

# webMethods Integration Server 9.9 Readme

October 2015

This file contains important information you must read before using webMethods Integration Server 9.9. You can find user documentation on the [Documentation website](#) or the [TECHcommunity website](#). At those locations, you can also find the suite-related information listed below.

- webMethods Product Suite Release Notes*
- webMethods and Intelligent Business Operations System Requirements*
- webMethods System Cache Specifications*
- Using the Software AG Installer*
- Installing webMethods and Intelligent Business Operations Products*
- Using the Software AG Update Manager (fixes)*
- Upgrading webMethods and Intelligent Business Operations Products*
- Security and globalization information

Included in this file is information about functionality that has been added, removed, deprecated, or changed for this product. Deprecated functionality continues to work and is supported by Software AG, but may be removed in a future release. Software AG recommends against using deprecated functionality in new projects.

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## 1.0 Critical Information

This section lists any critical issues for the current release that were known when this readme was published. For critical information found later, go to the Knowledge Center on the [Empower website](#).

None.

## 2.0 Known Issues

This section lists any issues for the current release that were known when this readme was published. For known issues found later, go to the Knowledge Center on the [Empower website](#).

- PIE-37549  
When executing the pub.event.routing:subscribe service, if the service signature is invalid, Integration Server displays a service exception instead of a more descriptive exception.  
When executing the pub.event.routing:subscribe service, if the service signature is invalid, Integration Server displays "Invalid Service" as the error message instead of a more descriptive exception with the error details.  
There is no workaround for this issue.
- PIE-37429  
Integration Server Administrator does not display LDAP users if the LDAP directory was configured from Command Central.  
There is no workaround for this issue.
- PIE-37510  
Integration Sever exhibits the following known issues when working with XML data and XML document types:
  - Copying or moving folders that contain XML document types or XML fields may break some namespace references. To work around this issue, reload the package containing the moved or copied folder.
  - Some validation errors do not have an accompanying error message. There is no workaround for this issue.
  - Validation of the xs:any wildcard may report validation errors even if processContents is set to "lax" or "skip". There is no workaround for this issue.
  - Integration Server might generate meaningless \*group documents in an XML document type, including:
    - A \*group document with no children.
    - A \*group document with one child for which minOccurs and maxOccurs are set to 1.
    - A sequence \*group for which minOccurs and maxOccurs that is itself contained in another sequence \*group.
    - A choice \*group for which minOccurs and maxOccurs that is itself contained in another choice \*group.

There are no workarounds for these issues.
- PIE-37628

When using Designer to delete or edit the HTTP URL Alias property for a service, Integration Server does not unregister the alias value.

When using Designer to delete or change the HTTP URL Alias property value for a service, the property appeared to be deleted or changed but Integration Server does not unregister the original value. As a result, HTTP requests that included the URL alias still work. Additionally, adding a new URL alias value to the same service resulted in a `NullPointerException` upon save.

There is no workaround for this issue.

- PIE-37655

A request that includes Kerberos ticket fails if it is received through Enterprise Gateway Server. Integration Server cannot validate Kerberos tickets acquired using the negotiate authentication scheme when the request is received through an Enterprise Gateway Server. As a result, authentication fails, which causes the request to fail.

There is no workaround for this issue.

- PIE-37837

Integration Server requires a value for the Default URL Path field for a URL alias even if the URL alias defines port mappings.

Prior to Integration Server 9.9, creating a URL alias in Integration Server Administrator required specifying a value for the URL Path field. In Integration Server 9.9, a value for the URL Path field (now called the Default URL Path field) is optional if the URL alias has one or more port mappings defined. However, Integration Server will not save the URL alias if a Default URL Path value is not supplied.

To work around this issue, specify a value for the Default URL Path.

- PIE-37869

webMethods messaging trigger does not start because there is no default messaging connection alias.

Prior to Integration Server 9.9, a default messaging connection alias was not required. Instead, the value [LOCAL ONLY] could be selected to indicate that publishable document types that specified DEFAULT as the messaging connection alias or a publishable document type that did not specify a messaging connection alias could be published locally only. Integration Server 9.9 introduces a pre-defined messaging connection alias (IS\_LOCAL\_CONNECTION) to assign to publishable document types that can be published locally only. With this change, the default messaging connection alias became required. However, if you migrated to Integration Server 9.9 from an earlier release, it is possible to migrate a blank default messaging connection alias. Because Integration Server 9.9 requires a default messaging connection alias, if a webMethods messaging trigger subscribes to a publishable document type that specifies DEFAULT or did not specify a value for the associated messaging connection alias, a blank default messaging connection alias can prevent the trigger from starting.

To work around this issue, set the default messaging connection alias. If you want instances of the publishable document type to be published locally, set the default messaging connection alias to IS\_LOCAL\_CONNECTION.

- PIE-35715

Protocol buffer encoding does not work properly if the publishable document type name and the

provider definition name do not match.

If a publishable document type has a corresponding provider definition with a different name and the publishable document type specifies protocol buffers as the encoding type, instances of the publishable document type are not encoded properly. As a result, provider filtering does not work. For example, if the publishable document type is named myFolder:myDocumentType and the provider definition on Universal Messaging is wm/is/myFolder/myDocumentType\_1 instances of myFolder:myDocumentType are not properly encoded as a protocol buffer which prevents Universal Messaging from performing provider side filtering correctly.

To work around this issue, make the publishable document type unpublishable (set the Publishable property to False), save the change, and then make the document type publishable again (set the Publishable property to True).

- PIE-35104  
Integration Server throws a NullPointerException when entering and exiting quiesce mode. There is no work around for this issue.
- PIE-8533 (was 1-1Z6J9O)  
Integration Server does not shut down if an audit logging queue contains records waiting to be written to a destination.  
To work around this issue, wait for the records in the queue to be written to the destination.
- PIE-25026  
After migrating Integration Server from previous versions to version 9.9, flat file contents created with previous versions of Integration Server and transferred to Integration Server 9.9 using FTP do not work. Files transferred with an extension of .dat do not invoke the flat file content handlers in Integration Server version 9.9, and so flat file data does not appear in the pipeline after you FTP the files.  
To resolve this issue:
  1. Open the Integration Server Administrator if it is not already open.
  2. Navigate to the Settings > Resources > Mime Type Settings page and click Edit Mime Type Settings.
  3. In the Mime Types Settings area, add the .dat file extension to the text/plain content-type.
  4. Click Save Changes.
- PIE-25824  
Cache-related failures on HP-UX.  
When Overflow To Disk is enabled for a local cache, Integration Server returns multiple cache-related exceptions in the log at start up. For example,  
"java.lang.IllegalArgumentException: Initial table allocation failed. Initial Table Size (slots) : 64  
Allocation Will Require : 1KB Table Page Source :  
com.terracottatech.offheapstore.disk.paging.MappedPageSource@56cac09  
at com.terracottatech.offheapstore.OffHeapHashMap.<init>(OffHeapHashMap.java:204)  
at com.terracottatech.offheapstore.AbstractLockedOffHeapHashMap.<init>(AbstractLockedOffHeapHashMap.java:58)  
at com.terracottatech.offheapstore.AbstractOffHeapClockCache.<init>(AbstractOffHeapClockCache.java:61)

at com.terracottatech.offheapstore.disk.persistent.AbstractPersistentOffHeapCache.<init>  
 (AbstractPersistentOffHeapCache.java:30)  
 at com.terracottatech.offheapstore.disk.persistent.PersistentReadWriteLockedOffHeapClock  
 Cache.<init>(PersistentReadWriteLockedOffHeapClockCache.java:26)  
 at net.sf.ehcache.store.offheap.factories.EhcachePersistentSegmentFactory\$EhcachePersistent  
 Segment.<init>(EhcachePersistentSegmentFactory.java:67)  
 at net.sf.ehcache.store.offheap.factories.EhcachePersistentSegmentFactory.newInstance  
 (EhcachePersistentSegmentFactory.java:50)  
 at net.sf.ehcache.store.offheap.factories.EhcachePersistentSegmentFactory.newInstance  
 (EhcachePersistentSegmentFactory.java:27)  
 at com.terracottatech.offheapstore.concurrent.AbstractConcurrentOffHeapMap.<init>  
 (AbstractConcurrentOffHeapMap.java:98)  
 at com.terracottatech.offheapstore.disk.persistent.AbstractPersistentConcurrentOffHeapMap.<init>  
 (AbstractPersistentConcurrentOffHeapMap.java:42)  
 at net.sf.ehcache.store.offheap.disk.EhcachePersistentConcurrentOffHeapClockCache.<init>  
 (EhcachePersistentConcurrentOffHeapClockCache.java:52)  
 at net.sf.ehcache.store.offheap.disk.OffHeapDiskStoreFactory.createBackingMap(OffHeapDisk  
 StoreFactory.java:213)  
 at net.sf.ehcache.store.offheap.disk.OffHeapDiskStoreFactory.create(OffHeapDiskStore  
 Factory.java:63)  
 at net.sf.ehcache.EnterpriseFeaturesManager.createNonPersistentStore(EnterpriseFeatures  
 Manager.java:211)...."

This issue occurs only on HP-UX 11. If you encounter such errors, contact Software AG Global Support.

- PIE-29447  
 When creating a WSDL first provider or consumer web service descriptor, if the XML Schema definition in the referenced WSDL document contains the <!DOCTYPE declaration, Integration Server issues a java.io.FileNotFoundException.  
 To work around this issue, remove the <!DOCTYPE declaration from the XML Schema definition.
- PIE-33367  
 IS assets cannot be retracted from CentraSite after migrating Integration Server to version 9.9. After migrating Integration Server to version 9.9, Integration Server cannot retract IS assets that were published to CentraSite by an earlier version of Integration Server.  
 To work around this issue:
  1. From the directory for the new Integration Server installation, open the assetpublisher.cnf file in a text editor.
  2. Find the following line: For example:  
 <value name="is\_directory">C:\SoftwareAG\IntegrationServer</value>
  3. Change the location of the Integration Server directory to point to the new location. For example:  
 <value name="is\_directory">C:\SoftwareAG99\IntegrationServer\instances\default</value>
  4. Save and close the file.
- PIE-32088  
 When creating a consumer web service descriptor or a WSDL first provider web service descriptor

from a WSDL document that specifies a style/use of RPC/Encoded, Integration Server does not properly handle recurring elements unless those elements are defined as being of type="SOAP-ENC:Array" or a type that derives from SOAP-ENC:Array.

While creating IS document types from the WSDL document, Integration Server generates fields that correspond to recurring elements as one of the Integration Server list fields, for example a DocumentList, StringList or ObjectList type field. (A recurring element is one with a maxOccurs attribute value greater than 1 or set to unbounded.)

When encoding and decoding SOAP messages for RPC/Encoded web services, Integration Server always handles list fields as a SOAP-ENC:Array even if the WSDL document does not define the elements to be of type SOAP-ENC:Array. As a result, if the WSDL document did not define the recurring elements to be of SOAP-ENC:Array" or a type that derives from SOAP-ENC:Array, Integration Server does not encode or decode the SOAP message into an instance that matches what is defined in the WSDL document.

There is no work around for this issue.

- PIE-4767 (was 1-1P2PV4)  
Invalid WSDL generated for C service for Axis and .Net clients.  
Integration Server generates invalid WSDL for a C service that takes a document specification as input. Axis and .Net clients cannot handle the resulting Java stub classes and throw an error.  
There is currently no workaround for this issue.
- PIE-8045 (was 1-1Y1BZ7)  
Installing a package that contains a schema with a target namespace that is the same as an existing schema on the Integration Server may result in two sets of definitions or declarations for the same components.  
If you only need the schema definitions or declarations contained in one schema, delete the other schema. However, if you need definitions from both schemas, there is no workaround for this issue.
- PIE-8185 (was 1-1YBYQD)  
Web service connector ends with the error [ISC.0082.9034] Field is absent, field must exist.  
If the output signature of a service used as an operation in a provider web service descriptor (WSD) contains a field that has a namespace URI without a prefix, Integration Server adds a prefix when generating a WSDL document for the provider WSD. In the consumer WSD created from the WSDL, the web service connector that corresponds to the operation (IS service) specifies a prefix for the field in the service output. However, the web service provider does not include a prefix with the field in the response. As a result, the contents of the SOAP response cannot be mapped to the web service connector output and the web service connector ends with the error [ISC.0082.9034] Field is absent, field must exist.  
To avoid this issue, if a service will be exposed as a web service, always associate a prefix with a namespace URI for fields in the service signature.
- PIE-8494 (was 1-1Z342R)  
The xsi:nil attribute in an element does not convert properly when generating an IS document from an XML document.  
If an XML document has an element containing only xsi:nil as an attribute and an IS document is generated from that XML document using the pub.xml.xmlNodeToDocument service, the xsi:nil

attribute is generated as an @xsi:nil field for the element in the resulting IS document. This occurs even if the element with the xsi:nil attribute has a simple type string; however, the document type that is created from the XML schema (which is used by the XML document) has a string field for the xsi:nil element instead of the IS document. There is a type difference between the generated document and the document type.

To work around this issue, manually edit the generated IS document to remove the @xsi:nil attribute and then convert the IS document to string field.

- **PIE-16451**  
WSDL generated for a web service descriptor with a service signature, header document type, or a fault document type containing derived document types does not contain the schema definitions for the derived document types.  
To work around this issue, create a WSDL with the schema definitions for the derived document types and then create a WSDL first web service descriptor.
- **PIE-18649**  
When creating a WSDL first provider web service descriptor, Integration Server does not preserve the original service name from the WSDL document.  
When Integration server generates a WSDL document for the provider web service descriptor, the service name will not match the service name in the source WSDL document.  
There is currently no workaround for this issue.
- **PIE-37652**  
On an HTTPS port configured to request a Kerberos ticket, Integration Server does not follow the correct fall back authentication when receiving a request that does not contain a Kerberos ticket in the HTTP headers.  
When an HTTPS port specifies Request Kerberos Ticket for client authentication, Integration Server looks for a Kerberos ticket in the HTTP headers. If the HTTP headers do not contain a Kerberos ticket, Integration Server then performs authentication using the X509 client certificates exchanged during the SSL handshake. If there are no X509 client certificates, then Integration Server looks for username and password information in the headers in order to perform basic authentication. However, if the Kerberos ticket is absent from the HTTP headers, Integration Server immediately looks for username and password information instead of looking for the X509 client certificates. There is no workaround for this issue.
- **PIE-19157**  
IMAP email listener does not start.  
This issue occurs when an IMAP e-mail port is configured to receive requests from an e-mail server that uses NTLM for authentication. With this configuration, the following error is returned when the port is enabled:  
"Failed to start EmailListener:imap: <UserName>@<HostName>: [ISS.0070.9003] Enable failed: Could not log into account <UserName>@<HostName>"  
To resolve this issue, do one of the following:  
  
If you want to disable NTLM authentication, follow these steps:
  1. Open custom\_wrapper.conf located under  
<Software AG\_directory>/profiles/IS\_default/configuration directory.

2. Add the following property:  
wrapper.java.additional.n=-Dmail.imap.auth.ntlm.disable=true  
where n is the next unused sequential number in the file.
3. Restart Integration Server.  
Note that this behavior is consistent with the past releases of Integration Server.

If you want to enable NTLM authentication, follow these steps:

1. Download jcifs-1.3.15.jar file from <http://jcifs.samba.org/src/> into the <IntegrationServer\_directory>/instances/<instanceName>/lib/jars or <IntegrationServer\_directory>/lib/jars directory.
2. Restart Integration Server.

- PIE-22556  
Java service throws java.lang.reflect.InvocationTargetException when attempting to use jars from <JRE\_directory>/lib/ext directory, such as classes in the com.sun.crypto.provider package.  
If you plan to use jars from the <JRE\_directory>/lib/ext directory, you can avoid this issue by modifying the config.ini as follows:
  1. Open the config.ini file located in <Software AG\_directory>/profiles/IS\_<instanceName>/configuration.
  2. Add the following line:  
osgi.parentClassLoader=app
  3. Restart Integration Server.
- PIE-29001  
Some application windows might become minimized after logging into Integration Server.  
After logging into Integration Server Administrator using Internet Explorer 10, all other application windows might become minimized. This issue only occurs on Windows Server 2012, Windows 7, and Windows 8 operating systems.  
There is currently no workaround for this issue.
- PIE-32205  
Integration Server does not provide Java-based NTLM (Windows NT LAN Manager) support for proxy servers that support NTLM authentication. You can only use the NTLM authentication support in Integration Server to allow clients to access resources in web servers that support NTLM authentication, such as Microsoft Internet Information Server (IIS).
- PIE-32979  
When creating of a service first web service descriptor, if the default target namespace value is replaced with a namespace that is used in one of the target services, Integration Server might generate an incorrect WSDL document for the descriptor.  
This situation occurs when a target service in the service first web service descriptor has a signature that contains a top-level Document reference or Document reference list field where the following are true:
  - The Document reference or Document reference list is not namespace qualified or the namespace is the same as the target namespace
  - The local name of a top level field in the Document reference or Document reference list is the same as that of the referenced IS document type

To work around this issue, do one of the following:

- Assign the web service descriptor a target namespace that is not used in the signature of any services that are part of the web service descriptor.
- Edit the IS document type referenced by Document reference or Document reference list so that the name of a top-level field in the document type is not the same as the local name of the document type. For example, if the fully qualified name of the IS document type is myFolder.abc and a top-level field in the document type is abc, change the name of the top-level field named abc. Alternatively, change the local name of the IS document type.
- Edit the Document reference or Document reference list field so that the top-level field has a namespace that does not match that of the target namespace.
- Instead of using a Document reference or Document reference list field in the signature, copy and paste the contents of the IS document type into the Input/Output tab for the service. Alternatively, recreate each field in the IS document type in the service Input/Output tab.

- PIE-37603

The pub.assets:getChecksums service disregards ACLs, returning checksums for all assets specified. This includes assets for which the user does not have list ACL permission. There is no workaround for this issue.

- PIE-37653

When Integration Server runs on AIX, services contained in the pub.xslt folder in the WmXSLT package throw a java.lang.reflect.InvocationTargetException: org/apache/xalan/xsltc/compiler/Parser exception.

To work around this issue, do the following:

1. Open custom\_wrapper.conf file located under <Software AG\_directory>/profiles/IS\_<instanceName>/configuration directory.
2. Remove the line that has content similar to the following.  
wrapper.java.additional.204=-Xbootclasspath/p:...<...>.../common/lib/ext/xml-apis.jar
3. Shut down Integration Server.
4. Start Integration Server.

## 3.0 Usage Notes

This section provides any additional information you need to work with the current release of this product.

- PIE-4086 (was 1-1MDBR7)

In the ClearCase dynamic view, reverting a node after performing a checkout, edit, save, or rename command causes the node to disappear.

When an uncheckout command is issued in ClearCase dynamic view, there is a delay of few seconds before the file is copied to the view. During the delay, the node disappears from Designer. This node reappears in Designer only after the view is refreshed.

This issue occurs only for direct installation of Integration Server in the Dynamic view for certain types of nodes, such as flat file schema. The issue does not occur when working directly in SnapShot view or when working with a folder that is mapped to a SnapShot or Dynamic view.

- PIE-6901 (was 1-1V7X71)

The jar files for an adapter are not removed from the system when the adapter is deleted. When you delete an adapter using the Package Management screen in Integration Server Administrator, the jar files in the code/jars and code/jars/static directory are not removed. The jar files in code/jars folder are loaded by the Package class loader and jars files in code/jars/static folder are loaded by Integration Server class loader. These jar files are locked by the Integration Server and can only be deleted when the server is shut down. If you install a new adapter package without removing the old jar files, Integration Server uses the old jar files with the new package. This can result in inconsistent or unexpected behavior.

When you install a new version of the adapter package, ensure that the new jar files are loaded by following these steps:

  1. Delete the adapter package using Integration Server Administrator.
  2. Shut down the Integration Server.
  3. If there are any jar files left in the <IntegrationServer\_directory>/ instances/<instanceName>/ packages/<packageName>/code/jars and <IntegrationServer\_directory>/ instances/<instanceName>/ packages/<packageName>/code/jars/static directories, delete them.
  4. Restart Integration Server.
  5. Install the new adapter package.
  
- PIE-7720 (was 1-1X7C9N)

Publishable documents are not always synchronized with the Broker after Integration Server is restarted.

To work around this issue, start Software AG Designer and select File > Sync Document Types > All. Click Set All to Push, and then click Synchronize to push all publishable document types to the Broker.
  
- PIE-13975

Integration Server uses the default JVM implementation of JAXP. The JAXP implementation is used to validate XML schema during IS schema creation and WSDL schema during WSD creation. With this implementation, however, the schema or WSDL validation may incorrectly report problems. If validation problems occur during IS schema or web service descriptor creation, you should use the Xerces JAXP implementation.

To use the Xerces JAXP implementation, set the javax.xml.validation.SchemaFactory system property to org.apache.xerces.jaxp.validation.XMLSchemaFactory.

The Xerces JAXP implementation should resolve the validation problems during schema or WSDL validation.
  
- PIE-16497

Integration Server does not generate the \*doctype field for IS document types generated from derived document types in a schema, when:

  - Deriving a complex type from an empty complex type by extension.
  - Deriving a complex type from a simple type by extension.
  
- PIE-21844

Integration Server throws Xerces validation errors while attempting to generate an IS asset from an XML Schema definition that imports multiple schemas from the same target namespace.

When creating an IS schema, IS document type, or flow service from an XML Schema definition that imports multiple schemas from the same target namespace, Integration Server throws Xerces validation errors indicating that the element declaration, attribute declaration, or type definition cannot be found. The Xerces Java parser honors the first <import> and ignores the others. This also occurs when creating a consumer web service descriptor or WSDL first provider web service descriptor from a WSDL document that contains multiple schemas imported from the same target namespace.

To work around this issue, do one of the following:

- Combine the schemas from the same target namespace into a single XML Schema definition. Then change the XML schema definition to import the merged schema only.

- When creating the IS asset, clear the "Validate schema using Xerces" check box to disable schema validation by the Xerces Java parser. When generating the IS asset, Integration Server will not use the Xerces Java parser to validate the schemas associated with the XML Schema definition.

Note: When creating an IS asset from an XML Schema definition, Integration Server always uses the internal parser to validate the schema. However, the Xerces Java parser offers stricter validation than the internal parser.

- PIE-22403

To make Integration Server more secure, the Execute ACL has been changed from Anonymous to Administrators for the following services:

- wm.server.tx:start
- wm.server.tx:restart
- wm.server.tx:execute
- wm.server.tx:end

If there are client applications that use the com.wm.app.b2b.client.TContext class to connect to your Integration Server anonymously, those applications will no longer work. In order for those applications to work, you must do one of the following:

1. Modify the client applications to use an administrative account when connecting to Integration Server.

- Or -

2. Change the Execute ACL for the services listed above back to Anonymous. This is less secure than the first option.

- PIE-28723

Keystore aliases are not displayed correctly with Internet Explorer 10.

When using Internet Explorer 10 to view the Certificates > Edit screen in Integration Server Administrator, the keystore aliases are not displayed correctly in the Keystore drop-down lists.

