service hangs the WebGUI window on loading

- APAR IC57300: MQ QM Status shows incorrect Received Messages and Sent Messages counts when messages are handled by an MQ Front Side Handler
- APAR IC57336: SNMP MIB objects `dpStatusReceiveKbpsThroughput`, `dpStatusReceivePacketThroughput`, `dpStatusTransmitKbpsThroughput`, and `dpStatusTransmitPacketThroughput` incorrectly set to obsolete instead of deprecated
- APAR IC57345: MQ Front Side Protocol Handler dynamic routing reverts to the 3.6.0 functionality.
- APAR IC57398: Device reboots on style sheet compilation when there is an `<xsl:call-template/>` call from within an EXSLT `func:function` element
- APAR IC57409: Previously, SQL actions that used XSL style sheets to generate a database query always used the default XML Manager; SQL actions now use the XML Manager associated with the service object.
- APAR IC57415: Stateful Raw XML handlers show memory utilization growth for each transaction while the TCP connection is open
- APAR IC57430: WTX map compiler logs the error "failed to set pad" when the encoding is not UTF-8
- APAR IC57440: The appliance reboots when the MQ Queue Manager Total Connection Limit is reached and the MQ server response time is too long
- APAR IC57443: White space characters in Base64 `<digest>` element cause "Hash values do not match" error
- APAR IC57500: An appliance crash occurs in multistep processing when style sheet RTF containing a `namespace` node is assigned to a context variable.
- 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 IC57596: Appliance reboots when WSDL file is missing or contains invalid URL
- APAR IC57660: Text for syslog messages is missing or is in the wrong format
- APAR IC57681: Client configuration files are created during TAM configuration only when the **Tivoli Access Manager Domain** is set to **Default**
- APAR IC57748: If a SQL query exceeds the timeout value that is set in the User Agent of the associated XML Manager, the client TCP connection is not terminated
- APAR IC57762: FTP Poller and NFS Poller handlers strip white spaces at the beginning of a file
- APAR IC57764: The appliance shows slow response time during high load
- APAR IC57767: In high load conditions, connection pooling causes excess TCP connections to be created to the SQL Data Source
- APAR IC57776: The compilation of WTX maps no longer raises an XSLT error that causes the appliance to reboot when splitting long, comma-separated strings
- APAR IC57797: Under certain circumstances, the appliance restarts when doing new line normalization in a **Binary Transform** action
- APAR IC57798: In TAM, due to a missing IBM Global Security Kit (GSKit) library path, Federal Information Processing Standard (FIPS) Mode fails
- APAR IC57807: If the initial attempt to resolve the host name for a SQL Data Source fails, the SQL Data Source remains in a `down` state until the object is manually enabled

- 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 IC57831: WS-Trust SCT STS generates a `WS-SecureConversation` token for an unsupported request type
- APAR IC57832: Schemas embedded in WSDL documents which otherwise do not define components required by the Web Service Proxy are erroneously omitted from the published WSDL, resulting in a published WSDL that is not valid.
- APAR IC57867: If present, the WS-Addressing `WSA:FaultTo` variable now will be propagated and sent on a request going out the backend of a proxy. Previously this was ignored.
- 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 IC57887: The appliance crashes when Tivoli Access Manager (TAM) task is starting up, but it receives a shutdown.
- APAR IC57889: The **Binary Transform** of the Multi-Protocol Gateway incorrectly handles a zero length response
- APAR IC57897: The `x-dp-response-code` header is not set if the MQ Queue Manager specified in the MQ URL is undefined or disabled; with this fix, the header will be set to `2059 (MQRC_Q_MGR_UNAVAILABLE)`
- 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 IC57923: Under load, the Multi-Protocol Gateway MQ header injection might fail causing the back-end application to fail to create reply messages.
- APAR IC57929: When the HTTPS Front Side Handler gets a TCP reset while the back end is processing the request, the appliance becomes unstable from memory utilization growth.
- APAR IC57959: The MQ Queue Manager object might fail to start when enabled. Now, disabling and enabling the MQ Queue Manager object brings it to the `up` operational state and establishes a new connection with the target MQ Queue Manager.
- 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 IC57963: The appliance reboots when the same MQ Queue Manager is used by either an asynchronous action or a `dp:url-open` call with `response="ignore"` and an MQ Front Side Handler.
- APAR IC57997: Missing required `soap:address` inside a `wsdl:port` causes the appliance to reload when used in a Web Service Proxy Validate action; now a missing `soap:address` or one with a different SOAP version from the `soap:binding` is not allowed in a Web Service Proxy or an XML Firewall WSDL Validate action.
- APAR IC58057: HTTPS `GET` requests fail when the header size is greater than 4 KB.
- 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 IC58293: The Policy tab of the Web Service Proxy is blank when viewed through the task template.
- APAR IC58310: Log target messages sent to a syslog facility contain incorrect message data.
- APAR IC58458: WTX Function Map will not process if one of the arguments does not exist. Now, the functional map returns NONE if any of its arguments is empty.
- APAR IC58529: The message "Unknown SQL Source access error" is returned as the result for queries that are attempted with SQL actions. This regression was introduced in version 3.7.1.2.
- APAR IC58576: MQ Front Side Handler is incorrectly deleted if its operational state is down or the handler is not associated with a Multi-Protocol Gateway or Web Service Proxy service.
- APAR IC58762: AAA authentication requests for methods other than LDAP do not correctly cache credentials.

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.
> - The online help is confusing or missing when configuring a Web Service Proxy service.

WTX integration
> During the compilation of a TX map, the "Expected text, but found Prefix" message is written to the log.

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 20

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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