To work around this issue, turn on Compatibility View in Internet Explorer and enable the "Display all websites in Compatibility View" option.

- When you upgrade to Integration Server 9.9 from a version of Integration Server that did not use port aliases, Integration Server assigns each port, with the exception of e-mail ports, an alias using the following naming convention:

<protocol>Listener\_<portNumber>\_<packageName>

where protocol is the protocol specified for the port, <portNumber> is the number assigned to the port, and packageName is the package with which the port is associated.

For e-mail ports, Integration Server uses the following naming convention for the port alias:

EMailListener\_<userName>\_<hostName>\_<packageName>

Where <userName> is the user name specified for the port, <hostName> is the host name specified for the port, and <packageName> is the package with which the port is associated.

The alias that Integration Server assigns to a port cannot be changed.

- When securing web services using policies based on WS-SecurityPolicy, you cannot alter an inbound message before the security processing executes or alter an outbound message after the security processing completes. For inbound messages, Integration Server always performs the security processing first upon receiving the message. As a result, Integration Server cannot invoke custom handlers before the security processing of an inbound message. For outbound messages, Integration Server always performs the security processing last, right before it sends the message. As a result, Integration Server cannot invoke custom handlers after the security processing of an outbound message.
- Integration Server uses Xerces Java parser version J-2.11.0. Limitations for this version are listed at <http://xerces.apache.org/xerces2-j/xml-schema.html>.
- If you want to use WS-SecurityPolicy to secure a web service and also want to use MTOM streaming, be aware that if the fields to be streamed are being signed and/or encrypted, Integration Server cannot use MTOM streaming because Integration Server needs to keep the entire message in memory to sign and/or encrypt the message.
- Integration Server Administrator is not accessible via Google Chrome when CORS is enabled on Integration Server.  
When updating data from Integration Server Administrator pages, Google Chrome adds an additional Origin header as a security measure for iFrames. As per CORS specification, the Origin header is sent by user agents when they detect cross-domain communication. When CORS is enabled on Integration Server by setting the `watt.server.cors.enabled` parameter to true, Integration Server validates requests by checking the Origin header against the origins specified by the `watt.server.cors.allowedOrigins` parameter. As a result, when a request originates from Google Chrome, Integration Server rejects the request because the origin header is invalid.  
To avoid this issue, set the URL for the Integration Server Administrator console (that is, `<protocol>://<hostname>:<port number>` ) in the `watt.server.cors.allowedOrigins` server configuration parameter. For more information about setting this parameter, see the *webMethods Integration Server Administrator's Guide*.
- Added support for session-based authentication.  
When a client invokes a stateful service, Integration Server creates a session, and includes the session ID in its response to the client. If the client returns to invoke a service during the same session, Integration Server should use this session ID to identify the client, but this is not happening. Instead, Integration Server is reauthenticating the client for each service invocation. This behavior is similar to that performed for stateless services. When a client connects to a stateless service, the session is not maintained, and Integration Server's response does not include a session ID, so Integration Server must reauthenticate the client during the next service invocation. With this update, if a client returns to invoke a stateful service during the same session, Integration

Server uses the session ID to identify the client, rather than performing authentication for each service invocation. This behavior allows the Integration Server to perform session-based authentication for stateful services, that is, authentication that lasts for the duration of the client's session with Integration Server.

For best performance, use stateful services if your Integration Server receives requests from repeating clients. The client can connect to Integration Server, be authenticated just once, and then issue many service invocations during the same session. Use stateless services if clients typically send a single invocation request to Integration Server at a time. Using a stateless service prevents the creation of sessions that will sit unused, taking up resources in Integration Server.

Note: This change does not require any changes to your existing implementation.

- Web services security implemented using WS-Security facility in Integration Server does not support partial message operations (Sign/Encrypt). Integration Server allows only the body of the SOAP message to be signed and encrypted.
- Do not modify the following file unless instructed to do so by Software AG:  
<IntegrationServer\_directory>\instances\<instanceName>\config\wss\axis2.xml  
Changes to this file may result in an unstable configuration. Software AG will not support issues that arise as a result of changes to this file that were not authorized by Software AG.
- Software AG does not support the deployment of custom handlers or modules via placement of an Axis Module (\*.mar) file in the following directory:  
<IntegrationServer\_directory>\instances\<instanceName>\config\wss\modules  
Unexpected behavior that arises due to the manual deployment of mar files directly to this location is the responsibility of the user and will not be addressed by Software AG.
- Software AG does not support the deployment of web services via placement of an Axis Archive (\*.aar) file in the following directory:  
<IntegrationServer\_directory>\instances\<instanceName>\config\wss\services  
Unexpected behavior that arises due to the manual deployment of aar files directly to this location is the responsibility of the user and will not be addressed by Software AG.
- Now, when you start Integration Server, Integration Server receives configuration settings (for example, the size of the Java heap) from the wrapper.conf and custom\_wrapper.conf files located in the *Software AG\_directory*\profiles\IS\_instance\_name\configuration directory. Integration Server no longer obtains settings from setenv.bat/sh or server.bat/sh.

If you need to modify the default property settings for Integration Server, you can override the settings using the custom\_wrapper.conf file. The following table shows the settings formerly set in the setenv.bat/sh file that are now set using properties in the custom\_wrapper.conf file:

<b>This setting in setenv.bat/sh...</b>	<b>Is replaced with the following property in custom_wrapper.conf...</b>
APPENDCLASSES/	wrapper.java.additional.203=-
APPEND_SYSTEM_CLASSPATH	Dwatt.server.append.classes=
JAVA_CUSTOM_OPTS	wrapper.java.additional.n

JAVA_MAX_DIRECT_SIZE	wrapper.java.additional.n=XX:MaxDirectMemorySize=
JAVA_MAX_MEM	wrapper.java.maxmemory
JAVA_MAX_PERM_SIZE	wrapper.java.additional.n=XX:MaxPermSize=
JAVA_MIN_MEM	wrapper.java.initmemory
PREPENDCLASSES/ PREPEND_SYSTEM_CLASSPATH	wrapper.java.additional.202= Dwatt.server.prepend.classes=

The following table shows settings you can change that were formerly in the setenv.bat/sh file, but are now located in other files or removed:

<b>Setting</b>	<b>New location (if applicable)</b>
DEBUG_ENABLED	<i>Software AG_directory</i> \profiles\IS_instance_name\bin\startDebugMode.bat/sh
JAVA_PROFILER_OPTS/ PROFILER_ENABLED	Removed.
Java location	wrapper.java.command in <i>Software AG_directory</i> \profiles\IS_instance_name\configuration\wrapper.conf
JMX_ENABLED	Removed. JMX monitoring is enabled by default and cannot be disabled.
JMX_PORT	The port property in <i>Software AG_directory</i> \profiles\IS_instance_name\configuration\com.software.jmx.connector.pid-port.properties

The startup.bat/sh and shutdown.bat/sh scripts contained in the *Integration Server\_directory*\instances\instance\_name\bin and *Integration Server\_directory*\bin directories are deprecated. You should use the scripts contained in the *Software AG\_directory*\profiles\IS\_instance\_name\bin directory to start and stop Integration Server. If you will manage Integration Server through Command Central, you *must* use the scripts located in the *Software AG\_directory*\profiles\IS\_instance\_name\bin directory.

The installSvc.bat file located in *Integration*

*Server\_directory*\instances\instance\_name\support\win32 directory is also deprecated. You should use the service.bat file from the *Software AG\_directory*\profiles\IS\_instance\_name\bin directory to register or remove an Integration Server instance as a Windows service.

For complete instructions for using any of the features affected by these changes, see *webMethods Integration Server Administrator's Guide* and *Working with the webMethods Product Suite and the Java Service Wrapper*.

## 4.0 Fixes Included in Each Release

This section lists the latest fix level that has been included in each release for each product component. A release is listed in this section only if changes occurred in that release. Go to the Knowledge Center on the [Empower website](#) for detailed information about fixes.

### **Release 9.9**

- IS\_8.2\_SP2\_Core\_Fix17
- IS\_9.0\_SP1\_Core\_Fix10
- IS\_9.0\_SP1\_WmCloud\_Fix1
- IS\_9.5\_SP1\_Core\_Fix8
- IS\_9.5\_SP1\_WmCloud\_Fix1
- IS\_9.6\_Core\_Fix7
- IS\_9.6\_MobileSupport\_Fix1
- IS\_9.6\_SubVersion\_Fix1
- IS\_9.6\_Tomcat6\_Fix3
- IS\_9.7\_Core\_Fix4
- IS\_9.7\_Migration\_Fix1
- IS\_9.7\_SPM\_Fix2
- IS\_9.8\_Core\_Fix2
- WAR\_9.5\_SP1\_Fix5
- WAR\_9.7\_Fix1

### **Release 9.8**

- IS\_7.1.2\_Core\_Fix47
- IS\_7.1.3\_Core\_Fix27
- IS\_8.2\_SP2\_Tanuki\_Fix1
- IS\_8.2\_SP2\_Tomcat6\_Fix7
- IS\_9.0\_SP1\_Core\_Fix8

- IS\_9.0\_SP1\_Tanuki\_Fix1
- IS\_9.5\_SP1\_Migration\_Fix1
- IS\_9.5\_SP1\_Portal\_Fix2
- IS\_9.5\_SP1\_Tanuki\_Fix1
- IS\_9.5\_SP1\_Tomcat6\_Fix1
- IS\_9.6\_Core\_Fix4
- IS\_9.6\_Migration\_Fix2
- IS\_9.6\_Portal\_Fix1
- IS\_9.6\_Tanuki\_Fix1
- IS\_9.6\_Tomcat6\_Fix1
- IS\_9.7\_AssetPublisher\_Fix1
- IS\_9.7\_Core\_Fix2
- IS\_9.7\_Portal\_Fix2
- IS\_9.7\_Tomcat6\_Fix1
- IS\_9.7\_WmCloud\_Fix1
- WAR\_8.2\_SP2\_Fix6
- WAR\_9.0\_SP1\_Fix2
- WAR\_9.5\_SP1\_Fix4
- WAR\_9.6\_Fix3
- WFF\_9.0\_SP1\_Fix2
- WFF\_9.5\_SP1\_Fix3
- WFF\_9.6\_Fix1

### ***Release 9.7***

- IS\_8.0\_SP1\_Core\_Fix30
- IS\_8.2\_SP2\_Core\_Fix14
- IS\_9.0\_SP1\_Core\_Fix6

- IS\_9.0\_SP1\_Portal\_Fix1
- IS\_9.0\_SP1\_Tomcat6\_Fix1
- IS\_9.5\_SP1\_Core\_Fix4
- IS\_9.6\_Core\_Fix2
- IS\_9.6\_Migration\_Fix1
- WAR\_8.2\_SP2\_Fix3
- WAR\_9.0\_SP1\_Fix1
- WAR\_9.5\_SP1\_Fix3
- WAR\_9.6\_Fix2
- WFF\_8.2.2\_Fix3
- WFF\_8.2\_SP2\_Fix5
- WFF\_9.0.1\_Fix1
- WFF\_9.5.1\_Fix1
- WFF\_9.5\_SP1\_Fix2
- WFF\_9.6\_Fix1

### ***Release 9.6***

- IS\_8.0\_SP1\_Core\_Fix29
- IS\_8.2\_SP2\_Core\_Fix11
- IS\_8.2\_SP2\_WmDB\_Fix2
- IS\_8.2\_SP2\_WmPKI\_Fix2
- IS\_9.0\_SP1\_Core\_Fix3
- IS\_9.0\_SP1\_Win32\_Fix1
- IS\_9.5\_SP1\_Core\_Fix1

### ***Release 9.5***

- ART\_8.2\_SP2\_Fix1

- WFF\_8.2.2\_Fix2
- IS\_8.0\_SP1\_Core\_Fix28
- IS\_8.2\_SP1\_Core\_Fix11
- IS\_8.2\_SP1\_VCS\_Fix2
- IS\_8.2\_SP2\_Core\_Fix9
- IS\_8.2\_SP2\_Portal\_Fix2
- IS\_8.2\_SP2\_Tomcat6\_Fix6
- IS\_8.2\_SP2\_Win32\_Fix3
- IS\_9.0\_SP1\_Core\_Fix1

## 5.0 Other Resolved Issues

This section lists the issues that were resolved in each release but were not part of the fixes listed in the previous section. A release is listed in this section only if changes occurred in that release.

### ***Release 9.9***

- PIEAR-616 (WAR\_9.5\_SP1\_Fix5, WAR\_9.7\_Fix1)  
 The change in status of an adapter listener is not displayed in Integration Server Administrator if you query the listener using an existing search filter.  
 In Integration Server Administrator, if you query an adapter listener using an existing search filter, the status of the listener is not refreshed and the current status of the listener is not displayed correctly.  
 This issue is resolved. The status of an adapter listener is now refreshed on access to display the correct status using an existing search filter.

### ***Release 9.8***

- PIE-31623 (IS\_7.1.2\_Core\_Fix47, IS\_7.1.3\_Core\_Fix27, IS\_9.0\_SP1\_Core\_Fix7, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix1)  
 Sessions on remote servers are reused by different users. When Integration Server is acting as an HTTP client, it retains the HTTP cookies from the remote server. If two users connect to the same remote server, they use the same set of cookies. Since the session ID is often stored in a cookie, this can result in the two users using the same session on the remote server. Each user should use a unique session when connecting to a remote server.

This issue is resolved. HTTP cookies are now associated with a specific user as well as the remote server so that a separate set of cookies are used for each user.

- PIE-31372 (IS\_7.1.3\_Core\_Fix27, IS\_9.0\_SP1\_Core\_Fix7, IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix2)  
Secure LDAP connections fail when running Integration Server on HP-UX.  
When running Integration Server on HP-UX, configuring LDAP connections using SSL fails because the default secure random algorithm in the Entrust library fails with an exception.  
This issue is resolved. Integration Server introduces the new `watt.net.ssl.randomAlgorithm` server configuration parameter to identify the random algorithm name. The default is `FIPS186_2usingSHA1`. If you change the setting of this parameter, you must restart Integration Server for the changes to take effect.
- PIE-34054 (IS\_7.1.3\_Core\_Fix27, IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix2)  
Remove use of SSLv3 from any HTTPS or FTPS Integration Server ports.  
In order to protect against POODLE vulnerability (CVE-2014-3566), this fix exposes server configuration parameters that allow you to disable the use of SSLv3.0 on Integration Server HTTPS and FTPS ports.

Depending on whether connections use the Entrust library (`entoolkit.jar`) or JSSE (where `useJSSE=true`), you use a different procedure to disable SSLv3.0. Follow the appropriate procedure as follows:

For connections that use Entrust (`entoolkit.jar`) library:

When Integration Server uses the Entrust library to handle inbound and outbound requests, you disable SSLv3.0 by setting the following server configuration parameters:

- `watt.net.ssl.server.handshake.minVersion`
- `watt.net.ssl.server.handshake.maxVersion`

Possible values for these server configuration parameters are `"sslV3"` and `"tls"` (the default). With this fix, these two parameters take the default value `"tls"`, which indicates that all server side SSL listeners will support only TLSv1 and no longer accept SSLv3 connections.

When Integration Server acts as a client and makes an outbound request, it configures the allowed protocols using the following server configuration parameters:

- `watt.net.ssl.client.handshake.minVersion=sslV2`
- `watt.net.ssl.client.handshake.maxVersion=tls`

Possible values for these server configuration parameters are `"sslV2"`, `"sslV3"`, and `"tls"`. If you want to disable the use of `"sslV3"`, set `watt.net.ssl.client.handshake.minVersion` as follows:

```
watt.net.ssl.client.handshake.minVersion=tls
```

To change the values of the server configuration parameters, from Integration Server Administrator, navigate to Settings > Extended and add the parameters as follows:

```
watt.net.ssl.server.handshake.minVersion=tls  
watt.net.ssl.server.handshake.maxVersion=tls  
watt.net.ssl.client.handshake.minVersion=tls  
watt.net.ssl.client.handshake.maxVersion=tls
```

If any of your clients require SSLv3 to connect (the previous default), set

```
watt.net.ssl.server.handshake.minVersion as follows:  
watt.net.ssl.server.handshake.minVersion=sslV3
```

When making outbound connections, you can configure Integration Server to first try to connect using sslv3 and, if that fails, to use tlsv1, set `watt.net.ssl.client.handshake.minVersion` as follows:  
`watt.net.ssl.client.handshake.minVersion=sslv3`

This will allow Integration Server to use sslv3 with endpoints that do not support tlsv1.

For connections that use JSSE (where `useJSSE=true`):

When Integration Server uses JSSE to handle inbound and outbound requests, you disable SSLv3.0 by setting the following server configuration parameters:

- `watt.net.jsse.server.enabledProtocols`
- `watt.net.jsse.client.enabledProtocols`

Possible values for these server configuration parameters are a comma-separated values consisting of one or more of the following:

- SSLv2Hello
- SSLv3
- TLSv1
- TLSv1.1
- TLSv1.2

With this fix, `watt.net.jsse.server.enabledProtocols` and `watt.net.jsse.client.enabledProtocols` are set to the default value of "TLSv1,TLSv1.1,TLSv1.2", which indicates that all server side SSL listeners and client side outbound connections that use JSSE will not accept any SSLv3 or SSLv2 connections. To change the values of the parameters, from Integration Server Administrator, navigate to Settings > Extended and add the parameters as follows:-

```
watt.net.jsse.server.enabledProtocols=TLSv1,TLSv1.1,TLSv1.2
```

```
watt.net.jsse.client.enabledProtocols=TLSv1,TLSv1.1,TLSv1.2
```

Note: These values are case-sensitive. Specify the values exactly as shown.

If any of your clients need to connect using SSLv3, add SSLv3 to

`watt.net.jsse.server.enabledProtocols`, for example:

```
watt.net.jsse.server.enabledProtocols=TLSv1,TLSv1.1,TLSv1.2,SSLv3
```

When starting JSSE ports, at DEBUG level of logging facility 6 (Server SSL Interface), Integration Server logs a message to indicate what protocols are enabled for each JSSE port.

- PIE-34463 (IS\_7.1.3\_Core\_Fix27, IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)  
When you invoke the `pub.client:http` service, Integration Server does not create a new session when the `newSession` parameter is set to `yes`.  
This issue is resolved.
- PIE-33340 (IS\_9.0\_SP1\_Core\_Fix7, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix1)  
While deploying BPM (ProcessModel) assets using `webMethods Deployer`, Integration Server issues an exception if a specified package does not exist in the source server.  
While creating a deployment map and adding it to the target group to deploy BPM (ProcessModel) assets using `webMethods Deployer`, Integration Server issues a `NullPointerException` if a specified package does not exist in the source Integration Server.  
This issue is resolved. In the above scenario, Integration Server now issues an error message stating that the specified package does not exist in the source server.
- PIE-32686 (IS\_9.0\_SP1\_Core\_Fix7, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix2)  
Integration Server returns a 401 Unauthorized error when it receives a request with no

authentication scheme specified in the Authorization header.

Requests with no authentication scheme do not conform to the HTTP Authorization header specification. Integration Server versions prior to 8.2 CoreFix 12 did not strictly enforce the HTTP Authorization header specification, so requests from HTTP clients that did not conform to that standard still worked. However, starting with Integration Server version 8.2 CoreFix 12, Integration Server forces requests to have an authentication scheme in the Authorization header.

This issue is resolved. Now, Integration Server treats requests with no authentication scheme in the Authorization header as BASIC authentication requests and performs authentication for valid credentials.

- PIE-32800 (IS\_9.0\_SP1\_Core\_Fix7, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix2)

In certain scenarios, SOAP fault that Integration Server generates includes the hostname and IP address of the endpoint reference.

Upon invoking a web service that does not exist in the Integration Server, the SOAP fault that Integration Server generates includes the hostname and IP address of the endpoint reference in the values specified for fault reasons and actor/role attributes.

This issue is resolved. This fix introduces a new server configuration parameter, `watt.server.SOAP.hideEPRHostInFault`, to hide the endpoint reference host name and IP address details in the SOAP fault. When this parameter is set to true, Integration Server replaces the host name and IP address with `*:*` in the SOAP fault. When this parameter is set to false, Integration Server includes the host name and IP address details of the endpoint reference in the SOAP fault. The default value of this parameter is false.

Note: This parameter applies only when the Pre-8.2 compatibility mode property of the web service descriptor is set to false.

- PIE-32920 (IS\_9.0\_SP1\_Core\_Fix7, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix2)

Integration Server returns the wrong error information when the format of an incoming HTTP Authorization header value is invalid.

When Integration Server receives a request whose HTTP Authorization header value is in an invalid format, it returns a 500 Internal Server Error. Integration Server should return a 401 Unauthorized Error.

This issue is resolved.

- PIE-33354 (IS\_9.0\_SP1\_Core\_Fix7, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix2) Integration Server logs an exception in the server logs while invoking web services that has no value set for the Outbound callback service property.

While invoking certain web services, Integration Server logs following message in the server logs: `ISC.0088.9998E Exception --> null`.

This issue occurs only if no value is set for the Outbound callback service property of the web service descriptor.

This issue is now resolved. Integration Server no longer logs an exception if a value is not set for the Outbound callback service property of the web service descriptor.

- PIE-33421 (IS\_9.0\_SP1\_Core\_Fix7, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix2) After applying IS\_9.0\_SP1\_Core\_Fix6, the Dynamic Server Pages in Integration Server Administrator are not cached.

This issue is resolved. This fix introduces a new server configuration parameter, `watt.cachedirective.exclude.packages` that you can use to specify a comma-separated list of packages whose Dynamic Server Pages you want the browser to cache. You can specify the packages as regular expressions. The asterisk (\*) is the only wildcard character allowed in the regular expression. By default, the value of this parameter is empty, meaning none of the Dynamic Server Pages in the Integration Server Administrator are cached.

Note: Software AG recommends that you use `watt.cachedirective.exclude.packages` to cache the Dynamic Server Pages that are related to custom packages only.

Important: If you change the setting of this parameter, you must restart Integration Server for the changes to take effect.

- PIE-31376 (IS\_9.0\_SP1\_Core\_Fix7, IS\_9.6\_Core\_Fix3)  
Querying for a user in an LDAP directory results in a "size limit exceeded" error.  
When Integration Server is configured to use LDAP for external user management, and Integration Server Administrator is used to query LDAP for a specific LDAP user or group of users, Integration Server retrieves all users from the LDAP directory instead of retrieving only the specified user(s). This behavior results in the following error in the Integration Server server log:  
ISS.0002.0044E Error querying for user(s) on (LDAP server) with search root (LDAP: error code 4 - Sizelimit Exceeded)  
This issue is resolved.
- PIE-32725 (IS\_9.0\_SP1\_Core\_Fix7, IS\_9.6\_Core\_Fix3)  
In certain scenarios, the entries in the `stats.log` file become corrupted.  
This issue is now resolved.
- PIE-33193 (IS\_9.0\_SP1\_Core\_Fix7, IS\_9.6\_Core\_Fix3)  
Even after modifying the database columns to make them wider, Integration Server truncates the length of data in the `WMSERVICEACTIVITYLOG.FULLMESSAGE` and `WMSERVICECUSTOMFLDS.STRINGVALUE` columns of the audit logging database.  
The `WMSERVICEACTIVITYLOG.FULLMESSAGE` and `WMSERVICECUSTOMFLDS.STRINGVALUE` columns of the audit logging database are hard-coded in Integration Server to be 1024 characters and 512 characters respectively. When you edit the width of the database columns to make them wider, Integration Server truncates the data to the hard-coded values before writing the data to the database table.  
This issue is resolved. You can now increase the widths of the `WMSERVICEACTIVITYLOG.FULLMESSAGE` and `WMSERVICECUSTOMFLDS.STRINGVALUE` columns in the audit logging database. Now, when the audit records corresponding to the `WMSERVICEACTIVITYLOG` and `WMSERVICECUSTOMFLDS` database tables are created during server initialization, Integration Server checks the database to determine the width of the `WMSERVICEACTIVITYLOG.FULLMESSAGE` and `WMSERVICECUSTOMFLDS.STRINGVALUE` columns, and sets the length accordingly.  
Keep the following points in mind when increasing the column widths:
  - The data written to these columns can contain multibyte characters. With multibyte characters, data can be truncated in the middle of a character, which could cause the last character written to the database column to be a character other than the intended character. To avoid this, Integration Server truncates the last character boundary before the maximum length of the field, meaning that

the data might be slightly smaller than the maximum value set in the audit logging database.

- Integration Server checks the database for column width by obtaining the metadata and examining the CHAR\_OCTET\_LENGTH field of the column. If the database vendor does not supply a CHAR\_OCTET\_LENGTH value for the column, Integration Server uses the hard-coded default lengths for the fields as follows:

- WMSERVICEACTIVITYLOG.FULLMESSAGE = 1024

- WMSERVICECUSTOMFLDS.STRINGVALUE = 512

Integration Server introduces the following new server configuration properties:

- The `watt.server.audit.schemaName` server configuration parameter specifies the user name of the ISCoreAudit JDBC functional alias. By default, Integration Server uses the user name from the ISCoreAudit JDBC functional alias.

- The `watt.server.audit.dbEncoding` server configuration parameter specifies the character set that the audit logging database uses. The default is UTF-8. The value for this property must be a standard IANA-assigned character set name, as defined on

<http://www.iana.org/assignments/character-sets>.

If you change the setting of either of these server configuration parameters, you must restart Integration Server for the changes to take effect.

- PIE-33250 (IS\_9.0\_SP1\_Core\_Fix7, IS\_9.6\_Core\_Fix3)

Settings within a package's `node.ndf` files are changed after the package is compiled during a repository-based deployment.

When a package is deployed to a target Integration Server using `webMethods Deployer`, and the `Compile Package on Install` global value is set to `true`, Integration Server performs a fragmentation step during compilation of the package. This step creates new `node.ndf` files for any Java services contained in the package. As a result, any settings previously defined in the `node.ndf` files are lost. This issue is resolved. This fix introduces a new global property - `fragPackage` (Fragment Package on Install), for package assets. A value of `true` indicates that you want to allow Integration Server to perform the fragmentation step and overwrite a package's `node.ndf` files when the package is compiled on the target server. A value of `false` indicates that you want to prevent the server from performing the fragmentation step, thereby preserving custom settings defined in the package's `node.ndf` files when the package is compiled on the target server. The default is `true`.

- PIE-33256 (IS\_9.0\_SP1\_Core\_Fix7, IS\_9.6\_Core\_Fix3) Integration Server gives the datatype of the `returnCode` output parameter of the `pub.client.sftp*` services incorrectly as integer instead of correctly specifying it as string.

This issue is now resolved. The `returnCode` output parameter of the `pub.client.sftp*` services is now updated to string datatype.

- PIE-32235 (IS\_9.0\_SP1\_Core\_Fix7) Integration Server thread dump indicates a deadlock state between `webMethods Broker` polling and synchronization threads when Broker disconnects while a publishing event is in progress.

The `BrokerPoller` thread, which determines Broker's connection status, and the `BrokerSynchronizer` thread, which synchronizes documents between Integration Server and Broker, may become deadlocked. This can happen when Broker disconnects and/or reconnects while Integration Server is publishing a document to Broker.

This issue is resolved. Integration Server now prevents deadlocks from occurring between the two

threads.

- PIE-32458 (IS\_9.0\_SP1\_Core\_Fix7)  
Integration Server support for using user-defined prefixes with the document types created when creating or refreshing a consumer web service descriptor or a WSDL first provider web service descriptor.  
This fix contains the server-side functionality required to support the Designer functionality described in WED-4598 which is available in a webMethods Service Development fix. Together, PIE-32458 and WED-4598 provide the ability to associate user-defined prefixes with the namespaces used in document types instead of the prefixes defined in the schema contained in or referenced by a WSDL document used as the source for a web service descriptor. For more information about this functionality, see the readme file for the webMethods Designer Service Development fix. For webMethods Service Development 9.6, WED-4598 is available in ESB\_9.6\_Fix2.  
Note: The ability to refresh a web service descriptor is available in Integration Server and webMethods Service Development versions 9.0 SP1 and later.
- PIE-32990 (IS\_9.0\_SP1\_Core\_Fix7)  
Copying and pasting Integration Server packages from one server to another results in a "no such remote server" error.  
When a package is copied from an Integration Server and pasted to a remote Integration Server using Software AG Designer, the following error message is displayed in the server log:(ISS.0085.9102) No such remote server  
This occurs even when the target server is running normally and has a valid remote server alias.  
This issue is resolved.
- PIE-32895 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.5\_SP1\_Migration\_Fix1, IS\_9.6\_Core\_Fix3, IS\_9.6\_Migration\_Fix2)  
Integration Server issues a java.lang.NullPointerException error while migrating from Integration Server version 8.0 SP1 to Integration Server version 9.0 SP1 or 9.5 SP1 in a different installation directory.  
This issue is now resolved.
- PIE-30419 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix1)  
Editing the connection details of a remote Integration Server does not work as expected.  
After a remote Integration Server connection is created and a successful connection is established, if the remote server connection settings are changed (for example, if a different port number is specified), Integration Server does not create a new session when subsequent connection attempts are made. As a result, Integration Server Administrator indicates that subsequent connections are successful, even if the revised remote server settings are incorrect (for example, if the revised port number is not valid).  
This issue is resolved.
- PIE-32999 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix1)  
After applying a fix containing PIE-30630 or when using Integration Server 9.7, if Platform Manager is in use, Integration Server can have a high number of active stateful sessions.  
The number of active stateful sessions becomes high because sessions created by the Platform

Manager were not being cleaned up upon disconnect but were not being removed from memory until the session time out limit elapsed. This issue was introduced by PIE-30630 which is included in Integration Server 9.7, IS\_8.2\_SP2\_Core\_Fix13, IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix1, and IS\_9.6\_Core\_Fix2.

Integration Server now removes a session created by the Platform Manager from memory at the time the Platform Manager disconnects.

- PIE-31474 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix2)  
Integration Server creates additional session threads while executing triggers and displays a misleading expiration value.  
When `watt.server.trigger.reuseSession` (for Broker/local triggers in Integration Server version 9.0 SP1 and earlier or `webMethods` messaging triggers in version 9.5 SP1 and later) or `watt.server.jms.trigger.reuseSession` (for JMS triggers) is set to false, Integration Server displays an additional session thread for the trigger. In addition, regardless of the values set for `watt.server.trigger.reuseSession` and `watt.server.jms.trigger.reuseSession` server configuration parameters, Integration Server Administrator displays the session on the Server > Statistics > Session screen with a Session Expires value of 9223372036854775807 and the session never expires. This issue is resolved. When either the `watt.server.trigger.reuseSession` or `watt.server.jms.trigger.reuseSession` server configuration parameter is set to false, Integration Server no longer creates extra sessions for the respective trigger. For these sessions, Integration Server Administrator displays “upon service completion” in the Session Expires column on the Server > Statistics > Sessions screen for trigger-related sessions. This indicates that the session will remain until the service executed by the trigger finishes. Once the service finishes, Integration Server removes the session.  
When either the `watt.server.trigger.reuseSession` or `watt.server.jms.trigger.reuseSession` server configuration parameter is set to true, Integration Server shares one session for each execution of the trigger. In this case, Integration Server Administrator displays a value of "never" in the Session Expires column of the Server > Statistics > Sessions screen and the session does not expire.
- PIE-33336 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix2)  
In case of web services, Integration Server does not keep the undeclared namespaces in the resulting document (IData), when the endpoint service is invoked.  
If an XML element that is part of a SOAP Message has elements with attributes containing undeclared namespaces, Integration Server does not keep the undeclared namespaces in the resulting document (IData), when the endpoint service is invoked.  
This issue is resolved. The generated IData now includes the undeclared namespace definitions.  
Note: In case of web services, the undeclared namespace functionality is available only if the datatype of the document is of type 'Object'.
- PIE-33632 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix2)  
The service results cache does not delete expired elements from Ehcache.  
Expired service results remain in Ehcache even after the cache sweeper thread runs.  
This issue is resolved.
- PIE-33376 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix3)  
Integration Server issues a NullPointerException when it receives an HTTP request with no User-

Agent header.

This issue is resolved.

- PIE-33601 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)

Integration Server is unable to process incoming XML files if the XML files contain non-English characters, such as Greek or Japanese.

While processing an incoming XML file, Integration Server uses the charset encoding defined in the XML header. If the encoding is not defined in the XML header, Integration Server processes the XML file using the charset encoding of the request or the character encoding specified in the `watt.server.fileEncoding` server configuration parameter. However, after migrating to higher versions, using the character encoding specified in `watt.server.fileEncoding` parameter to process an incoming XML file causes Integration Server to return garbled messages.

This issue is resolved. To resolve this issue, this fix introduces a new server configuration parameter, `watt.server.xml.encoding`, that specifies the encoding that Integration Server must use when processing incoming XML files.

If an encoding is not defined in the XML header, Integration Server attempts to process the XML file using the charset encoding of the http or ftp request. If charset encoding is not available in the request header, then Integration Server uses the character encoding specified in the `att.server.xml.encoding` server configuration parameter. There is no default value for this parameter. You must restart Integration Server for changes to this parameter to take effect.

Note: If you have configured Integration Server to use the character encoding specified in the `watt.server.fileEncoding` parameter to process incoming XML files, after installing this fix or after upgrading to a higher version of Integration Server, ensure that the value of `watt.server.fileEncoding` parameter is set to the same value specified for `watt.server.xml.encoding`. If you have not configured `watt.server.fileEncoding` for processing XML files previously, after installing this fix or after upgrading to a higher version of Integration Server, you can configure `watt.server.xml.encoding` to process incoming XML files. You can use `watt.server.fileEncoding` to process all files other than incoming XML files.

- PIE-33615 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)

Integration Server is unable to parse incoming XML files if the XML files contain non-English characters, such as Greek or Japanese.

While processing an incoming XML file, Integration Server uses the charset encoding defined in the XML header. If the encoding is not defined in the XML header, Integration Server parses the XML file using the charset encoding of the request or the character encoding specified in the `watt.server.fileEncoding` server configuration parameter. However, after migrating to higher versions, using the character encoding specified in `watt.server.fileEncoding` parameter to process an incoming XML file causes Integration Server to return garbled messages.

This issue is resolved. To resolve this issue, this fix introduces a new server configuration parameter, `watt.server.xml.encoding`, to specify the encoding that Integration Server must use when processing incoming XML files.

If an encoding is not defined in the XML header, Integration Server attempts to process the XML file using the charset encoding of the http or ftp request. If charset encoding is not available in the request header, then Integration Server uses the character encoding specified in the `watt.server.xml.encoding` server configuration parameter. There is no default value for this parameter. You must restart Integration Server for changes to this parameter to take effect.

Note: If you have configured Integration Server to use the character encoding specified in the `watt.server.fileEncoding` parameter to process incoming XML files, after installing this fix or after upgrading to a higher version of Integration Server, ensure that the value of `watt.server.fileEncoding` parameter is set to the same value specified for `watt.server.xml.encoding`.

- PIE-33637 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)  
Integration Server generates an invalid WSDL document if it encounters identically named elements that are declared to be of different types but belonging to the same target namespace. When generating the WSDL document, if Integration Server encounters identically named elements that are declared to be of different types but belonging to the same target namespace, Integration Server cannot correctly represent this in a WSDL document. Instead, when generating the WSDL document, Integration Server replaces the element declaration it creates for the identically named element first with the element declaration that it generates last.  
With this fix, when creating a service first web service descriptor, Integration Server issues a warning message stating that the element declaration it creates for the identically named element first is replaced with the element declaration that it generates last.
- PIE-33762 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)  
The `pub.cache.atomic:putIfAbsent` and `pub.cache.atomic:replaceIfKeyExists` services show the incorrect data type for the `oldValue` output parameter.  
The `pub.cache.atomic:putIfAbsent` and `pub.cache.atomic:replaceIfKeyExists` services display the `oldValue` output parameter as a `String` data type, but should display the data type as `Object`. This issue is resolved.
- PIE-33799 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)  
When running flow services in debug mode, Integration Server cannot retrieve parent service information from a calling child service.  
Integration Server cannot retrieve the parent service information from a calling child service in debug mode.  
This issue is resolved. Integration Server introduces the new public service `pub.flow:getCallingService` that can be invoked from the calling child service and returns the service and package name of the parent service. The `pub.flow:getCallingService` service returns the following output parameters:
  - `svcName` - `String` (optional) Fully qualified namespace name of the parent service.
  - `pkgName` - `String` (optional) Package name of the parent service.If `pub.flow:getCallingService` is invoked from a service that does not have a parent service (for example, if the service is a top level service), Integration Server does not return the output parameters.
- PIE-33938 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)  
Integration Server continues to execute a flow service even after global variable substitution fails. When a flow service expects an input through global variable substitution and if the expected global variable does not exist, Integration Server displays an error message and continues executing the flow service instead of stopping the service execution.  
The issue is resolved. If the global variable that a flow service expects does not exist, Integration Server displays an error message and stops the flow service execution.

- PIE-34080 (IS\_9.0\_SP1\_Core\_Fix8, IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)  
 Adding an HTTP or HTTPS port in the Integration Server Administrator results in a blank Security > Ports screen.  
 When the server configuration parameter `watt.server.http.listRequestVars` is set to "error" and a new HTTP or HTTPS port is added, Integration Server returns a blank Security > Ports screen and writes the following message to the server log:  
 (ISC.0038.2) Duplicate query tokens found in URI: threadPool  
 This issue is resolved.
- PIE-33821 (IS\_9.0\_SP1\_Core\_Fix8)  
 The `watt.server.SOAP.hideEPRHostInFault` server configuration parameter is not available in the Extended Settings page in Integration Server Administrator.  
 This issue is resolved. The `watt.server.SOAP.hideEPRHostInFault` server configuration parameter now appears in the Extended Settings page.
- PIE-32771 (IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix1)  
 JMS provider connection attempts are refused during the processing of messages.  
 When a trigger service uses a transacted JMS connection alias, and that service sends JMS messages using the `pub.jms:send` service to a different transacted connection alias, the sessions on the JMS provider are not closed. As a result, connection attempts are refused because channel and process limits are reached.  
 This issue is resolved.
- PIE-33468 (IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix1)  
 Web service descriptor does not use user-defined prefixes for fault and handler document types.  
 When creating a consumer web service descriptor or a WSDL first provider web service descriptor, the user creating the web service descriptor can specify namespace prefixes to replace the prefixes used in the WSDL document. However, Integration Server was not using the user-defined prefixes for the IS document types generated for fault or handlers messages.  
 This issue is now resolved.
- PIE-33531 (IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix1)  
 After installing a newly generated license file for Terracotta, Integration Server disables editing for BigMemory settings.  
 The issue occurs because of a parsing error in the license file.  
 This issue is resolved.
- PIE-33660 (IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix1)  
 Integration Sever does not acknowledge all of the messages received in a batch by a JMS trigger.  
 When a standard JMS trigger receives and processes a batch of messages from the JMS provider, the JMS trigger should acknowledge the last message received in the batch. This results in acknowledgement of all the messages received in the batch. However, the JMS trigger currently acknowledges the first message received in a batch instead of the last which causes several messages to be unacknowledged.  
 Now, a JMS trigger that performs batch processing acknowledges the last message in the batch.

- PIE-33552 (IS\_9.6\_Core\_Fix3, IS\_9.7\_Core\_Fix2)  
 The pub.client:http service fails with an access denied HTTP response if the url input parameter contains special characters.  
 If the encoded value of the url input parameter of the pub.client:http service contains hexadecimal characters that are greater than 7f, the authorization information for the resource specified in the url parameter is not submitted by the http service. As a result, the pub.client:http service fails with the following error:  
 (ISC.0064.9314) Authorization Required: (ISS.0084.9004) Access Denied  
 This issue is resolved.
- PIE-33498 (IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2) Integration Server generates an invalid WSDL document if it encounters identically named elements that are declared to be of different types but belonging to the same target namespace.  
 When generating a WSDL document, if Integration Server encounters identically named elements that are declared to be of same type and belonging to the same target namespace, Integration Server issues a warning message stating that the element declaration it creates for the identically named element first is replaced with the element declaration that it generates last. Integration Server must do this only in case of identically named elements that are declared to be of different types but belonging to the same target namespace.  
 This issue is resolved. Integration Server now issues a warning message only if the identically named elements are declared to be of different types but belonging to the same target namespace.
- PIE-33539 (IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)  
 Wrong message type identifier assigned to some messages of "0088 SOAP" server log facility. Integration Server assigns I (Info) as the message type identifier, instead of D (Debug), to some messages of "0088 SOAP" server log facility. As a result, there are discrepancies in the list of log messages displayed in the Logs > Server page of the Integration Server Administrator when Integration Server receives SOAP requests.  
 The issue is resolved. The log messages of "0088 SOAP" server log facility now have the correct message type identifier.
- PIE-33764 (IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)  
 Wrong port shown in Mediator WSDL if multiple ports are configured in Integration Server.  
 If a HTTP or HTTPS port is defined in Integration Server's Security > Ports page and added in the selected ports section in Solutions > Mediator > Administration > General page, the non-primary port with the lowest port number should be shown for the virtual service endpoint deployed in Mediator. However, Integration Server randomly chooses a port and makes the port available to the Mediator WSDL.  
 This issue is resolved. The virtual service WSDL in Mediator will now see the non-primary port with the lowest port number if multiple ports are configured for Mediator in Integration Server.
- PIE-33811 (IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)  
 Integration Server becomes unresponsive while processing requests from a JMS provider.  
 In certain circumstances, thread cleanup tasks performed during the processing of JMS messages fail to release the lock on an object. Other server threads that need that object go into a wait state, which eventually causes the server to become unresponsive.

This issue is resolved.

- PIE-33886 (IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)

The `pub.flow:getLastError` service does not return any results when the invoke step of a flow service reaches its timeout threshold.

When a parent flow service (service A) invokes a child flow service (service B) with the Timeout parameter specified at the invoke step, and the child flow service invokes another flow service (service C), and timeout is triggered, `pub.flow:getLastError` in parent flow service (service A) returns no error information.

This issue is resolved. When you invoke the `pub.flow:getLastError` service in the parent flow service (service A), the parent flow service returns the `lastError` output parameter as an `errorType` element with a value of `"com.wm.lang.flow.FlowTimeoutException"`.

- PIE-34051 (IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)

Integration Server Administrator displays the number of completed requests over the lifetime of the Integration Server in the Current column on the Statistics screen.

Integration Server Administrator displays the number of completed requests in two columns in the Requests area of the Statistics screen: Current and Lifetime. The Current column should display the number of requests in the last polling period, and the Lifetime column should display the number of completed requests over the lifetime of the Integration Server. Instead, the Current column displays the number of requests over the lifetime of the Integration Server, and the Lifetime column does not display any value. In addition, Integration Server Administrator does not properly display the Average Time row.

This issue is resolved.

- PIE-34109 (IS\_9.6\_Core\_Fix4, IS\_9.7\_Core\_Fix2)

Integration Server does not honor the `watt.server.control.triggerInputControl.delays` or `watt.server.control.triggerInputControl.delayIncrementInterval` values.

When the values for `watt.server.control.triggerInputControl.delays` or `watt.server.control.triggerInputControl.delayIncrementInterval` are changed, Integration Server saves but does not use the specified values if an exception occurred when parsing the supplied values. Regardless of which parameter value caused the parsing error, Integration Server uses the default values for both parameters. However, there was no log message or other type of notification to inform the user that the default values would be used instead.

Now, Integration Server logs the following message if it cannot parse the values of the `watt.server.control.triggerInputControl.delays` or `watt.server.control.triggerInputControl.delayIncrementInterval` parameters:

```
ISS.0125.0015W
```

The trigger input control parameters,

`watt.server.control.triggerInputControl.delaysIncrementInterval` and

`watt.server.control.triggerInputControl.delays`, were set to their default values because an exception occurred when parsing the supplied values.

Cause

Integration Server could not set the trigger input control configuration parameter

`watt.server.control.triggerInputControl.delaysIncrementInterval` and/or

`watt.server.control.triggerInputControl.delays` to the new value because an exception occurred

when parsing the new value. Integration Server reset both configuration parameters to the default values.

Action

Use a valid value for the `watt.server.control.triggerInputControl.delaysIncrementInterval` or `watt.server.control.triggerInputControl.delays` parameter.

- **PIE-32407 (IS\_9.7\_Core\_Fix2)**  
While using the `pub.schema:validate` service to validate an object, Integration Server considers a string ending with a decimal point to be a valid long data type.  
While validating an object using the `pub.schema:validate` service, Integration Server considers a string ending with a decimal point (for example, `<longType>5.</longType>`) to be a valid long data type.  
This issue is resolved. Integration Server no longer considers a string ending with a decimal point to be a valid long data type.
- **PIE-33458 (IS\_9.7\_Core\_Fix2)**  
Validation of web service request or response fails because of an extraneous `*body` field.  
When processing an inbound web service request or response that has an element that contains whitespace only and the associated field in the IS document types is defined as a document with optional children, Integration Server inserts a `*body` field to contain the whitespace. This is incorrect as Integration Server should ignore the whitespace. The presence of the extraneous `*body` field causes validation to fail because the associated IS document type does not contain a `*body` field.  
This issue is now resolved.
- **PIE-33583 (IS\_9.7\_Core\_Fix2)**  
A thread dump of Integration Server suggests a thread contention issue occurs during the creation of secure outbound connections.  
When Integration Server attempts to create multiple secure outbound connections at the same time, only one connection is created and other threads must wait.  
This issue is resolved.
- **PIE-33990 (IS\_9.7\_Core\_Fix2)**  
An inbound HTTP/S request that includes `access_token` in the query parameters or header fields is rejected and results in an error message in the `security.log` file.  
If an inbound HTTP/S request includes `access_token` in the query parameter or header fields, Integration Server performs OAuth authentication, denies the request, and logs the following message in the `security.log` file:  
SYSTEM AUTHENTICATION Integration Server rejected the request to access this resource. The access token is either invalid or expired.  
To address this issue, Integration Server now includes server parameters to enable or disable OAuth authentication by Integration Server when an inbound HTTP/S request `access_token` in the query parameters or header fields  
`watt.server.auth.oauth.accessToken.useHeaderFields`  
Specifies whether Integration Server performs OAuth authentication when an inbound HTTP/S request includes an `access_token` in the header fields. Specify `true` to perform OAuth

authentication. Specify false to skip OAuth authentication. The default is true.  
For changes to this parameter to take effect, you must restart Integration Server.

watt.server.auth.oauth.accessToken.useQueryParameters

Specifies whether Integration Server performs OAuth authentication when an inbound HTTP/S request includes an access\_token in the query parameter. Specify true to perform OAuth authentication. Specify false to skip OAuth authentication. The default is true.

For changes to this parameter to take effect, you must restart Integration Server.

- PIE-34248 (IS\_9.7\_Core\_Fix2)

While using the extended character sets, Integration Server issues a java.io.UnsupportedEncodingException error.

This issue occurs because the wm-converters.jar file, which is required to support extended character sets, is not present in the Integration Server classpath.

To resolve this issue in Integration Server version 9.5 SP1, do the following:

1. Shut down Integration Server.

2. Using a text editor, navigate to and open the following file:

Software AG\_directory/profiles/configuration/custom\_wrapper.conf

3. Edit the custom\_wrapper.conf file by adding the following jar entry:

wrapper.java.classpath.100=Software AG\_directory\common\lib\wm-converters.jar

Where <Software AG\_Directory> is the installation directory for Software AG products.

4. Save your changes to the custom\_wrapper.conf file and then close the file.

5. Start Integration Server.

To resolve this issue in Integration Server versions 9.6 and 9.7, do the following:

1. Shut down Integration Server.

2. Using a text editor, navigate to and open the following file:

Software AG\_directory/profiles/IS\_instance\_name/configuration/custom\_wrapper.conf

3. Edit the custom\_wrapper.conf file by adding the following jar entry:

wrapper.java.classpath.100=Software AG\_directory\common\lib\wm-converters.jar

Where <Software AG\_Directory> is the installation directory for Software AG products.

4. Save your changes to the custom\_wrapper.conf file and then close the file.

5. Start Integration Server.

- PIE-34323 (IS\_9.7\_Core\_Fix2)

While executing SQL queries, the Integration Server scheduler sometimes leaves the database cursor open, which causes the database cursor to reach its maximum limit.

The issue is now resolved.

- PIE-34330 (IS\_9.7\_Core\_Fix2)

Integration Server returns different results in debug and run modes when an input variable to a MAP step is mapped to an output variable of the same name.

When an input variable to a MAP step is mapped to an output variable of the same name, Integration Server returns different results in debug mode than it does in run mode.

This issue is resolved.

- PIE-34444 ( IS\_9.7\_Core\_Fix2)

The pub.client:http service does not consider the Content-Type headers if the data/args and data/table input parameter value is empty.

If the data/args and data/table input parameter value of the pub.client:http service is not null, but empty, Integration Server uses the "application/x-www-form-urlencoded" content type and ignores the specified Content-Type headers.

The issue is resolved, If the data/args and data/table input parameter value of the pub.client:http service is empty, Integration Server now uses the "application/x-www-form-urlencoded" content type only if no Content-Type is specified as the value of input field /headers/Content-Type.
- PIE-34481 (IS\_9.7\_Core\_Fix2)

Integration Server does not use service output templates for JSON requests.

When Integration Server receives a request containing the header "Accept: application/json" and the invoked service has an output template defined, Integration Server does not use the template to create the output.
- PIE-34482 (IS\_9.7\_Core\_Fix2)

Integration Server throws a NullPointerException followed by a SocketTimeoutException.

If Integration Server sends an outbound HTTP request and the request times out before a response is received, Integration Server may throw the following superfluous NullPointerException before throwing a SocketTimeoutException:

```
java.lang.NullPointerException: null
at com.wm.app.b2b.server.ServerThread.removeListener(ServerThread.java:272)
at com.wm.util.lifecycle.LifecycleManager.unregisterLifecycleListener(LifecycleManager.java:103)
at com.wm.app.b2b.server.HTTPMessageHandler.process(HTTPMessageHandler.java:266)
at com.wm.app.b2b.server.HTTPDispatch.handleRequest(HTTPDispatch.java:173)
```

This issue is now resolved.
- PIE-34503 (IS\_9.7\_Core\_Fix2)

The pub.string:bytesToString does not filter the byte order mark (BOM) characters while converting a byte array to string.

This issue is now resolved. This fix introduces a new optional input parameter, ignoreBOMChars, to the pub.string:bytesToString service.

If ignoreBOMChars is set to true and the value of the encoding input parameter is set to UTF-8, UTF-16, or UTF-32, Integration Server will remove the byte order mark (BOM) characters before converting the input byte array to string, if the byte array contains BOM characters.

If ignoreBOMChars is set to false and the value of the encoding input parameter is set to UTF-8, UTF-16, or UTF-32, Integration Server will include the byte order mark (BOM) characters while converting the input byte array to string, if the byte array contains BOM characters. The default is false.
- PIE-34661 (IS\_9.7\_Core\_Fix2)

Integration Server connects to an SFTP server directly while retrieving the public key of an SFTP server, even if the connection between Integration Server and the SFTP server is through a proxy.

While defining an SFTP server alias, upon clicking the Get Host Key button to retrieve the public

key of the SFTP server, Integration Server connects to the SFTP server directly even if the connection between Integration Server and the SFTP server is through a proxy.

The issue is now resolved. If the connection between Integration Server and an SFTP server is through a proxy, Integration Server connects to the SFTP server through the proxy while retrieving the public key of the SFTP server.

- PIE-34662 (IS\_9.7\_Core\_Fix2)

When creating an IS schema from an XML document that does not reference a DTD, Integration Server throws a `NullPointerException`.

An IS schema can be created from an XML document only if the XML document references an existing DTD or contains a DTD inline. However, when creating an IS schema from an XML document that does not reference or contain an existing DTD, Integration Server throws a `NullPointerException` instead of a `ServiceError`.

This issue is now resolved.

- PIE-31363

Integration Server Administrator displays facility code 0090 as "Unknown".

On the View Server Logger Details Screen, Integration Server Administrator displays the facility name for code 0090 as "Unknown". The facility name for 0090 should be "pub Flow Services".

This issue is resolved.

- PIE-33148

When creating a WSDL first provider web service descriptor, the Addressing action property in the WSDL does not show up correctly in the web service descriptor.

Upon creating a WSDL first provider web service descriptor from a WSDL document containing the Addressing action property in the `prefix:namespace` format, Integration Server does not include the prefix in the Addressing action property of the newly created WSDL first provider web service descriptor.

The issue is now resolved. The same Addressing action property that is in the WSDL is included in the web service descriptor created from the WSDL.

- PIE-34287

Integration Server does not recycle the `stats.log` file at the correct time.

By default, Integration Server should recycle the `stats.log` file daily at midnight. However, the first time to recycle the `stats.log` file was incorrect. This caused the file to be recycled daily but at the wrong time.

This issue is now resolved. Integration Server now recycles the `stats.log` file daily at midnight.

- PIE-34509

After setting the server configuration property `watt.core.xml.expandGeneralEntities` to `false`, Integration Server does not encode the apostrophe properly.

This issue is now resolved.

- PIE-34627

Integration Server displays an error message when editing a JNDI provider alias if Integration Server Administrator is accessed via Mozilla Firefox or Google Chrome.

Integration Server displays the following error message when attempting to edit any field of a JNDI

provider alias using Integration Server Administrator: JNDI Alias Name must be specified. This issue occurs only if Integration Server Administrator is accessed via Mozilla Firefox or Google Chrome.

The issue is now resolved.

- PIE-34669  
When Integration Server is installed as a service, the service is not unregistered when it is uninstalled.  
While uninstalling Integration Server that is installed as a service on a Windows operating system, Integration Server does not uninstall the registered service.  
This issue is resolved.
- PIE-34898  
A scheduled task configured to run on any one of the Integration Servers connected to the same database does not run as expected and fails with an error.  
When a scheduled task is configured to run on any of the Integration Servers that are part of a non-clustered group of Integration Servers in which the ISInternal functional alias on each server points to the same database, the scheduled task fails with the following error:  
Could not complete last run  
This issue is resolved.
- PIE-34899  
The pub.client.ftp:get service does not consider files of 0 KB size to be large files even if the largefilethreshold input parameter is set to 0.  
If the largefilethreshold input parameter of the pub.client.ftp:get service is set to 0, Integration Server must consider all files to be large files. The output parameter islargefile must be true and the file content must be returned in the output parameter contentstream as a java.io.InputStream object. However, the pub.client.ftp:get service does not behave as expected. The pub.client.ftp:get service does not consider files of 0 KB size to be large files even if the largefilethreshold input parameter is set to 0. The service returns the islargefile parameter as false and the file content is returned in the output parameter content.  
This issue is resolved. The pub.client.ftp:get service now considers files of 0 KB size to be large files if the largefilethreshold input parameter is set to 0.
- PIE-35009  
Integration Server appears to become unresponsive because of blocked client requests. An internal component in Integration Server fails to release a lock when it should. Client threads wait indefinitely to acquire the lock, eventually causing requests to block. As result, Integration Server appears to be unresponsive.  
This issue has been resolved.
- PIE-35012  
At start up, Integration Server resets the persistence strategy of a cache to none.  
When Integration Server starts, it resets the default persistence strategy for a cache to “none”. Integration Server should change the default persistence strategy to “none” only when TerracottaConfiguration is set to “clustered”.

This issue is resolved.

- **PIE-35059**

Integration Server does not display an appropriate error message when an FTP client makes an active connection to the Integration Server FTP port, if there is a port in Integration Server with port number that is one less than the FTP port.

If the FTP port configured in Integration Server is running in active mode and if there is a port in Integration Server with port number that is one less than the FTP port, when the FTP client makes an active connection to the FTP port configured in Integration Server, the connection fails with a `NullPointerException` message.

The issue is resolved. Integration Server now issues the following error message to the FTP client: `Could not create data port <port number>. Try passive mode."`
- **PIE-35143**

After applying `IS_8.2_SP2_Core_Fix13` or higher, deserialization of SOAP messages to `IData` does not work as expected.

After applying `IS_8.2_SP2_Core_Fix13` or higher, while deserializing SOAP messages to `IData`, Integration Server erroneously adds a default namespace prefix of `"xmlns"` to those fields that are contained in an implicit namespace declaration. This results in broken endpoint service field mappings. This issue occurs only when the `Pre-8.2 compatibility mode property` of the web service descriptor is set to `true`.

This issue is now resolved.
- **PIE-35151**

Integration Server logs an `SQLException` during startup.

When Integration Server starts, it uses the schema name to:

  - Access the audit logging database to determine the length of the `WMSERVICECUSTOMFLDS.STRINGVALUE` and `WMSERVICEACTIVITYLOG.FULLMESSAGE` columns. Integration Server uses the lengths to automatically adjust the size of the values inserted into these columns.
  - Retrieve the database metadata.

By default, Integration Server uses the User ID specified in the `ISCoreAudit` functional alias as the schema name for the audit logging database. You can override this value by specifying a value for the `watt.server.audit.schemaName` server configuration parameter. However, if the User ID does not match the schema name specified in `watt.server.audit.schemaName`, Integration Server logs a `SQLException` to the server log.

This issue is resolved. Integration Server no longer uses the User ID of the `ISCoreAudit` functional alias as the default schema name. Now, Integration Server requires that you specify a value for the `watt.server.audit.schemaName` parameter to retrieve the database metadata and resize the audit logging values in the `WMSERVICECUSTOMFLDS.STRINGVALUE` and `WMSERVICEACTIVITYLOG.FULLMESSAGE` columns. If `watt.server.audit.schemaName` is not set, Integration Server does not retrieve the metadata and assumes the lengths of the `WMSERVICECUSTOMFLDS.STRINGVALUE` and `WMSERVICEACTIVITYLOG.FULLMESSAGE` columns are 512 and 1024, respectively.

Note: Some databases are case-sensitive. When specifying the value for `watt.server.audit.schemaName`, you should match the case of the schema name with the schema

name required by the database.

- **PIE-32619**  
After fix IS\_8.2\_SP2\_Core\_Fix12 is installed, the SOAP response for a migrated web service contains a document instead of a document list.  
Before the fix is installed, data elements are formatted in the SOAP response in a document list, as expected. After the fix is installed, these data elements are formatted as separate documents. This change in output structure makes it difficult to map the documents in the flow.  
This issue is resolved. The SOAP response is formatted in the same way it was before fix IS\_8.2\_SP2\_Core\_Fix12 was installed.
- **PIE-32737**  
Deployer fails when deploying a package that contains a new trigger that does not exist in the earlier version of the package on the target Integration Server.  
When deploying a package that contains a trigger that does not exist in the same package on the target Integration Server, Deployer fails because the target Integration Server attempts to suspend the trigger that does not exist. Deployment might fail with one of the following messages:  
(ISS.0098.9067) Trigger not found for triggerName: "triggerName"  
(ISS.0098.9074) Unable to suspend document retrieval for Trigger "triggerName"  
Now, when a package containing triggers is deployed to a target Integration Server, the target Integration Server suspends a trigger only after first verifying that the trigger exists on the target Integration Server.
- **PIE-32873**  
It takes a long time for Integration Server to stop all JMS triggers once the triggers are disabled. All the JMS triggers on Integration Server can be disabled at the same time when Integration Server is shut down or when Integration Server Administrator is used to disable all JMS triggers. Once disabled, all of the JMS triggers stop receiving messages immediately. However, Integration Server closes the JMS Session and MessageConsumer objects sequentially. Some JMS providers, including WebSphere MQ, may take a second or two to close the objects for each JMS trigger. When many JMS triggers are disabled at once, closing the JMS Session and MessageConsumer objects can take a significant amount of time.  
Now, Integration Server stops closes JMS Session and MessageConsumer objects simultaneously instead of sequentially.
- **PIE-33279**  
Option to control how Integration Server decodes duplicates of nested elements in an element of type anyType in a SOAP request.  
If the input signature of an IS service exposed as a web service contains a document that has a child variable of type object, the object is represented as an element of type anyType. When decoding a SOAP request for the service, Integration Server places duplicate elements in line in the resulting IData. However, some users want Integration Server to create an array for the duplicate elements in the resulting IData.  
To accommodate this, Integration Server now includes a server configuration parameter that you can use to specify how Integration Server decodes duplicate elements nested in an anyType element.

watt.server.xml.xmlNodeToDocument.makeArrayforWS

Specifies how Integration Server decodes duplicate elements contained in an anyType Element.

- Set watt.server.xml.xmlNodeToDocument.makeArrayforWS to true if you want Integration Server to create an array for duplicate elements contained in an element of type anyType.

- Set this parameter to false if you want Integration Server to leave duplicate elements as separate, repeated elements in the element defined to be of type anyType. When set to false, Integration Server does not create an array for elements that appear more than once in the element defined to be of type anyType.

The default is false.

- PIE-33318  
Integration Server displays the wrong message in the server log.  
Integration Server logs the following message to the server log:  
(ISC.0088.9443W) Message not found for messageKey 88.9443  
This issue is resolved.
- PIE-33326  
After IS\_8.2\_SP2\_Core\_Fix14 is installed, Integration Server issues a NullPointerException while loading some custom services.  
This issue is resolved.
- PIE-33553  
Logging off the Integration Server Administrator fails with an error.  
Attempting to log off the Integration Server Administrator fails with the following error message:  
Logoff Failed.  
This issue is resolved. Upon clicking Log Off, Integration Server terminates the session and displays a message confirming that the session is terminated.
- PIE-33883  
Integration Server does not include the initial SOAP request message in the SOAP fault that is generated when an error occurs upon invoking a web service.  
Upon invoking a web service, in case of an error, the SOAP fault that Integration Server generates does not include the initial SOAP request even if the pub.soap.handler:getInitialSOAPRequest service is used to retrieve the initial SOAP request message in the outbound callback service.  
This issue is resolved. Integration Server now includes the initial SOAP request message in the SOAP fault that is generated when an error occurs upon invoking a web service.
- PIE-33895  
Enhancements to Integration Server to provide NTLM (Windows NT LAN Manager) authentication support to allow clients to access resources in web servers that support NTLM authentication.  
Prior to this fix, Integration Server could use Integrated Windows Authentication as a means of authenticating its identity while establishing connections between Integration Server and web servers on an intranet only if the Integration Server was running on a Windows platform. If Integration Server is running as an NT service, it uses the local system rights for authentication when responding to an Integrated Windows Authentication request. If you log on as a user, Integration Server uses the credentials associated with that session when responding to an

Integrated Windows Authentication request.

After installing this fix, when Integration Server is acting as a client to access resources in web servers, the authentication credentials must be provided by the user explicitly. You can specify NTLM as the authentication type while configuring the transport properties for web service endpoints to authenticate clients who are already logged into a domain using their existing credentials.

In addition, you can specify NTLM as the value for the `auth\` type parameter of `pub.client:http` or `pub.client:soapClient` services and web service connector. If you specify NTLM as the authentication type, you must specify the user name that the service will submit when requesting a protected resource in the following format: `domain_name/user_name`.

- **PIE-34213**  
Enabling a Salesforce.com Adapter connection results in a `javax.net.ssl.SSLHandshakeException`. If the Salesforce.com Adapter is installed on an Integration Server for which the WmCloud package is enabled, enabling a Salesforce.com Adapter connection results in the following exception:  
`javax.net.ssl.SSLHandshakeException: sun.security.validator.ValidatorException: PKIX path building failed: sun.security.provider.certpath.SunCertPathBuilderException: unable to find valid certification path to requested target`  
This issue is now resolved.
- **PIE-34311**  
The Polling Notifications page in localized versions of Integration Server Administrator displays an Adapter Runtime error if there are no scheduled tasks for polling notifications. When there are no scheduled tasks associated with adapter polling notifications, localized versions of Integration Server return a `SQLException` that cannot be verified by the Adapter Runtime causing the following message to be displayed in the Polling Notifications page:  
(ART.116.3020) Adapter Runtime (Notification): Unable to get list of notification types supported by node JDBCAdapter. `java.sql.SQLException: Invalid task ID`  
Now, when there are no scheduled tasks for polling notifications, a localized Integration Server returns a `SQLException` with a predefined error code that can be verified by the Adapter Runtime.
- **PIE-34373**  
Integration Server throws a `java.lang.NoClassDefFoundError` when a user defined in the central user management attempts to log in. A jar file required for central user management, specifically `jsf-api.jar`, is not present in the Integration Server classpath. To resolve this issue in Integration Server versions prior to 9.5 SP1 do the following:
  1. Shut down Integration Server.
  2. Using a text editor, navigate to and open the following file:  
`IntegrationServer_InstallDirectory/bin/ini.cnf`
  3. Edit the `ini.cnf` file by adding the following jar entry to the `application.classpath` parameter:  
`<Software AG_Directory>/common/lib/ext/jsf-api.jar`  
Where `<Software AG_Directory>` is the installation directory for Software AG products.  
Note: Make sure to use the appropriate directory separator for the operating system.
  4. Save your changes to the `ini.cnf` file and then close the file.
  5. Start Integration Server.

Note: For versions of Integration Server 9.5 SP1 and later, the Software AG Update Manager will handle updates to the ini.cnf.

- PIE-35015  
Updating webMethods Cloud account settings from Integration Server Administrator fails. Using Integration Server Administrator to update webMethods Cloud account settings results in the following error when changes to the account are saved:  
The following error occurred while saving account settings :  
com.wm.app.b2b.server.ServiceException:  
iaik.security.ssl.SSLException: Server certificate rejected by ChainVerifier. See the error log for the full stack trace.  
This issue is now resolved.
- PIEAR-625 (WAR\_9.5\_SP1\_Fix5)  
Exceptions thrown by adapter services are logged multiple times in the error log. The error log contains multiple entries of an exception thrown by an adapter service because the exception is logged by Adapter Runtime, Adapter Development Kit, and Integration Server.  
This issue is resolved. The following two server configuration parameters are introduced to prevent error logging by Adapter Runtime and Adapter Development Kit for exceptions in adapter services:  
- watt.art.adapterService.disable.errorlogging  
- watt.adk.adapterService.disable.errorlogging  
The default value of each parameter is false.  
Add the new server configuration parameters to Extended Settings in Integration Server Administrator and set the parameters to true.

## **Release 9.7**

- PIE-31090 (IS\_8.0\_SP1\_Core\_Fix30, IS\_8.2\_SP1\_Core\_Fix13, IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix2)  
Outbound HTTP/HTTPS requests made from Integration Server intermittently fail. Outbound requests are failing while retrying failed requests. When an outbound HTTP/HTTPS request made from an Integration Server fails, Integration Server attempts to retry the request one time. The Integration Server usually uses a new connection to retry requests, but under heavy load situations the retry attempt does not always use a new connection, which causes the retry attempt to fail.  
This issue is resolved. Now, Integration Server forces retry attempts to use a new connection.
- PIE-28885 (IS\_8.0\_SP1\_Core\_Fix30, IS\_9.0\_SP1\_Core\_Fix4, IS\_9.5\_SP1\_Core\_Fix2)  
The pub.xml:documentToXMLString service ends with a ClassCastException or the xmldata output parameter is null.  
If the pipeline includes a variable named outputStream, the pub.xml:documentToXMLString service ends with a ClassCastException or with a null value for the xmldata output parameter.  
This issue is now resolved.

- PIE-31496 (IS\_8.0\_SP1\_Core\_Fix30, IS\_8.2\_SP1\_Core\_Fix13, IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix2)  
 Outbound HTTP/HTTPS requests made from Integration Server receive responses of HTTP 200 (success) even if the server receiving the request closes the connection prematurely.  
 When Integration Server makes an outbound call to another server, it is acting as a client. As a client, Integration Server should wait for a response from the server receiving the request. In some cases, the server receiving the request prematurely closes the connection, and the Integration Server client incorrectly returns an HTTP 200 (success).  
 This issue is resolved. Integration Server now issues a "Connection was closed during read" error instead of giving HTTP 200 when the server receiving the request closes prematurely.
- PIE-29966 (IS\_8.0\_SP1\_Core\_Fix30, IS\_9.5\_SP1\_Core\_Fix2)  
 When acting as an SSL client, Integration Server is too strict in enforcing SSL certificate chain ordering and linking.  
 When Integration Server performs an SSL handshake with another server, the server sends its certificates. While validating the server's certificate chain, Integration Server expects the server's certificate to be in the first position and its signer's certificate in the next position of the chain. Some servers improperly include either incorrect or misordered certificates. These certificates are not technically allowed, but browsers and other SSL clients typically just ignore them and proceed to the next in the chain. Integration Server was rejecting such chains as invalid.  
 This issue is resolved. Now, Integration Server validates certificates as long as the issuer's certificate in the chain can be validated to a trusted certificate on Integration Server.
- PIE-30493 (IS\_8.2\_SP1\_Core\_Fix13, IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix2)  
 WSDL generated for a provider web service descriptor is invalid because it contains references to missing elements.  
 If a provider web service descriptor uses an IS document type generated from an XML Schema definition that did not have a targetNamespace, Integration Server does not include the elements from the document type in the schema portion of the WSDL document for the descriptor. The resulting WSDL document is invalid if it contains references to the missing elements.  
 Now, if a provider web service descriptor uses an IS document type generated from an XML Schema definition with no targetNamespaces, Integration Server includes elements for the IS document type in the schema portion of the WSDL document generated for the provider web service descriptor.
- PIE-30700 (IS\_8.2\_SP1\_Core\_Fix13, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix1)  
 Loading standard HTTP status codes for pub.flow:setResponseCode is not thread-safe.  
 This issue is now resolved.
- PIE-30123 (IS\_8.2\_SP2\_Core\_Fix12, IS\_9.5\_SP1\_Core\_Fix3)  
 Integration Server faces issues while handling multiple WWW-Authenticate attributes in HTTP Headers.  
 When a web service client executes a Mediator service, multiple WWW-Authenticate headers are added to the Mediator service. These headers have to be sent back to the client. However, Integration Server sends only one WWW-Authenticate header back to client and this results in

issues.

This issue is resolved. Integration Server now sends multiple WWW-Authenticate headers back to the web service client.

- PIE-29175 (IS\_9.0\_SP1\_Core\_Fix4, IS\_9.5\_SP1\_Core\_Fix2)  
Integration Server generates a WSDL document that does not pass WS-I compliance tests. When generating a WSDL document for a provider web service descriptor, the resulting WSDL document does not pass WS-I compliance tests. This can occur when a field that makes use of the prefix “xml” or the XML namespace is used in the service signature or in an IS document type used with the web service descriptor. The presence of the xml prefix or XML namespaces causes Integration Server to include an `xsd:import` element for the XML namespace. However, the `xsd:import` element does not contain the `schemaLocation` attribute. Now, when generating a WSDL document, whenever the `xsd:import` statement is for the XML namespace, Integration Server includes the `schemaLocation` attribute in the `xsd:import` element.
- PIE-29435 (IS\_9.0\_SP1\_Core\_Fix4, IS\_9.5\_SP1\_Core\_Fix2)  
The Integration Server diagnostic utility returns incorrect status for complex scheduled tasks. The Integration Server diagnostic utility, which an administrator can run by invoking the `wm.server.admin:getDiagnosticData` service, returns the `Scheduler.txt` file as part of its output. The statuses for complex scheduled tasks shown in this file are not consistent with the statuses shown on the Scheduler screen of Integration Server Administrator. This issue is resolved. The `Scheduler.txt` file now contains correct statuses for complex scheduled tasks.
- PIE-30079 (IS\_9.0\_SP1\_Core\_Fix4, IS\_9.5\_SP1\_Core\_Fix2)  
Document type created from XML Schema definition is missing fields. An IS document type generated from an XML Schema definition may be missing fields if the XML Schema definition had a target namespace and the schema contained a reference to an element that is not namespace qualified. The resulting IS document type might not contain a field that corresponds to the element that is not namespace qualified. This situation might also occur for IS document types that Integration Server creates as part of creating a web service descriptor from a WSDL document. This issues is now resolved.
- PIE-30150 (IS\_9.0\_SP1\_Core\_Fix4, IS\_9.5\_SP1\_Core\_Fix2)  
The `pub.sync:wait` service returns immediately instead of waiting. If the `pub.sync:notify` service executes and the notification times out (that is the value specified by `watt.server.sync.timeout` elapses) a subsequent invocation of `pub.sync:wait` executes to completion immediately if the `pub.sync:wait` and `pub.sync:notify` services specify the same key value. The `pub.sync:wait` service should wait until a new `pub.sync:notify` with the same key is issued or until the waiting time specified in the service elapses. This issue is now resolved.
- PIE-30172 (IS\_9.0\_SP1\_Core\_Fix4, IS\_9.5\_SP1\_Core\_Fix2)  
The `pub.mime:createMimeData` service prints unnecessary exceptions to the Integration Server console.

This issue is now resolved.

- PIE-30283 (IS\_9.0\_SP1\_Core\_Fix4, IS\_9.5\_SP1\_Core\_Fix2)  
Specifying an action to perform when an overdue scheduled task is more than 35000 minutes late results in a "numeric overflow" error.  
On the Create a Scheduled Task page in Integration Server Administrator, in the If the Task is Overdue section, the maximum number of minutes that the "if more than xxx minutes late" field can accept is 35000. However, Integration Server incorrectly accepts numbers larger than 35000, which results in a "numeric overflow" error that requires manual intervention in the database to correct the error.  
This issue is resolved. Integration Server now validates entries in the "if more than xxx minutes" field to ensure that a number larger than 35000 is not entered.
- PIE-28612 (IS\_9.0\_SP1\_Core\_Fix4, IS\_9.5\_SP1\_Core\_Fix3)  
Performance of `pub.xslt.Transformations:transformSerialXML` in a multithreaded scenario is slower in versions 8.2 and later.  
When compared to versions prior to 8.2, performance of the `pub.xslt.Transformations:transformSerialXML` service is slower in a multithreaded scenario. Performance decreases because in version 8.2 a synchronization point was added before Integration Server transforms the XML. This synchronization point causes one thread to perform the XML transformation while blocking the rest of the threads.  
This issue is now resolved.
- PIE-30500 (IS\_9.0\_SP1\_Core\_Fix4, IS\_9.5\_SP1\_Core\_Fix4, IS\_9.6\_Core\_Fix2)  
Changes to address security vulnerabilities found in Integration Server Administrator.  
This fix resolves several cross-site scripting (XSS) issues found during internal security testing.
- PIE-30603 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix2, IS\_9.6\_Core\_Fix2)  
When a pipeline variable is defined in a SEQUENCE step within a BRANCH step, the variable does not appear in the pipeline for subsequent steps that use that variable.  
In the flow implementation for a branch step, a pipeline variable that was defined in a SEQUENCE step was ignored in subsequent child steps within the BRANCH step. As a result, the variable did not appear in the pipeline for the subsequent child steps.  
This issue is resolved. Defined pipeline variables are now visible in the pipeline for all subsequent steps within the BRANCH step in which they were defined.
- PIE-30114 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3)  
Enhancements to Integration Server to provide flexibility to add custom processing logic to SOAP requests in case of consumer web service descriptors and to SOAP responses in case of provider web service descriptors.  
To do this, this fix introduces outbound callback services, which are user-specified IS services that you can use to insert custom processing logic into a SOAP request message. Integration Server defines the outbound callback service signature in the `pub.soap.utils.callbackServiceSpec` specification. When you specify an IS service as an outbound callback service, Integration Server creates the message context and passes it to the outbound callback service. The message context of the outbound callback service contains the properties for the outbound SOAP message and

provides access to the SOAP message. You can use the various services that are located in the `pub.soap.handler` folder in the `WmPublic` package to manipulate the message within the IS service that is used as the outbound callback service. To specify outbound callback services for outbound SOAP messages, you use `Outbound Callback Service` web service descriptor property.

This fix also introduces a new built-in service, `pub.soap.handler:getInitialSOAPRequest`. This service gets the initial SOAP request message from a given message context. You can use the initial SOAP request message retrieved by this service in the outbound callback service.

- **PIE-30642 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3)**  
If proxy server aliases are configured and Integration Server makes an outbound HTTP call using the `pub.client:http` service, Integration Server does not honor the `connectTimeout` parameter of the `pub.client:http` service.  
This issue is resolved. Integration Server now honors the time specified for the `connectTimeout` parameter when making an outbound HTTP call through a proxy server alias. If a value is not specified for the `connectTimeout` parameter, Integration Server uses the value specified for the `watt.net.timeout` server configuration parameter.
- **PIE-30630 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix1)**  
When Integration Server is clustered, Integration Server writes stateless sessions to the distributed session cache, causing unnecessary consumption of resources on the Terracotta Server Array. Integration Server creates stateless sessions to execute stateless services. Integration Server should discard these sessions as soon as the top-level service completes and should not write them to the distributed cache.  
This issue is resolved. Now, after the top-level service completes, Integration Server writes stateful sessions to the distributed cache and discards stateless sessions.
- **PIE-31142 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix1)**  
Integration Server does not parse the encoding attribute correctly if there are whitespace characters before or after the equals sign (=).  
If the prolog in an XML document contains one or more whitespace characters before or after the equals sign (=) in the encoding attribute, Integration Server did not parse the contents of the encoding attribute correctly.  
This issue is now resolved.
- **PIE-31397 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix1)**  
Attempts by external client applications to connect to an Integration Server using `TContext` fail with an exception.  
Attempts by external client applications to establish a connection with Integration Server via the guaranteed-delivery facility using the `connect()` method of the `TContext` class fail with the following exception:  
"Guaranteed Delivery Disabled - Please correct error and reinitialize."  
This issue is now resolved.
- **PIE-29757 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix2)**  
If a document is moved to a different location within the same package, and the document is referenced in a flow service that is being deployed to another Integration Server, unresolved

dependencies occur.

When a document used in the service signature of a flow service is moved from one location to another within the same package in Software AG Designer, the flow.xml file of that flow service was not updated to reflect the document's new location. As a result, webMethods Deployer considered the document as a missing asset and identified the document as an unresolved dependency.

This issue is resolved.

- PIE-30010 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix2)  
In certain scenarios, decoding of SOAP messages fails with a 'Dimension mismatch, List expected' error.  
If a web service descriptor is created using strict or lax content model compliance and if the generated IS document type contains a mix of attributes and child documents, the child documents are of type array. As a result of this, decoding of SOAP messages fails with the following error: 'Dimension mismatch, List expected'  
This issue is now resolved.
- PIE-30796 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix2)The debug message that Integration Server logs in the server log when hostname verification fails does not contain sufficient information.  
This issue is resolved. The debug message now contains sufficient information.
- PIE-30831 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix2)  
Installation of IS\_8.2\_SP1\_Core\_Fix11 causes mapping steps in flow services to fail.  
After fix IS\_8.2\_SP1\_Core\_Fix11 is installed, cached services that use the MBoolean class as input create multiple cache entries for the same input instead of creating just one cache entry. As a result, the MAP steps of flow services that call those cached services fail.  
This issue is resolved.
- PIE-31093 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix2)  
In case of web services, Integration Server does not keep the undeclared namespaces in the resulting document (IData), when the endpoint service is invoked.  
If an XML element that is part of a SOAP Message has undeclared namespace elements, Integration Server does not keep the undeclared namespaces in the resulting document (IData), when the endpoint service is invoked.  
This issue is resolved. The generated IData now includes the undeclared namespace definitions.  
Note: In case of web services, the undeclared namespace functionality will be available only if the datatype of the document is of type 'Object'.
- PIE-31108 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix2)  
When attempts are made to check unlocked elements out of Subversion by way of the Version Control System (VCS) Integration feature, the attempts fail with a message that the elements are already locked.  
When the VCS Integration feature is used with Subversion, some elements remain in a locked and modified state after they are checked in. In addition, these elements are shown to be unlocked in Software AG Designer. This occurs when packages are created in Designer because Designer does

not create the necessary /config directory associated with the package. As a result, the /config directory does not get checked in to the Subversion repository when the package is checked in, which leads to asset inconsistencies between the Integration Server file system and the Subversion repository.

This issue is resolved. Integration Server now creates the needed /config directory when a package is created in Designer.

- PIE-31328 (IS\_9.0\_SP1\_Core\_Fix6, IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix2)

The Service Usage screen in the Integration Server Administrator takes a long time to load in Internet Explorer if there are a large number of listed services.

This issue is now resolved.

- PIE-29888 (IS\_9.5\_SP1\_Core\_Fix2)

Deployer deploys packages even when service threads are still running on the target Integration Server.

Deployer should only deploy packages when none of the package's services are running on the target Integration Server. Deployer does not check to see if any of the packages services are executing on the Integration Server before performing the upgrade of the package. If a package is deployed while its services are running on the target Integration Server, the application's data can become corrupted.

To control whether Deployer deploys packages when service threads are running on the target Integration Server, Deployer has been modified to accept the following new global values for Integration Server package assets and composites:

- disallowActivePackage specifies whether you want to prevent deployment if the package being deployed is in an active state on the target. If set to False (the default), Deployer deploys the package even if the package is active on the target Integration Server.

- packageExecutionCheck specifies the length of time (in milliseconds) Deployer should wait if a service contained in the package being deployed is being executed on the target Integration Server. If this time expires and a service is still being executed, Deployer terminates the deployment job. The default value for this parameter is 0, which disables this feature.

- PIE-30151 (IS\_9.5\_SP1\_Core\_Fix2)

LDAP bind operations are logged twice for a single LDAP add, bind, delete, modify, or search operation.

Integration Server logs two LDAP bind operation entries in the server log each time one of the following LDAP operations is executed:

pub.client.ldap:add

pub.client.ldap:search

pub.client.ldap:modify

pub.client.ldap:bind

pub.client.ldap.delete

This issue is resolved. Integration Server now logs only one bind operation for add, bind, delete, modify, and search operations.

- PIE-30285 (IS\_9.5\_SP1\_Core\_Fix2) Changes to Integration Server because of updates to the wss4j.jar provided by Software AG Web Services Stack.

Integration Server makes use of the wss4j.jar provided by the Web Services Stack for various kinds of web services processing. A recent update to the wss4j.jar by Web Services Stack requires changes to Integration Server. Without these changes, web service descriptors that run in compatibility mode (the Pre-8.2 compatibility mode property is set to true) and use the Integration Server WS-Security facility may end with a Java RuntimeException.

- PIE-30611 (IS\_9.5\_SP1\_Core\_Fix2)  
When attaching a ws-policy to the Fault binding operation type, the policy is not properly reflected in the <wsdl:fault> element of the WSDL.  
When attaching a ws-policy to the Fault binding operation type, the policy is not properly reflected in the <wsdl:fault> element of the wsdl. Also when a ws-policy is attached to any combination of the Input, Output, and Fault binding operation types, the policy is not being enforced during runtime.  
The issue is resolved.
- PIE-31462 (IS\_9.5\_SP1\_Core\_Fix3, IS\_9.5\_SP1\_Core\_Fix4, IS\_9.6\_Core\_Fix1, IS\_9.6\_Core\_Fix2)  
Changes to address security vulnerabilities found in Integration Server Administrator.  
This fix resolves multiple cross-site scripting vulnerabilities found in different pages of Integration Server Administrator.
- PIE-29895 (IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix1)  
In a clustered environment, if an Integration Server on which a scheduled task is running is stopped, scheduled tasks that are running on other servers in the cluster stop responding.  
In a clustered environment, if an Integration Server on which a scheduled task is running is stopped, the status of the scheduled task is still shown as running and even tasks that are running on other servers in the cluster stop responding.  
This issue is resolved. Now, if an Integration Server on which a scheduled task is running is stopped, scheduled tasks that are running on other Integration Servers in the cluster are not affected.
- PIE-30612 (IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix1)  
When you simulate the deployment of a package to a target server on which a higher version of the package already exists, the package deployment succeeds.  
This issue is resolved. Integration Server issues an error during the simulation indicating that the version of the package on the target Integration Server is higher than that of the one being deployed.
- PIE-31056 (IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix1)  
Integration Server does not retain configuration parameters for JMS connection aliases after deployment.  
This issue is now resolved.
- PIE-31114 (IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix1) In Google Chrome, when the Show running services on top check box is selected in the Service Usage screen in Integration Server Administrator, Integration Server does not display the currently running services at the top of the screen.  
When Integration Server Administrator is accessed via Google Chrome, Integration Server does not

display all the currently running services together at the top of the screen, when the Show running services on top check box is selected.

This issue is now resolved.

- PIE-31140 (IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix1)  
Integration Server logs an access denied error in the server log when executing the pub.remote:invoke service even if CSRF guard is disabled.  
When the pub.remote:invoke service is executed by a user who is a member of a group that is assigned to the Anonymous ACL, Integration Server logs an "Access Denied" error in the server log. This issue occurs even if CSRF guard is disabled in Integration Server.  
The issue is now resolved.
- PIE-31256 (IS\_9.5\_SP1\_Core\_Fix3, IS\_9.6\_Core\_Fix1)  
Updates to audit logging.  
The following updates have been made to audit logging:
  - When the AuditConfig.xml file is created, the logging mode is now set to "Synchronous" by default. In previous versions, the default logging mode was "Asynchronous". In most cases, synchronous audit logging is faster.
  - Integration Server now writes a warning message to the server log when the AuditConfig.xml file is missing when the server starts. The message is as follows: "The AuditConfig.xml file was not found and is being created. The audit logging system is using default settings."
- PIE-30876 (IS\_9.5\_SP1\_Core\_Fix4)  
webMethods Mediator does not supply the correct SOAP action when it passes a web service request to Integration Server.  
When passing a SOAP over JMS web service request to Integration Server, Mediator does not pass on the SOAP action set in the request.  
This issue is resolved.
- PIE-20043  
When Integration Server acts as a passive mode FTP client, Integration Server cannot parse the response from the FTP server if the response contains two closing parentheses.  
When Integration Server acts as a passive mode FTP client it cannot parse a response from the FTP server such as the following because the response contains two closing parentheses:  
227 Entering Passive Mode (148,143,12,26,131,81))  
Integration Server can now parse responses with two closing parentheses properly.
- PIE-27241 Integration Server takes a long time to open the Support > webMethods Packages and Updates page.  
When you are logged on as a central user and click the View link on the About page, Integration Server takes a long time to open the Support > webMethods Packages and Updates page.  
This fix reduces the time it takes to load this page.

- PIE-28066

File system-based JNDI provider aliases cause errors when SonicMQ is used as the JMS provider. When using SonicMQ as a JMS provider, attempts to enable a JMS connection that uses a file system-based JNDI provider alias result in the following exception:  
 [ISS.0134.9025] Unable to retrieve JMS Connection Factory for JMS alias.

This issue occurs because SonicMQ stores object definitions in serializable Java object (.sjo) files, unlike other JMS providers that store configuration details in .bindings files.

This issue is resolved. When SonicMQ is used as the JMS provider, Integration Server now deserializes the .sjo files instead of processing .bindings files. When you create a JMS connection alias for SonicMQ, make sure that the Connection Factory Lookup Name includes the connection factory file extension ".sjo".
- PIE-29007

The pub.xml:xmlNodeToDocument service does not preserve the "xsi" namespace. The pub.xml:xmlNodeToDocument contains an input parameter named preserveUndeclaredNS that can be used to preserve undeclared namespaces in the output document. An undeclared namespace is one that is not specified as part of the nsDecls input parameter.

In the case of the namespace <http://www.w3.org/2001/XMLSchema-instance> which is commonly declared with "xsi" prefix, the namespace was not being preserved in the output document even when preserveUndeclaredNS was set to true and nsDecls did not include the namespace <http://www.w3.org/2001/XMLSchema-instance>.

This issue is now resolved.
- PIE-29304

When using pub.security.xml:signXML to digitally sign an outgoing XML node or document, you cannot place the signature in the proper position as required by the schema.

This issue is resolved. The input signature for pub.security.xml:signXML now includes the optional addSignatureAsLastElement parameter. When set to true, Integration Server adds the signature element as the last child of the root node. If set to false (the default), Integration Server adds the signature element as the first child of the root node.
- PIE-30518

Integration Server did not include the X-Frame-Options attribute in the response header to requests for pages. This made Integration Server implementations vulnerable to clickjacking attacks. This issue is resolved. Integration Server now includes the X-Frame-Options attribute in the response header to requests for pages, as defined in <http://www.rfc-editor.org/rfc/rfc7034.txt>. X-Frame-Options is not included in responses to requests for service invocation, such as those including the invoke, rest, or soap directives. It is only included in responses to requests for pages, for example, <https://my-server/MyPackage/my-page.html>. The value for the X-Frame-Options attribute can be controlled with the watt.server.http.x-frame-options system property. Valid values for this property include the following:

  - SAMEORIGIN

This is the default value. It directs the client's browser to allow Integration Server pages to be displayed in an HTML frame only if the frame is on a page from the same server.

  - ALLOW-FROM <other\_origin>

Set `watt.server.http.x-frame-options` to this value to direct the client's browser to allow Integration Server pages to be displayed in an HTML frame only if the frame is on a page from the same server or from one of the other servers listed in `<other_origin>`.

To list multiple origin servers, separate them with a space. For example:

```
watt.server.http.x-frame-options=ALLOW-FROM https://server1.com http://server2.org
```

Note: The value DENY is defined for the X-Frame-Options attribute but is not allowed for Integration Server. DENY means that the page can never appear in a frame, regardless of the frame's origin. This would cause Integration Server Administrator to be unusable. If `watt.server.http.x-frame-options` is set to DENY, the value is ignored and SAMEORIGIN is used instead.

If you do not want Integration Server to include the X-Frame-Options attribute in response headers, remove the value of the `watt.server.http.x-frame-options` property. For example:

```
watt.server.http.x-frame-options=
```

The property can be set on the Settings > Extended page of Integration Server Administrator. Changes to this property take effect immediately; the server does not need to be restarted. See <http://www.rfc-editor.org/rfc/rfc7034.txt> for more information about X-Frame-Options.

- PIE-30524  
Saving changes to flow services in Software AG Designer commits the changes in Subversion. When the Version Control System (VCS) Integration feature is used with Subversion, saving changes made to a flow service in Designer causes the changes to be pushed immediately to the Subversion repository.  
This issue is resolved. Integration Server now commits changes saved to a flow service in Designer only when the Check In command is issued.
- PIE-30560  
Integration Server displays the wrong error message in the error log.  
When an ACL check for a service fails, the following message is written to the error log:  
"ACLManager: allow check for user "local/Developer" on ACL "myFolder:mySvc" is returning false."  
The message should indicate the service and not the ACL.  
This issue is now resolved. The message now states the following:  
"ACLManager: allow check for user "local/Developer" on service "myFolder:mySvc" is returning false."
- PIE-31046  
Web service connectors always call only the default binder even when the consumer has multiple binders associated with it.  
A WSDL document for a virtual service contains two port definitions, one for the HTTP transport protocol and one for HTTPS, and specifies the same binding name for both definitions. When a consumer web service connector is generated using this WSDL document, the connector used only the default binder. This resulted in the execution of an endpoint service that did not always use the correct transport protocol.  
This issue is resolved.

- PIE-31163  
 Upon enabling clustering, the confirmation message displayed in the Settings -> Cluster page in Integration Server Administrator includes a <br> tag.  
 This issue is now resolved.
- PIE-31283  
 Integration Server ignores User-Agent header fields when executing pub.client:soapClient.  
 If a User-Agent header field is specified in the transportHeaders parameter of the pub.client:soapClient service, Integration Server ignores the value specified for that header field. Instead, Integration Server sets the value of the header field to the default value configured in the watt.net.userAgent parameter.  
 This issue is resolved.
- WFF-32 (WFF\_8.2\_SP2\_Fix4, WFF\_9.5.1\_Fix1, WFF\_9.6\_Fix1)  
 In webMethods EDI Module 8.0 SP1, the schemas generated for EDI transactions do not use the correct format service for some of the fields.  
 In webMethods EDI Module 8.0 SP1, the format service associated with some of the field types are not correct. For example, for a field of type N0, the associated format service must be wm.b2b.edi.util.formatServices:formatN0, and for a field of type N1, the associated format service must be wm.b2b.edi.util.formatServices:formatN1. Currently, all the fields of type N0 to N9 are incorrectly associated with the wm.b2b.edi.util.formatServices:formatN0 format service.  
 This issue is resolved. The correct format service is now associated with a field type.
- WFF-33 (WFF\_8.2\_SP2\_Fix4, WFF\_9.5.1\_Fix1, WFF\_9.6\_Fix1)  
 When using Flat File Module with webMethods Integration Server 8.2 SP2, the pub.flatFile:convertToValues service fails to validate the non-EDI document.  
 When using Flat File Module with Integration Server, the pub.flatFile:convertToValues service fails to validate the non-EDI document and returns an exception. This issue occurs even though the validate input parameter is set to true and the ffData parameter is a non-EDI document.  
 This issue is resolved.
- WFF-45 (WFF\_8.2\_SP2\_Fix5, WFF\_9.5.1\_Fix1, WFF\_9.6\_Fix1)  
 In webMethods Flat File 8.2.2, polling port processes the XML file incorrectly if file contains Chinese or Taiwanese characters.  
 This issue occurs because the flat file parser is using Windows default encoding (for example, CP1252) while parsing the XML file. The parser now has been modified to use UTF-8 as the default encoding for XML files. If you want to override the default encoding for XML files, you can do this by adding the following property into properties.cnf: filepollingport=encoding and providing the appropriate value for the new encoding. For example:  
 On a Windows machine:- C:\\\RemoteDrive\\Monitor=UTF-8  
 On Unix/Linux:- opt/monitor=UTF-8  
 This issue is resolved.

## **Release 9.6**

- **PIE-27597**  
Integration Server returns a numeric code when a user password is changed instead of returning a message.  
Integration Server returns a numeric code when a user password is changed from the Security > User Management > Change Password page in the Integration Server Administrator. This issue occurs intermittently.  
This issue is resolved. Integration Server now returns a message when the user password is changed.
- **PIE-27714**  
The pub.mime:createMimeData service does not honor the encoding type of the "charset" parameter in a MIME multipart header.  
When creating mime data, the pub.mime:createMimeData service ignores the "charset" parameter in a MIME multipart header. The encoding specified by the watt.server.netEncoding parameter is used instead.  
This issue is now resolved. The pub.mime:createMimeData parameter now uses the encoding type specified by the "charset" parameter in a multipart header.
- **PIE-28024**  
"UncaughtExceptionHandler in queue 'Session Queue'" error in the IS server log.  
This error occurs in clustered environments when Integration Server starts up or shuts down. The error is triggered if an unhandled null pointer exception occurs with the pinger thread, which is used to ping the server after a connection is established.  
This issue is now resolved.
- **PIE-28613**  
Email listener ports suddenly stop processing emails.  
Email listener ports stop processing emails when network issues arise. When the network issues are resolved, an Integration Server restart is needed to resume the processing of emails through those ports. Restarting Integration Server negatively affects other projects that share the same server.  
This issue is resolved. Email listener ports now automatically resume the processing of email after network issues are resolved.
- **PIE-28664**  
Integration Server handles document types that have defined XML namespace URIs but do not have prefixes associated with each namespace, differently in versions prior to 8.2 SP2.  
In Integration Server 8.2 SP2 and higher, if document types that have a defined XML namespace URI but do not have a prefix associated with each namespace are specified as inputs to services, the SOAP processor fails to recognize the document types at run time. This results in improper SOAP responses. However, in Integration Server versions prior to 8.2 SP2, SOAP processors recognized document types that have defined XML namespaces but do not have prefixes associated with each namespace. This difference in behavior results in backward compatibility issues when upgrading to Integration Server 8.2 SP2 or above.

This issue is resolved. To support backward compatibility, Integration Server supports the previous behavior at run time in case of web service descriptors created in Integration Server versions prior to 8.2 SP2. For web service descriptors created in Integration Server 8.2 SP2 onwards, you must associate a prefix with an XML namespace URI for fields in the service signature.

Additionally, this fix introduces the `watt.server.soap.decodeElementWithPrefix` server configuration parameter. You must set the `watt.server.soap.decodeElementWithPrefix` property to `true` if you want the SOAP processors to recognize document types that have a defined XML namespace but do not have a prefix associated with each namespace. The default is `false`. If you change the setting of this parameter, you must restart Integration Server for the changes to take effect.

- PIE-28885

The `pub.xml:documentToXMLString` service ends with a `ClassCastException` or the `xmlData` output parameter is `null`.

If the pipeline includes a variable named `outputStream`, the `pub.xml:documentToXMLString` service ends with a `ClassCastException` or with a `null` value for the `xmlData` output parameter. This issue is now resolved.

- PIE-28935

After upgrading to Integration Server 8.2 SP1 or later from an earlier version of Integration Server, if the input pipeline for the `pub.flow:setResponse` service includes a parameter named `string`, the service uses the value of `string` in the response instead of the value of the `response` service input parameter.

Prior to Integration Server 8.2 SP1, the `pub.flow:setResponse` service had a `response` input parameter of type `String` used to specify the response returned to a calling process. In Integration Server 8.2 SP1, the `response` input parameter was deprecated and replaced by a `string` input parameter of type `String`. A `bytes` input parameter of type `byte[]` was also added. The `pub.flow:setResponse` service honored the value set for `response` but gave precedence to the `string` parameter if that was set or present in the input pipeline. Because the `string` parameter had precedence, the `pub.flow:setResponse` service used the value of `string` in the response instead of the value set for the `response` input parameter. This resulted in unexpected behavior in existing services that were migrated to Integration Server 8.2 SP1 and later. The likelihood of unexpected behavior was compounded by the using an input variable name, `string`, that is commonplace.

To address this issue, the following changes have been made:

- The `pub.flow:setResponse` service now has input parameter names that are more unique and deprecates the old parameter names.

- A new server configuration parameter controls the order of precedence for the deprecated parameter names.

The `pub.flow:setResponse` service now has the following input signature:

`responseString` – Optional. A `String` that specifies the response.

`responseBytes` – Optional. A `byte[]` that specifies the response.

`response` – Deprecated. Use `responseString`. Optional. A `String` that specifies the response.

`string` – Deprecated. Use `responseString`. Optional. A `String` that specifies the response.

`bytes` – Deprecated. Use `responseBytes`. Optional. A `byte[]` that specifies the response.

contentType – Optional. A String specifying the MIME type of the response data.  
encoding – Optional. A String specifying the character set in which the response is encoded.  
Specify responseString or responseBytes, but not both. If you specify both, the pub.flow:setReponse service uses responseString and ignores responseBytes.

If neither responseString or responseBytes are specified, Integration Server uses the value of the server configuration parameter watt.server.setReponse.pre82Mode to determine the order in which to look for and use the deprecated fields.

When watt.server.setResponse.pre82Mode is set to “true”, Integration Server follows a precedence order similar to what was available in Integration Server 7.1x and 8.0x. Specifically, Integration Server looks for the deprecated parameters in the following order and uses the value of the first parameter that it finds:

1. response
2. string
3. bytes

When watt.server.setResponse.pre82Mode is set to “false”, Integration Server follows a precedence order similar to what was available in Integration Server 8.2 and later. Specifically, Integration Server looks for the deprecated parameters in the following order and uses the value of the first parameter that it finds:

1. string
2. bytes
3. response

The default value of the watt.server.setResponse.pre82Mode parameter is “false”.

If you want to set watt.server.setResponse.pre82Mode to true, you must use Integration Server Administrator to add the following to Extended Settings and then restart Integration Server:  
watt.server.setResponse.pre82Mode=true

- PIE-29175

Integration Server generates a WSDL document that does not pass WS-I compliance tests.

When generating a WSDL document for a provider web service descriptor, the resulting WSDL document does not pass WS-I compliance tests. This can occur when a field that makes use of the prefix “xml” or the XML namespace (<http://www.w3.org/XML/1998.namespaces>) is used in the service signature or in an IS document type used with the web service descriptor. The presence of the xml prefix or XML namespaces causes Integration Server to include an xsd:import element for the XML namespace. However, the xsd:import element does not contain the schemaLocation attribute.

Now, when generating a WSDL document, whenever the xsd:import statement is for the XML namespace, Integration Server includes the schemaLocation attribute in the xsd:import element.

- PIE-29193

Ports created with JSSE support enabled do not support TLS 1.1.

Ports created with the “Use JSSE” option enabled (or useJSSE=yes) do not support TLS 1.1 until Integration Server is restarted.

This issue is now resolved.

- PIE-29244

Few components are missing from the schema that Integration Server generates when the XSD includes types that are restricted by pattern.

When creating a consumer web service descriptor from a WSDL, few components are missing from the schema that Integration Server generates if the XSD contains types that are restrictions of an xsd:string with a pattern defined. This issue happens especially when there are cascaded restrictions.

This issue is now resolved.
  
- PIE-29345

Updates to documentation for using Universal Messaging with native publish/subscribe. The following PDF documentation has been updated to include additional information about using Integration Server and Designer to develop publish/subscribe solutions that use Universal Messaging as the messaging provider:

  - *webMethods Integration Server Administrator's Guide*
  - *webMethods Integration Server Built-In Services Reference*
  - *Publish-Subscribe Developer's Guide*
  - *webMethods Service Development Help*

Refreshed versions of the above guides are available by downloading the product documentation using the Software AG Installer or on the Software AG Documentation website <http://documentation.softwareag.com>.
  
- PIE-29401

When decoding a SOAP request, an element of type anyType is incorrectly decoded if it contains duplicate elements.

If the input signature of an IS service exposed as a web service contains a document that has a child variable of type object, the object is represented as an element of type anyType. When Integration Server decodes a SOAP request for the service, the contents of the element of type anyType should be represented as is in the resulting IData. However, if the element of type anyType contains duplicate elements, Integration Server created an array for the duplicate elements.

This issue is now resolved.
  
- PIE-29435

The Integration Server diagnostic utility returns incorrect status for complex scheduled tasks. The Integration Server diagnostic utility, which an administrator can run by invoking the `wm.server.admin:getDiagnosticData` service, returns the Scheduler.txt file as part of its output. The statuses for complex scheduled tasks shown in this file are not consistent with the statuses shown on the Scheduler screen of Integration Server Administrator.

This issue is resolved. The Scheduler.txt file now contains correct statuses for complex scheduled tasks.
  
- PIE-29482

Unable to update the master password after the master password and outbound passwords are reset.

After resetting the master password and outbound passwords using the Security > Outbound Passwords > Reset All Outbound Passwords option, updating the master password fails with "Verification of current master password failed." error.

This issue is now resolved.

- PIE-29524  
Integration Server experiences blocked service threads when flow services contain BRANCH steps with "Evaluate label" enabled.  
This issue is now resolved.
- PIE-29616  
Integration Server issues a NullPointerException when the Event Manager triggers a service that expects a valid session.  
This issue is now resolved. When a service is triggered by the Event Manager, a valid session is now associated with the triggered service. The session that is created has a default timeout value of 60000 milliseconds. This timeout value can be controlled by the `watt.server.eventHandlerSessionTimeout` server configuration parameter, which is introduced in this fix. This fix also introduces the `watt.server.eventHandlerCreateSession` server configuration parameter. Use this parameter to control whether or not Integration Server is to create a session for the service that is triggered by the Event Manager. When set to "true", Integration Server creates a session for the service that is triggered by the Event Manager. When set to "false", Integration Server does not create a session for the service that is triggered by the Event Manager. The default is "true".
- PIE-29756  
Migrated Broker configuration is over-written with the default Broker configuration.  
If Broker configuration is migrated to Integration Server 9.5 SP1, when Integration Server starts for the first time, Integration Server replaces the migrated Broker configuration with the default Broker configuration.  
This issue is resolved. Integration Server does not overwrite the migrated Broker configuration with the default Broker configuration.
- PIE-29873  
The archive file returned by the `wm.server.admin:getDiagnosticData` service does not contain caching configuration files.  
In the `diagnostic_data.zip` file, the `config/caching` folder contains audit logging configuration files instead of caching configuration files.  
This issue is resolved. The `config/caching` folder now contains a copy of the files from the `IntegrationServer/instances/<instanceName>/config/Caching` directory.
- PIE-29887  
In Integration Server, attempting a JAAS login with message-level credentials for a consuming application with a SAML token in the SOAP header of the message fails with an error.  
When a web service provider with a security policy that does not require a SAML token receives a secured message with a SAML token in the security header, the JAAS login attempt with message-

level credentials fails. The issue occurs because the Web Services Stack security engine attempts to process and use the SAML token as a part of the message authentication credentials. The issue is resolved. A new web service descriptor property, Filter Login Credentials, is added to configure the web service descriptor to use only the tokens required by the applied security policy as authentication credentials. When this property is set to true in Designer, Integration Server filters the login credentials in incoming SOAP requests and processes only those credentials that are provided in the WS-Security policy attached to the web service descriptor. When this property is set to false, Integration Server processes all the credentials that are available in the incoming SOAP request without verifying whether the credentials are also provided in the WS-Security policy attached to the web service descriptor. The default is true.

- PIE-29888

Deployer deploys packages even when service threads are still running on the target Integration Server.

Deployer should only deploy packages when none of the package's services are running on the target Integration Server. Deployer does not check to see if any of the packages services are executing on the Integration Server before performing the upgrade of the package. If a package is deployed while its services are running on the target Integration Server, the application's data can become corrupted.

To control whether Deployer deploys packages when service threads are running on the target Integration Server, Deployer has been modified to accept the following new global values for Integration Server package assets and composites:

- disallowActivePackage specifies whether you want to prevent deployment if the package being deployed is in an active state on the target. If set to False (the default), Deployer deploys the package even if the package is active on the target Integration Server.

- packageExecutionCheck specifies the length of time (in milliseconds) Deployer should wait if a service contained in the package being deployed is being executed on the target Integration Server. If this time expires and a service is still being executed, Deployer terminates the deployment job. The default value for this parameter is 0, which disables this feature.

- PIE-29889

An incorrect exception is returned when using the pub.client.ftp:get service with large files. When using pub.client.ftp:get service with files larger than the available tspace, the exception "java.io.IOException:Stream Closed" is returned instead of "java.io.IOException: Not enough storage in tspace".

This issue is resolved. When there is not enough tspace available, the exception "java.io.IOException: Not enough storage space in tspace" is now returned.

- PIE-29892

The pub.security.outboundPasswords:listKeys service does not return the keys for keystore and truststore aliases even if the watt.security.ope.AllowInternalPasswordAccess parameter is set to true.

This issue is now resolved.

- **PIE-29936**  
Building any Integration Server package asset using the webMethods Asset Build Environment results in a `NoSuchElementException`.  
For a repository-based deployment, when the Asset Build Environment is used to build a composite from any Integration Server package asset, the Asset Build Environment throws a `NoSuchElementException`. This occurs even if the package element is present. The Asset Build Environment then proceeds with the build.  
This issue is resolved. The Asset Build Environment now correctly detects the presence of a package asset before determining whether to proceed with the build.
  
- **PIE-29963**  
Creation of a web service descriptor from a WSDL with message parts succeeded in Integration server version 7.1.x or 8.x but fails in Integration Server 9.0 or later.  
Using Designer to create a web service descriptor from a WSDL with message parts succeeded with Integration Server 7.1.x or 8.x but fails in Integration Server 9.0 and later with an error similar to the following:  
[ISC.0081.9195] Invalid message part(s) defined in the wsdl: The header has a message part "partName" defined by the type "typeName". Message parts in a header must be defined by the element attribute instead of the type attribute.  
According to the WSDL specification, message parts are to be treated as document/literal. This means that a message part must define the part using the element attribute and not the type attribute. Validation was added to Integration Server 9.0 to enforce this restriction.  
This fix introduces a server configuration parameter that you can use to indicate that defining the message part using the type attribute instead of the element attribute should be treated as a warning and not an error. Set `watt.server.SOAP.warnOnPartValidation` to true to indicate that when creating a web service descriptor form a WSDL document that uses the type attribute to define message parts, Integration Server returns a warning and allows the web service descriptor to be created. Set `watt.server.SOAP.warnOnPartValidation` to false to indicate that when creating a web service descriptor form a WSDL document that uses the type attribute to define message parts, Integration Server returns an error and creation of the web service descriptor fails. The default is false.
  
- **PIE-29977**  
Creating a consumer web service descriptor from a WSDL document fails with an error stating that the schema definition is not valid.  
If the schema in a WSDL document contains complex type elements with the "mixed" attribute set to True, Integration Server incorrectly considers the schema to be invalid. Creation of a consumer web service descriptor fails with the following error:  
[ISS.0092.9032] Error: Invalid schema definition for Input signature. Web Service Connector was not created.  
This issue is resolved. Integration Server now processes schemas containing complex type elements with mixed content.
  
- **PIE-30079**  
Document type created from XML Schema definition is missing fields.

An IS document type generated from an XML Schema definition may be missing fields if the XML Schema definition had a target namespace and the schema contained a reference to an element that is not namespace qualified. The resulting IS document type might not contain a field that corresponds to the element that is not namespace qualified. This situation might also occur for IS document types that Integration Server creates as part of creating a web service descriptor from a WSDL document.

This issues is now resolved.

- PIE-30087  
The `pub.soap.utils:removeBodyEntry` service prints data to the Integration Server console. When the `pub.soap.utils:removeBodyEntry` service is executed, Integration Server prints data contained in the SOAP body to the server console.  
This issue is now resolved.
- PIE-30123  
Integration Server faces issues while handling multiple `WWW-Authenticate` attributes in HTTP Headers. When a web service client executes a Mediator service, multiple `WWW-Authenticate` headers are added to the Mediator service. These headers have to be sent back to the client. However, Integration Server sends only one `WWW-Authenticate` header back to client and this results in issues.  
This issue is resolved. Integration Server now sends multiple `WWW-Authenticate` headers back to the web service client.
- PIE-30127  
The execution of `pub.xml:documentToXMLString` service fails with an `EmptyStackException` if a document with `'*body'` as a top-level element is given as the input.  
This issue is now resolved.
- PIE-30150  
The `pub.sync:wait` service returns immediately instead of waiting.  
If the `pub.sync:notify` service executes and the notification times out (that is the value specified by `watt.server.sync.timeout` elapses) a subsequent invocation of `pub.sync:wait` executes to completion immediately if the `pub.sync:wait` and `pub.sync:notify` services specify the same key value. The `pub.sync:wait` service should wait until a new `pub.sync:notify` with the same key is issued or until the waiting time specified in the service elapses.  
This issue is now resolved.
- PIE-30151  
LDAP bind operations are logged twice for a single LDAP add, bind, delete, modify, or search operation.  
Integration Server logs two LDAP bind operation entries in the server log each time one of the following LDAP operations is executed:  
`pub.client.ldap:add`  
`pub.client.ldap.search`  
`pub.client.ldap:modify`

pub.client.ldap.bind  
pub.client.ldap.delete

This issue is resolved. Integration Server now logs only one bind operation for add, bind, delete, modify, and search operations.

- PIE-30161  
When migrating from earlier versions of Integration Server, some parameters in the server.cnf file are not updated with the correct system paths.  
When migrating from earlier Integration Server using the migration utility, the values for watt.server.homeDir and watt.server.terracotta.license.path parameters are not migrated as expected.  
This issue is resolved. After migration, watt.server.homeDir now points to the correct system path. Also, if the value of watt.server.terracotta.license.path points to the default location of the license file, it now points to the correct system path after migration. However, if the watt.server.terracotta.license.path parameter does not point to the default location, the value is not changed during the migration process.
- PIE-30172  
The pub.mime:createMimeData service prints unnecessary exceptions to the Integration Server console.  
This issue is now resolved.
- PIE-30249  
The axis2.xml is updated to use ws-stack formatters instead of axis2 formatters.
- PIE-30250  
When debugging a flow service in Designer, unexpected input validation errors occur for Sequence flow steps.  
When Software AG Designer is used to debug a flow service that contains a Sequence flow step, the following input validation errors occur if the Sequence element is not the root element of the flow service: [ISC.0049.9005] Input validation for service 'xxx' failed  
[ISC.0082.9034] Field is absent, field must exist  
This issue is resolved. Integration Server now correctly handles flow services containing Sequence steps that are not root elements of the service.
- PIE-30283  
Specifying an action to perform when an overdue scheduled task is more than 35000 minutes late results in a "numeric overflow" error.  
On the Create a Scheduled Task page in Integration Server Administrator, in the If the Task is Overdue section, the maximum number of minutes that the "if more than xxx minutes late" field can accept is 35000. However, Integration Server incorrectly accepts numbers larger than 35000, which results in a "numeric overflow" error that requires manual intervention in the database to correct the error.  
This issue is resolved. Integration Server now validates entries in the "if more than xxx minutes" field to ensure that a number larger than 35000 is not entered.

- PIE-30285

Changes to Integration Server because of updates to the wss4j.jar provided by Software AG Web Services Stack.

Integration Server makes use of the wss4j.jar provided by the Web Services Stack for various kinds of web services processing. A recent update to the wss4j.jar by Web Services Stack requires changes to Integration Server. Without these changes, Web service descriptors that run in compatibility mode (the Pre-8.2 compatibility mode property is set to true) and use the Integration Server WS-Security facility may end with a Java RuntimeException.
- PIE-30390

Integration Server Administrator does not display webMethods messaging triggers deployed to the Integration Server if the messaging connection alias for the triggers does not exist.

If webMethods messaging triggers are deployed to an Integration Server and the messaging connection alias used by the triggers is not on the target Integration Server, the Integration Server Administrator does not display the triggers on the Settings > Messaging > webMethods Messaging Trigger Management page. When the messaging connection alias used by the triggers is created on the Integration Server, the triggers do not load properly. Integration Server must be restarted for the triggers to function correctly.

Now, when webMethods messaging triggers are deployed to an Integration Server that does not have the messaging connection alias used by the triggers, the Integration Server Administrator will display the triggers. Once the messaging connection alias used by the triggers is created, Integration Server reloads and starts the trigger automatically. A server restart is not required.

Note: After creating the messaging connection alias, you might need to synchronize the publishable document types that use the alias with the messaging provider.
- PIE-30424

When a webMethods messaging trigger does not start because Integration Server cannot locate a publishable document type to which the trigger subscribes, Integration Server does not reload and start the trigger if the publishable document type is later loaded.

Integration Server does not start a webMethods messaging trigger if it cannot find a publishable document type to which the trigger subscribes. For example, if a webMethods messaging trigger is in a different package from a publishable document type to which it subscribes and the package containing the trigger is loaded before the package containing the publishable document type, the trigger will not fully load. Furthermore, the trigger will not fully load even after Integration Server loads the package containing the publishable document type. When a webMethods messaging trigger does not fully load because Integration Server cannot locate the publishable document type, Integration Server Administrator does not list the trigger on the Settings > Messaging > webMethods Messaging Trigger Management page.

Now, if Integration Server does not fully load a webMethods messaging trigger because a publishable document type cannot be located, the trigger will appear on the Settings > Messaging > webMethods Messaging Trigger Management page. An exception stating the reason the trigger did not fully load will appear as well. In addition, when Integration Server loads the package containing the publishable document type to which the trigger subscribes, Integration Server reloads the trigger.

- PIE-30484  
Integration Server issues a `java.lang.NullPointerException` while executing the `pub.oauth:getAccessToken` service.  
This issue is now resolved.
- PIE-30523  
When a Designer session times out, Integration Server does not close the socket reserved to notify Designer of the Integration Server shutdown event.  
When Designer connects to an Integration Server, Integration Server reserves a socket to notify Designer of the Integration Server shutdown event. If the Designer session times out while still connected to Integration Server, the reserved socket is not closed.  
This issue is now resolved. When a Designer connection times out, Integration Server now releases the reserved sockets.
- PIE-30585  
The `pub.security.xml:signXML` service supports only SHA-1 for signing an XML node or document. To resolve this issue, the `pub.security.xml:signXML` service has been enhanced. You can now specify the `signatureAlgorithm` and `digestAlgorithm` to use when signing an XML node or document.  
Possible values for each field are as follows:

  - SHA1 (the default)
  - SHA256
  - SHA384
  - SHA512
- PIE-30611  
When attaching a `ws-policy` to the Fault binding operation type, the policy is not properly reflected in the `<wsdl:fault>` element of the `wsdl`.  
When attaching a `ws-policy` to the Fault binding operation type, the policy is not properly reflected in the `<wsdl:fault>` element of the `wsdl`. Also when a `ws-policy` is attached to any combination of the Input, Output, and Fault binding operation types, the policy is not being enforced during runtime.  
The issue is now resolved.
- PIE-30619  
Integration Server did not include the `X-Frame-Options` attribute in the response header to requests for pages. This made Integration Server implementations vulnerable to clickjacking attacks.  
This issue is resolved. Integration Server now includes the `X-Frame-Options` attribute in the response header to requests for pages, as defined in <http://www.rfc-editor.org/rfc/rfc7034.txt>. `X-Frame-Options` is not included in responses to requests for service invocation, such as those including the `invoke`, `rest`, or `soap` directives. It is only included in responses to requests for pages, for example, `https://my-server/MyPackage/my-page.html`. The value for the `X-Frame-Options` attribute can be controlled with the `watt.server.http.x-frame-options` system property. Valid values for this property include the following:

**SAMEORIGIN** This is the default value. It directs the client's browser to allow Integration Server pages to be displayed in an HTML frame only if the frame is on a page from the same server.

**ALLOW-FROM <other\_origin>** Set `watt.server.http.x-frame-options` to this value to direct the client's browser to allow Integration Server pages to be displayed in an HTML frame only if the frame is on a page from the same server or from one of the other servers listed in `<other_origin>`. To list multiple origin servers, separate them with a space. For example: `watt.server.http.x-frame-options=ALLOW-FROM https://server1.com http://server2.org`

Note: The value **DENY** is defined for the `X-Frame-Options` attribute but is not allowed for Integration Server. **DENY** means that the page can never appear in a frame, regardless of the frame's origin. This would cause Integration Server Administrator to be unusable. If `watt.server.http.x-frame-options` is set to **DENY**, the value is ignored and **SAMEORIGIN** is used instead. If you do not want Integration Server to include the `X-Frame-Options` attribute in response headers, remove the value of the `watt.server.http.x-frame-options` property. For example: `watt.server.http.x-frame-options=`

The property can be set on the `Settings > Extended` page of Integration Server Administrator. Changes to this property take effect immediately; the server does not need to be restarted. See <http://www.rfc-editor.org/rfc/rfc7034.txt> for more information about `X-Frame-Options`.

- PIE-30658

Change in the upper limit of unique tags that the enhanced XML parser can handle in a single XML document.

The upper limit of unique tags that the enhanced XML parser can handle in a single XML document is now 15,000,000. The previous upper limit was 30,000. When parsing an XML document with more than 15,000,000 unique tags, the enhanced XML parser ends with an error.

- PIE-30888

The `pub.xml:documentToXMLString` service behaves differently in Integration Server 8.0 SP1 and Integration Server 9.5 SP1.

In Integration Server 9.5 SP1, if a document (`IData` object) that contains multiple top-level elements is converted to an XML document using the `pub.xml:documentToXMLString` service, Integration Server does not add the namespace definition in the XML document correctly as shown in the example given below:

```
<xsd1:HEAD xmlns:xsd1="http://www.hello.com/hSoapMsg.xsd1">
  <xsd1:VAR1>1</xsd1:VAR1>
</xsd1:HEAD>
<xsd1:TAIL>
  <xsd1:VAR3 xmlns:xsd1="http://www.hello.com/hSoapMsg.xsd1">1</xsd1:VAR3>
</xsd1:TAIL>
```

This issue is now resolved. After this fix, Integration Server adds the namespace definitions in the XML document correctly as shown in the example below:

```
<xsd1:HEAD xmlns:xsd1="http://www.hello.com/hSoapMsg.xsd1">
  <xsd1:VAR2>1</xsd1:VAR2>
</xsd1:HEAD>
<xsd1:TAIL xmlns:xsd1="http://www.hello.com/hSoapMsg.xsd1">
```

<xsd1:VAR3>1</xsd1:VAR3>  
</xsd1:TAIL>

- PIE-30995  
Integration Server takes a long time to parse large JSON documents.  
This issue is now resolved.
  
- PIEAR-425  
Using the Adapter Runtime to create a listener takes too long.  
Creating a listener using the Adapter Runtime takes too long when the system has a large number of existing notifications. The issue occurs because the Adapter Runtime attempts to update the listener with the list of all registered listener notifications.  
The issue is resolved. With the new watt property, watt.art.notifications.disableImplicitUpdate, you can disable the implicit update of registered notifications when creating a new listener.  
Adapter Configuration Parameter Reference:  
watt.art.notifications.disableImplicitUpdate  
Controls whether the Adapter Runtime updates the listener with the list of registered listener notifications when creating a new listener.  
Values are:
  - true. The adapter disables the implicit update of registered notifications.
  - false. (default) The adapter does not disable the implicit update of registered notifications.For more information about setting and working with extended configuration settings, see *webMethods Integration Server Administrator's Guide*.
  
- PIEAR-450  
Deploying Adapter Runtime adapter listeners fails with an "unrecognized parameter" error. When you try to deploy an ART-based adapter listener using webMethods Deployer, deployment fails with the following error:  
"Adapter Runtime (Metadata): Unrecognized parameter connDataNodeName specified".  
The error occurs because the validation of the listener settings fails.  
The issue is now resolved.
  
- PIEAR-466  
Accessing the DSP pages of the WmART package fails when webMethods Integration Server is using the CSRF guard feature.  
When you enable the Cross-Site Request Forgery (CSRF) guard in Integration Server, access to the dynamic server pages (DSP) of the WmART package is denied.  
This issue is now resolved.
  
- PIEAR-486  
After editing an adapter polling notification, the notification does not work.  
After you edit the parameters of an adapter polling notification in Software AG Designer and then enable the notification, it does not work and the system returns the following message:  
"[ART.0116.3527D] Adapter Runtime (Notification): Ignoring request to start notification".  
This issue is now resolved.

- **PIEAR-471**  
Adapter Runtime-based adapters version 8.2 and lower do not run on the Adapter Runtime 9.5.1. Building or using an adapter with version 8.2 and earlier on the Adapter Runtime 9.5.1 results in compile and run-time errors due to API changes in the ListenerNode class. The signature of the enable() and disable() methods has been altered, which causes the errors.  
This issue is now resolved.
- **WIR-6933**  
Integration Server loses the default character encoding.  
When starting Integration Server, the character set retrieved from the JVM is incorrectly set to: "US-ASCII".  
This issue is now resolved.

## **Release 9.5**

- **PIE-26728 (IS\_8.0\_SP1\_Core\_Fix28)**  
On the Settings > Cluster page, Integration Server Administrator displays the physical host name instead of the logical hostname.  
If the watt.net.localhost configuration parameter sets a logical host name for an Integration Server, when the Integration Server is a member of a cluster, the Settings > Cluster page should display the logical host name under Cluster Hosts.  
This issue is now resolved.
- **PIE-27619 (IS\_8.0\_SP1\_Core\_Fix28, IS\_8.2\_SP1\_Core\_Fix10, IS\_8.2\_SP2\_Core\_Fix9)**  
Designer and Developer do not handle password changes as expected.  
The following password issues are present in Designer and Developer:
  - You cannot change the password for Integration Server local users in Developer or Designer. This should be possible.
  - Even though neither Developer nor Designer support changing the passwords for central users, both should issue a message informing users of this limitation.
 This issue is resolved. Designer and Developer now:
  - Support changing passwords for Integration Server local users.
  - Display a message indicating that you cannot change the password for central users.
- **PIE-27965 (IS\_8.0\_SP1\_Core\_Fix28, IS\_8.2\_SP1\_Core\_Fix11)**  
If Integration Server is unable to write audit records to the audit logging database, administrators are not informed unless they monitor the database or the FailedAudit log.  
To resolve this issue, Integration Server introduces a new audit error event. To register an event handler service for this new type of event, invoke the pub.event:addSubscriber service, setting the <EventType> input variable to "Audit Error Event".  
If a SQLException is encountered while trying to insert an audit record into the audit logging database, your event handler will be notified. If the Service logger is configured to retry failed auditing attempts, the audit error event will be fired for each failure. The event is also fired while Integration Server is initializing if it cannot connect to the audit logging database.

The specification for audit error event handlers is `pub.event:auditError`. Its structure is as follows:

Input Parameters:

<time> String Date and time that the event occurred, in the format yyyy-MM-dd HH:mm:ss.SSS.

For example, "2013-07-04 14:46:39.77".

<destination> String The audit logging destination.

<message> String The exception message.

<stackTrace> String The exception stack trace.

<errorCode> String Optional. The SQL error code returned with the exception.

Output Parameters:

None.

Usage Notes:

- When you subscribe to an audit error event, you can supply a filter to limit the events that your event handler receives. The filter applies to the concatenated values of the destination and <errorCode> fields. Surround your search term with wildcards (i.e. \*YourSearchTerm\*) to find the desired value in either field. If either field matches the filter, the event will be passed to the event handler. See the description of the `pub.event:addSubscriber` service in the Integration Server Built-In Services Reference for more information about event filters.

- Use the `watt.server.event.audit.async` server parameter to indicate whether event handlers for audit error events are invoked synchronously or asynchronously. When this parameter is set to "true", Integration Server invokes the event handlers that subscribe to audit error events asynchronously. When this parameter is set to "false", Integration Server invokes the event handlers that subscribe to audit error events synchronously. The default is "true" (asynchronous).

- PIE-27840 (IS\_8.2\_SP1\_Core\_Fix10)  
Integration Server throws an exception while creating a new scheduled task if the service does not have any input parameters.  
Integration Server throws a `java.lang.NullPointerException` while creating a new scheduled task if the service you want Integration Server to execute does not have any input parameters. Integration Server throws this exception when you attempt to assign inputs to the service.  
This issue is resolved. Integration Server now creates the scheduled task even if the service does not have any input parameters.
- PIE-26996 (IS\_8.2\_SP1\_Core\_Fix11, IS\_8.2\_SP2\_Core\_Fix9)  
When the vector passed into the `pub.list:vectorToArray` service contains two different `IData`, such as `com.wm.util.Values` and `com.wm.data.ISMemDataImpl`, the service throws the following exception:  
`java.lang.IllegalArgumentException: array element type mismatch.`  
This issue is resolved. Now the `pub.list:vectorToArray` service processes all types of `IData` types that appear in a vector.
- PIE-27013 (IS\_8.2\_SP1\_Core\_Fix11, IS\_8.2\_SP2\_Core\_Fix9)  
Integration Server returns an incorrect or an unusable SOAP Fault when processing a request that contains invalid UTF-8 data.  
When a SOAP request is sent to Integration Server using the `soap` directive and the SOAP request

contains a character that is not UTF-8, Integration Server returns a SOAP fault that contains a `NullPointerException`. As a result, the SOAP fault does not contain any information about the cause of the error.

This issue is now resolved. The SOAP fault will now contain information about the cause of the error.

- **PIE-27308 (IS\_8.2\_SP1\_Core\_Fix11)**  
Integration Server 8.2 SP2 and Integration Server 7.1.x produce different results if an operation in a provider web service descriptor references a missing document type.  
Integration Server 8.2 SP2 and Integration Server 7.1.x produce different results when a web service client invokes an operation in a provider web service descriptor and the flow service used as the operation:
  - Contains a document reference and the referenced document type is missing
  - Maps data to the fields in the missing document typeIn Integration Server 7.1.x, the web service output is properly encoded. In Integration Server 8.2 SP2, the service output is not properly encoded.  
Integration Server 8.2 SP2 now behaves in the same way as Integration Server 7.1.x.
  
- **PIE-27341 (IS\_8.2\_SP1\_Core\_Fix11)**  
Integration Server does not support the backslash (\) character in the User Name field for email ports.  
This issue is now resolved.
  
- **PIE-27858 (IS\_8.2\_SP1\_Core\_Fix11)**  
Integration Server considers an element to be invalid if it contains child elements and the IS schema declares it to be of type "anyType".  
When validating XML against an IS schema, if the IS schema contains an element declared to be of type "anyType" and the corresponding element in the document contains child elements, Integration Server considers the XML to be invalid. This is incorrect.  
This issue is now resolved.
  
- **PIE-27897 (IS\_8.2\_SP1\_Core\_Fix11)**  
Integration Server ignores the value of the `watt.server.jms.trigger.stopRequestTimeout` parameter if it is set to 5 seconds or less.  
This issue is resolved. Integration Server now honors a value of 5 seconds or less for the `watt.server.jms.trigger.stopRequestTimeout` parameter. The minimum value for this parameter is 0.  
Note: If you set the `watt.server.jms.trigger.stopRequestTimeout` parameter to 0 (zero), when a JMS trigger is disabled while it is processing messages, Integration Server stops the trigger immediately and does not wait for any processing to complete. This can result in a `javax.jms.IllegalStateException`.
  
- **PIE-28086 (IS\_8.2\_SP1\_Core\_Fix11)**  
Integration Server returns an incorrect or an unusable SOAP Fault when processing a request that contains invalid UTF-8 data.  
When a SOAP request is sent to Integration Server using the `soap` directive and the SOAP request

contains a UTF-16 character, Integration Server returns a SOAP fault that contains WmDocumentException. As a result, the SOAP fault does not contain any information about the actual cause of the error.

This issue is resolved. Now, if the SOAP request contains UTF-16 characters, Integration Server displays the UTF-16 characters as UTF-8 characters. Integration Server will not return a SOAP fault simply because the SOAP request contained UTF-16 characters.

- **PIE-28174 (IS\_8.2\_SP1\_Core\_Fix11)**  
Integration Server is unable to parse XML files available on a file polling port if the XML files do not have a charset encoding defined in the header.  
While parsing an XML file, Integration Server uses the charset encoding defined in the XML header. If the encoding is not defined in the XML header, Integration Server parses the XML file using the default encoding "UTF-8" instead of using the charset encoding of the request or the character encoding specified in the `watt.server.fileEncoding` server configuration parameter.  
This issue is resolved. If an encoding is not defined in the XML header, Integration Server attempts to parse the XML file using the charset encoding of the request. If charset encoding is not available in the request header, then Integration Server uses the character encoding specified in the `watt.server.fileEncoding` server configuration parameter.
- **PIE-26985 (IS\_8.2\_SP2\_Core\_Fix9)**  
During shut down, Integration Server issues an "Object Not Found" error for every service URL alias created in Developer or Designer.  
While Integration Server shuts down, it issues an "Object Not Found" error for URL aliases that were created in Developer or Designer. Integration Server does not issue an error if the URL alias has an association to a server or a package.  
This issue is now resolved.
- **PIE-27537 (IS\_8.2\_SP2\_Core\_Fix9)**  
Services executed from triggers are unable to query the current session.  
A trigger creates a session in order to execute a service, but the trigger's session cannot be queried by the service. Calling `InvokeState.getCurrentSession()` does not return the session in which the service was executing.  
This issue is resolved. Services that are invoked by either broker/local triggers or JMS triggers are now able to call `InvokeState.getCurrentSession()` to get the session in which they are executing. These sessions appear on the `Server > Statistics > Sessions` page in Integration Server Administrator and they count toward the maximum number of sessions allowed by the Integration Server license. All triggers that are executed create a non-expiring session. If the `watt.server.trigger.reuseSession` parameter is "false", an additional session is created for each execution of a broker/local trigger. The session is deleted immediately after the broker/local trigger's services are invoked. If the `watt.server.jms.trigger.reuseSession` parameter is "false", an additional session is created for each execution of a JMS trigger. The session is deleted immediately after the JMS trigger's services are invoked. See the `webMethods Integration Server Administrator's Guide` for more information about the `watt.server.trigger.reuseSession` and `watt.server.jms.trigger.reuseSession` parameters.
- **PIE-27636 (IS\_9.0\_SP1\_Core\_Fix1)**

While generating document types from XML Schema definitions, the namespace prefixes that Integration Server uses depend on the order in which the namespaces are specified.

While generating a document type from an XML Schema definition, if the XML Schema contains namespace prefix as well as default namespace pointing to the same namespace URI, the namespace prefix that Integration Server uses depends on the order in which the namespaces are specified in the XML Schema definition.

This issue is resolved. Integration Server now gives preference to the user-specified namespace prefixes over default namespace regardless of the order in which the namespaces are specified in the XML Schema definition.

- **PIE-27939 (IS\_9.0\_SP1\_Core\_Fix1)**  
Integration Server functioning as an FTP server does not return any results when the FTP: dir command is executed with filename as the parameter.  
When attempting to list the files by executing the FTP: dir command with filename as the parameter, Integration Server functioning as an FTP server does not return any results. The FTP: dir command works as expected if the filename parameter is specified as a regular expression.  
This issue is now resolved.
- **PIE-25410**  
Reverse Gateway Integration Server fails when handling requests that contain a 100-Continue HTTP header.  
For requests that should be challenged with 401: Access Denied error, Reverse Gateway Integration Server does not return 401: Access Denied error if that request includes a 100-Continue HTTP header.  
This issue is now resolved.
- **PIE-25998**  
Under heavy load, the Reverse HTTP Gateway Server logs an error about a closed connected repeatedly.  
When the Integration Server acting as the Reverse HTTP Gateway Server is under heavy load, it logs the following error repeatedly:  
(ISS.0053.0010E) The Reverse Gateway Integration Server encountered an error: (ISC.0064.9306) Connection was closed during read while handling the request. It is unable to retry the request at this time. The retry count is 1.  
An error on the Internal Server closes the connection to the Reverse HTTP Gateway Server, causing the above message to be logged repeatedly.  
This issue is now resolved.
- **PIE-26925**  
Decrease in performance when processing certain services.  
Integration Server performance decreases when processing services that have a content type of text/xml.  
This issue is now resolved. To resolve this issue, Integration Server no longer generates a default

template name when services are created. This change greatly increases performance when processing services with content type of text/xml.

- PIE-27035

The following issues occur when using the AS2 restart capability of webMethods EDIInt solution:

- When reusing a pooled connection, if there is a connection related failure, EDIInt automatically retries the transaction using the AS2 Restart capability.

This issue is resolved. Now EDIInt can disable the retry to process the AS2 Restart.

- Some EDIINT solutions experience interoperability issues when the request uses Transfer-Encoding (chunking). This occurs because the Content-Length header is included in the request, and chunked requests do not require Content-Length.

This issue is resolved. Now Integration Server removes the Content-Length header when the request uses Transfer-Encoding.

- PIE-27241

Integration Server takes a long time to open the Support > webMethods Packages and Updates page.

When you are logged on as a central user and click the View link on the About page, Integration Server takes a long time to open the Support > webMethods Packages and Updates page.

This issue is now resolved.

- PIE-27580

After installing Integration Server 8.2 SP2 Core Fix 7, HTML script related to the CSRF guard feature is added to the DSP pages even if the CSRF guard feature is disabled.

This issue is resolved. Integration Server now adds the HTML script related to the CSRF guard feature to the DSP pages only if the:

- CSRF guard feature is enabled
- DSP file contains the <html> tag.

Note: Because Integration Server does not insert CSRF secure tokens in custom DSPs that use the JavaScripts Location object such as document.location and window.location.href, you must update these pages manually.

For example, if you have the following code in your custom DSP:

```
document.location="ldap-settings.dsp";
```

You must replace it with the following code:

```
if(is_csrf_guard_enabled && needToInsertToken) {  
    document.location="ldap-settings.dsp?"  
    + _csrfTokenNm_ + "=" + _csrfTokenVal_;  
} else {  
    document.location="ldap-settings.dsp";  
}
```

You do not have to define the JavaScript variables `_csrfTokenNm_`, `_csrfTokenVal_`, `is_csrf_guard_enabled`, and `needToInsertToken`. However, you must import

<IntegrationServer\_directory>\packages\WmRoot\csrf-guard.js to your DSP before using these variables.

For more information about configuring CSRF guard in Integration Server, see webMethods

## Integration Server Administrator's Guide.

- **PIE-27628**  
Designer and Developer find document types located in deleted packages.  
When deleting a package, Integration Server did not properly delete document types if auditing was enabled. As a result, Designer or Developer would display the document types in search results.  
This issue is resolved. Integration Server now deletes document types correctly.
- **PIE-27648**  
ebXML acknowledgements fail due to intermittent SSL errors.  
The Integration Server HTTP client fails intermittently, causing outbound HTTPS requests delivering ebXML acknowledgements to fail.  
This issue is now resolved.
- **PIE-27713**  
The `pub.security.xml:signXML` service supports only SHA-1 for signing an XML node or document. To resolve this issue, the `pub.security.xml:signXML` service has been enhanced. You can now specify the `signatureAlgorithm` and `digestAlgorithm` to use when signing an XML node or document.  
Possible values for each field are as follows:
  - SHA1 (the default)
  - SHA256
  - SHA384
  - SHA512
- **PIE-27831**  
The `Settings > Messaging > Broker/Local Trigger Management` page in Integration Server Administrator shows the message "null" after suspending document retrieval for a trigger. If Integration Server Administrator is used to suspend document retrieval for a Broker/local trigger when Integration Server is not connected to the Broker, the `Settings > Messaging > Broker/Local Trigger Management` page displays the message "null" which is not informative.  
This issue is resolved. Now, when Integration Server Administrator is used to suspend a Broker/Local trigger when Integration Server is not connected to the Broker, Integration Server Administrator displays the following message:  
Unable to suspend document retrieval for Trigger "triggerName": Broker not connected.
- **PIE-27848**  
Designer and Developer do not show enumeration values for an element defined to be a union of a defined type and an in-line simple type with enumerated values.  
This issue is now resolved.
- **PIE-27880**  
WSDLs that Integration Server 8.2 SP2 generates from web services that are migrated from Integration Server 7.1.2 show broken schema references for the unresolved imports.

The WSDLs that Integration Server 8.2 SP2 generates from web services that are migrated from Integration Server version 7.1.2 to 8.2 SP2 show broken schema references for unresolved imports of web services. Integration Server 7.1.2 generated the WSDLs of web services with schema imports correctly even if the imports were unresolved.

This issue is now resolved. Integration Server 8.2 SP2 generates WSDLs without broken schema references for all web services migrated from version 7.1.2 even if the imports are unresolved.

- **PIE-27966**  
When using the webMethods Platform Manager to configure ports on Integration Server, some error messages might be returned that refer to Software AG Platform Manager. These messages should reference webMethods Platform Manager instead.  
This issue is resolved. The error messages now refer to webMethods Platform Manager.
- **PIE-27972**  
When you enable or disable security logging, Integration Server does not log the event to the audit logger.  
This issue is resolved. Now when you enable or disable security logging, Integration Server logs the event to the audit logger.
- **PIE-28003**  
Integration Server issues an error when creating a scheduled task without any inputs.  
When creating a new scheduled task that does not take any inputs, Integration Server creates the task successfully. However, Integration Server also writes the following message to the error log: (ISS.0137.0015E) Scheduler: Exception getting task from database: Invalid task ID  
The issue is now resolved.
- **PIE-28032**  
Deployment fails when deploying Integration Server assets to an Integration Server in a cluster. When deploying Integration Server assets to a target group that is part of an Integration Server cluster, deployment to the second Integration Server node fails with the following message:  
Unknown system type: "java.io.FileNotFoundException:  
<IntegrationServer\_directory>\replicate\deployer\out\isconfiguration.zip"..  
This issue is resolved.
- **PIE-28064**  
When the pub.storage services are used by multiple threads in the same session, the threads are not able to prevent one another from accessing the same items at the same time.  
This issue occurs because pub.storage locks are owned by the session. Multiple threads in the same session cannot lock each other out since their locks all have the same lock owner: the session itself.  
This issue is resolved. The pub.storage services now qualify the lock owner with the current thread. The owner of a pub.storage lock is now the current session AND the current thread.
- **PIE-28075**  
In Integration Server Administrator, displaying the error log entries from newest to oldest starting from the end fails with an exception.

In Integration Server Administrator, selecting the "Display Log Entries newest to oldest starting from the end" option to view the error log entries fail with an exception if the log file is UTF-8 encoded.

This issue is now resolved.

- PIE-28104

When running in passive mode, the Integration Server FTP port does not switch to active mode when the FTP client sends a PORT command.

This issue is now resolved.

- PIE-28125

Integration Server does not interrupt a service thread when a timeout event is triggered or a flow service is cancelled.

When timeout interval is specified for a flow step, and if the step invokes a long running Java service, the service continues to run even after the timeout interval is exceeded and the timeout is triggered or the service is cancelled.

This issue is resolved. Integration Server introduces a new server configuration parameter that you can use to interrupt a service for which a timeout is triggered or is cancelled. If

watt.server.threadKill.interruptThread.enabled is set to "true", when a timeout is triggered or the service is cancelled, Integration Server interrupts the service thread with an underlying service. The default is "false". If you change the setting of this parameter, you must restart Integration Server for the changes to take effect.

- PIE-28190

After applying IS\_8.2\_SP2\_Core\_Fix8, Integration Server generates an invalid SOAP response.

IS\_8.2\_SP2\_Core\_Fix8 includes a fix for PIE-26504 which ensures that when converting between IData and XML the xsi:type attribute is generated for an element declared to be of xsd:anyType when it is declared in the nsDecls parameters. However, when Integration Server uses this same behavior while creating a SOAP response, the SOAP response contains the xsi:type attribute and its value but does not contain the prefix declaration for the value. For example, if xsi:type = xs:string, the xs prefix declaration is missing from the SOAP response This behavior occurs when Integration Server creates a SOAP request as well.

This issue is resolved. Integration Server provides a new server configuration parameter that indicates whether or not the SOAP request or response includes the xsi:type attribute and its value for an element of xsd:anyType. Set watt.server.SOAP.encodeXSITypeValue to "false" to omit the xsi:type attribute and its value for an element of xsd:anyType. Set the parameter to "true" to include the xsi:type attribute and its value for an element of xsd:anyType. The default is "true".

Note: The server parameter watt.server.SOAP.encodeXSITypeValue affects SOAP requests and SOAP responses created by Integration Server only.

- PIE-28260

While adding a SAML token issuer in Integration Server Administrator, Integration Server does not allow URIs to be entered in the Issuer Name field.

After installing IS\_8.2\_SP2\_Core\_Fix7, Integration Server does not allow URIs to be entered in the Issuer Name field while adding a SAML token issuer in Integration Server Administrator. This

issue occurs because as part of the security fixes introduced in IS\_8.2\_SP2\_Core\_Fix7, characters such as `^!%*:$./\ \ `;``, among others are not permitted in the input fields. As a result, Integration Server does not allow adding a SAML token issuer name that contains a URI.

This issue is resolved. Integration Server now allows URIs to be entered in the Issuer Name field by permitting the period (`.`), forward slash (`/`), and colon (`:`) characters in the input fields.

- **PIE-28305**  
In Integration Server 9.0 SP1, pipeline variable substitution does not work as expected if the value of the pipeline variable is empty.  
This issue is resolved. Integration Server now generates the pipeline variables correctly upon performing the pipeline variable substitution.
- **PIE-28310**  
Server statistic page does not show the graph properly when Japanese language pack is installed with Integration Server.  
This issue is now resolved.
- **PIE-28332**  
While querying the database for scheduled tasks, Integration Server fails to retrieve the scheduled tasks at times.  
While querying the database for scheduled tasks, Integration Server does not retrieve the scheduled tasks at times. This issue occurs because Integration Server takes the target hostname as case sensitive. As a result, Integration Server does not return the scheduled tasks if there is a change of case in the target host name returned while querying the database for scheduled task.  
This issue is resolved. Integration Server does not take the target hostname as case sensitive while querying the database for scheduled tasks.
- **PIE-28386**  
When the "Show running services on top" check box is checked on the Service Usage page, and Integration Server refreshes the page, the running services are no longer shown on top of the screen.  
When the "Show running services on top" check box is checked on the Service Usage page, the Integration Server Administrator displays the running services at the top of the screen. However, when Integration Server refreshes the Service Usage page automatically (as it does every 90 seconds by default), the Integration Server Administrator no longer displays the running services on top of the screen.  
This issue is now resolved.
- **PIE-28420**  
A provider web service descriptor created from a WSDL document containing an XML Schema with `nillable="false"` returns an invalid response.  
Integration Server returns an invalid response when executing a provider web service descriptor created from a WSDL document containing an XML Schema with `nillable="false"`. The response contains `xsi:nil` attribute even though the element declaration in the XML Schema contains `nillable="false"`.

This issue is now resolved.

- PIE-28429

While refreshing the context for durable subscribers, Integration Server recreates durable subscribers with the incorrect shared state ordering, causing an error.

Integration Server logs an ISS.0134.0058E error to the Integration Server log while refreshing the context for a topic that is associated with durable subscribers that have different shared state ordering (None/Publisher).

This issue is now resolved.

- PIE-28441

The JSON content handler does not parse HTTP requests by default.

JSON content in HTTP requests is not automatically parsed. Instead, a `jsonStream` is placed in the pipeline and the application must use `pub.json:jsonStreamToDocument` to parse the JSON into pipeline variables. This prevents clients from using JSON to pass inputs to existing services without first wrapping them in top-level services that parse the incoming JSON.

This issue is resolved. Integration Server introduces a new server configuration parameter that you can use to specify how Integration Server handles JSON content in HTTP requests. If `watt.server.http.jsonFormat` is set to "parsed" (the default), Integration Server parses JSON content into pipeline variables automatically. When `watt.server.http.jsonFormat` is set to "parsed", clients can use JSON to compose pipelines and execute existing services, without having to call `pub.json:jsonStreamToDocument`. The following example shows an HTTP request that uses JSON to pass inputs to an existing Integration Server service:

```
GET /invoke/pub.cache/put HTTP/1.1
Host: localhost:5555
Content-type: application/json
Content-length: 114
{
  "cacheManagerName": "My_Cache_Manager",
  "cacheName": "My_Cache",
  "key": "testKey",
  "value": "testValue"
}
```

If `watt.server.http.jsonFormat` is set to "stream", Integration Server places a `jsonStream` variable in the pipeline whose value is an `InputStream` containing the JSON content. You can then use `pub.json:jsonStreamToDocument` to parse `jsonStream` into pipeline variables. This was the behavior prior to this fix.

If `watt.server.http.jsonFormat` is set to "bytes", the incoming stream of JSON content is read into a byte array.

You can override the behavior specified by `watt.server.http.jsonFormat` in individual requests by adding the `jsonFormat` query parameter to the request URI. For example, if `watt.server.http.jsonFormat` is set to "parsed", a client can override this setting and instead specify a value of "stream" for the request by entering a URI as follows:

```
/invoke/myfolder/myservice?jsonFormat=stream
```

This will result in the request being placed in a `jsonStream` variable in the pipeline as an

InputStream containing the JSON content.

Changes to `watt.server.http.jsonFormat` take effect immediately. A server restart is not required.

Note: This fix changes the default handling of incoming JSON content. Prior to this fix, Integration Server always placed a `jsonStream` variable in the pipeline. Now Integration Server parses the JSON content into pipeline variables by default. To restore the previous behavior, set the value of `watt.server.http.jsonFormat` to "stream".

- PIE-28462  
The `pub.client.sftp:logout` service does not end the current SFTP session.  
The `pub.client.sftp:logout` service logs off the user from the SFTP server, but does not end the current SFTP session. This results in a large number of open connections to the SFTP server.  
This issue is resolved. Upon executing, the `pub.client.sftp:logout` service now logs off the user and ends the current SFTP session.
- PIE-28531  
The service `pub.flow:getTransportInfo` does not return the client IP address.  
The service `pub.flow:getTransportInfo` does not return the client IP address of the requests that come through the Enterprise Gateway Server.  
This issue is resolved. When a request comes through the Enterprise Gateway Server, Integration Server now adds the "clientIp" and "clientPort" values to the output of `pub.flow:getTransportInfo` service.
- PIE-28526  
Designer does not display the pick list choices of String and String list variables in the derived document from a consumer web service descriptor that is created from an external WSDL file that has got some enumeration in its schema for simpleType variables.  
When a consumer web service descriptor is created from an external WSDL file that has got some enumeration in its schema for simpleType variables, Designer does not display the pick list choices of String and String list variables in the derived document. Designer displays the pick list choices only after the schema is manually refreshed or reloaded.  
This issue is now resolved. The derived schema and variables in the document show the pick list choices that are available in the source WSDL for simpleType variables without manually refreshing or reloading the schema. Designer displays the pick list choices for String and String list variables in their Properties view as well as in the Run Configurations dialog boxes.
- PIE-28558  
Creating a web service descriptor from a WSDL document fails with an error stating that the schema definition is not valid.  
If the schema in a WSDL document did not declare a namespace prefix for the default namespace, Integration Server incorrectly considers the schema to be invalid. Creation of a web service descriptor fails with the following error:  
[ISC.0082.9802] fileName: not a valid schema definition document  
This issue is now resolved.
- PIE-28570

When the "quote TYPE" FTP command is executed without any arguments, Integration Server functioning as an FTP server throws a NullPointerException instead of issuing a meaningful error message.

This issue is resolved. Integration Server now issues a meaningful message when the "quote TYPE" FTP command is executed without any arguments.

- PIE-28615

Multiple invocations of stateful IS service through web services provider makes Integration Server unresponsive.

When stateful IS service is invoked multiple times through the web services provider, Integration Server does not handle the session correctly. This leads to a large number of sessions being created in Integration Server thereby making Integration Server unresponsive.

This issue is now resolved.

- PIE-28692

Option to determine how Integration Server decodes an xsd:anyType element with simple content in SOAP response.

If a WSDL document contains an element declared to be of xsd:anyType, the corresponding element in the SOAP response may be of complex type or simple type.

- If the element is of complex type, Integration Server always decodes the element into an IData with nested fields and an @xsi:type field to retain the xsi:type value.

- If the element is of simple type, you can use the new configuration parameter `watt.server.SOAP.useStringforAnyTypewithSimpleValue` to determine how Integration Server decodes the element.

When `watt.server.SOAP.useStringforAnyTypewithSimpleValue` is set to "false", Integration Server decodes the element into an IData with an @xsi:type field to retain the xsi:type value and a \*body field to contain the element value. This is the default behavior. When

`watt.server.SOAP.useStringforAnyTypewithSimpleValue` is set to "true", Integration Server decodes the element into a String type field that contains the element value. The element's xsi:type information will be gone.

If you want to set the parameter to true, after installing the current fix open Integration Server Administrator. Navigate to the Settings > Extended page. Click on "Edit Extended Settings" and add the following line:

```
watt.server.SOAP.useStringforAnyTypewithSimpleValue=true
```

Save your changes. Integration Server does not require a restart for changes to take effect.

Note: This fix is related to PIE-26101 in that it provides the option to revert Integration Server to the behavior provided prior to PIE-26101 in IS\_8.2\_SP2\_Core\_Fix8.

- PIE-28713

When using the `pub.xml:xmlNodeToDocument` service to create a document, the generated document sometimes does not contain the xsi:type attribute field.

This issue can occur after applying IS\_8.2\_SP2\_Core\_Fix8.

This issue is now resolved.

- PIE-28737

When Integration Server is not connected to a Broker Server, the resource monitor service for triggers is not scheduled.

This issue is now resolved.

- PIE-28894  
When Integration Server is installed with the Japanese language pack, two users cannot be created at the same time.  
This issue is now resolved.

## 6.0 Documentation Changes

This section describes significant changes to the documentation, such as the addition, relocation, or removal of product guides, online help, chapters, or other major content. A release is listed in this section only if changes occurred in that release.

### **Release 9.8**

- Software AG documentation is no longer available on the Software AG installer. You can access all Software AG documentation on the [Documentation website](#).

### **Release 9.6**

- Two new guides were added for webMethods Mobile Support: Developing Data Synchronization Solutions Using webMethods Mobile Support and webMethods Mobile Support Client Java API Reference.
- webMethods Integration Server Administrator's Guide includes a new chapter called "Running Multiple Integration Server Instances". This chapter provides an overview of the multi-instance feature and how to create and configure multiple Integration Server instances on a single host machine.
- The Web Services Developer's Guide includes a new chapter called "About Outbound Callback Services". This chapter provides information about using and invoking outbound callback services in outbound SOAP messages.
- The "Working with webMethods Messaging Triggers" section of the Service Development Help has been added as a new chapter to the Publish-Subscribe Developer's Guide.
- The "Working with JMS Triggers" section of the Service Development Help has been added as a new chapter to Using webMethods Integration Server to Build a Client for JMS.
- The "Working with Web Services" section of the Service Development Help has been added as a new chapter to the Web Services Developer's Guide.

## 7.0 Terminology Changes

A release is listed in this section only if changes occurred in that release.

### Release 9.5

#### Old Term

webMethods Nirvana

Broker/Local Trigger

#### New Term

webMethods Universal Messaging

webMethods Messaging Trigger

## 8.0 Added, Removed, Deprecated, or Changed Items

This section lists features, functionality, controls, portlets, properties, or other items that have been added, removed, deprecated, or changed. A release is listed in this section only if changes occurred in that release.

### Release 9.9

#### Added Item

Cluster synchronization for webMethods messaging triggers that receive documents from Universal Messaging.

CDATA block support to outbound SOAP processing

#### Description

If a webMethods messaging trigger receives documents from Universal Messaging resides on Integration Servers that is a member of a cluster, changes that you make for document retrieval, document processing, and for trigger properties can be propagated to other servers in the cluster automatically. Previously, cluster synchronization was available for webMethods messaging triggers that received documents from webMethods Broker only.

Integration Server now provides CDATA block support for processing of outbound SOAP messages only when Integration Server hosts the web service provider. When a service used as an operation in a web service provider returns String values containing CDATA blocks, when encoding the IData into a SOAP message, Integration Server places the CDATA text in the outbound SOAP message in a CDATA section and does not url-encode special characters in the delimiters or text block. Previously, Integration Server ignored CDATA delimiters in String fields and treated text in a CDATA block as regular text.

Added Item	Description
Dedicated MessageConsumer for receiving synchronous replies per JMS connection alias	When a JMS connection alias has the Create Temporary Queue check box and the Enable Request-Reply Listener for Temporary Queue check box selected, Integration Server uses a dedicated consumer to retrieve replies to all requests sent using that JMS connection alias.
Default instance name can be defined by the user	The default instance of Integration Server can now be specified during the installation process. Previously, the default instance was always named "default".
Fail-fast mode for a JDBC functional alias.	A JDBC functional alias can now be configured to enter fail-fast mode when a transient error caused by an unavailable database prevents the connection pool alias used by the JDBC functional alias from establishing a connection to the database.
Instances of Integration Server can be started and stopped from the Windows Start menu.	Any instance of Integration Server can be started or stopped from the Windows Start menu. The Integration Server Administrator can also be started from the Windows Start menu for any instance of Integration Server. Previously, you could start, stop, or launch Integration Server Administrator for the default instance only.
IS_LOCAL_CONNECTION messaging connection alias	A predefined messaging connection alias for use with publishable document types that will be published locally only.
New filter added to the Enterprise Gateway rule	Custom filter added to the list of filter that can be included in an Enterprise Gateway rule. You can use this filter to customize and invoke services in the Enterprise Gateway Server.
URL aliases can now have specific destinations per port and for the empty path	A URL alias can now identify a port-specific destination for the alias. Additionally, an alias can now be created for the empty path for a port.

Added Item	Description
XMLData and XML document types	<p>XMLData is a new data type that more faithfully represents XML content. This enables Integration Server to support XML Schema constructs such as substitution groups, nested model groups, the any wildcard, and the anyAttribute wildcard.</p> <p>XMLData also provides improvements with regards to handling of XML namespaces. XMLData is surfaced in Integration Server and Designer through XML document types which are created from XML Schema definitions.</p>
Removed Item	Replacement, if any
<p>startup.bat/sh and shutdown.bat/sh scripts contained in the following directory: <i>Integration Server_directory</i>\bin</p>	<p>The startup.bat/sh and shutdown.bat/sh scripts contained in and <i>Integration Server_directory</i>\bin directory have been removed. These scripts are replaced by the startup.bat/sh and shutdown.bat/sh scripts respectively in the following directory: <i>Software</i> <i>AG_directory</i>\profiles\<i>IS_instance_name</i>\bin</p>
<p>server.bat/sh scripts contained in the following directory: <i>Integration Server_directory</i>\bin</p>	<p>The server.bat/sh scripts contained in the <i>Integration Server_directory</i>\bin directory have been removed. These scripts are replaced by the startup.bat/sh scripts in the following directory: <i>Software</i> <i>AG_directory</i>\profiles\<i>IS_instance_name</i>\bin</p>
Deprecated Item	Replacement, if any
WmVCS and VCS Integration feature	<p>Use the local service development feature (Local Version Control Integration) to check package elements and their supporting files into and out of a version control system (VCS) directly from Designer.</p>

Changed Item	Description
Destination List parameter renamed to Destination Lookup Name List	On the Create JMS Connection Alias, Edit JMS Connection Alias, and JMS Connection Alias details screens available under Settings > Messaging in Integration Server Administrator, the Destination List parameter was renamed to Destination Lookup Name List to clarify that the destination lookup names must be provided.
Default messaging connection alias	Previously, you did not have to select a default messaging connection alias for use with webMethods messaging. You could select [LOCAL ONLY] which would indicated that publishable document types that specified the DEFAULT messaging connection alias could be published locally only. Now, you must select a messaging connection alias as the default. If you want the default to be local publishing, specify IS_LOCAL_CONNECTION as the default messaging connection alias in Integration Server Administrator.
WmTomcat package	The WmTomcat package is still installed by default, but is no longer enabled by default. The WmTomcat must be disabled if you want to use webMethods Application Platform with Integration Server.
Client Principal and Client Principal Password fields renamed to Principal and Principal Password	On the Create, Edit, or View Web Services Consumer Endpoint Alias details screens available under Settings > Web Services > Create Web Service Endpoint Alias in Integration Server Administrator, under the Kerberos Properties section, the Client Principal and Client Principal Password fields were renamed to Principal and Principal Password.
Use Subject Credentials field renamed to Use Subject Credentials Only	On the Security > Kerberos and Security > Kerberos > Edit screens, the Use Subject Credentials field has been renamed to Use Subject Credentials Only.

Changed Item	Description
<p>Serial webMethods messaging triggers that receive documents from Universal Messaging now process documents from a publisher publication order.</p>	<p>Previously, a webMethods messaging trigger with serial processing corresponded to a shared named object on a channel on Universal Messaging server. Now, a serial webMethods messaging trigger corresponds to a priority named object. This provides processing in publishing order for a serial trigger in a cluster or a non-clustered group of Integration Server</p>
<p>Transient error handling during trigger preprocessing.</p>	<p>The following changes were made to improve transient error handling during trigger preprocessing:</p> <p>If the <code>ISRuntimeException</code> occurs during trigger preprocessing, Integration Server checks the values of the <code>watt.server.trigger.preprocess.suspendAndRetryOnError</code> parameter and the <code>On Retry Failure</code> trigger property. If <code>watt.server.trigger.preprocess.suspendAndRetryOnError</code> is set to <code>true</code> or <code>On Retry Failure</code> is set to "Suspend and retry later", then Integration Server suspends the trigger.</p> <p>Previously, Integration Server checked the <code>watt.server.trigger.preprocess.suspendAndRetryOnError</code> server configuration property only for webMethods messaging triggers that received messages from webMethods Broker. Also previously, Integration Server checked the <code>On retry failure</code> property only for JMS triggers and webMethods messaging triggers that received messages from Universal Messaging.</p> <p>The <code>watt.server.trigger.preprocess.suspendAndRetryOnError</code> parameter now applies to all trigger types and messaging providers. Previously, the behavior provided by this property applied only to webMethods messaging triggers that received messages from webMethods Broker. Now, this property also works with webMethods messaging triggers that receive messages from Universal Messaging as well as JMS triggers.</p> <p>Integration Server now includes a <code>server</code></p>

Changed Item	Description
	<p>configuration property, <code>watt.server.trigger.preprocess.monitorDatabaseOnConnectionException</code>, that determines how Integration Server handles a <code>ConnectionException</code> that causes a transient error. A <code>ConnectionException</code> occurs when the document history database is not enabled or is configured incorrectly.</p> <p>Typically, transient errors that occur during preprocessing occur during exactly-once processing.</p>
<p>Naming convention for port aliases for migrated ports</p>	<p>To ensure that each port alias is unique, Integration Server now includes the host name for the port in the port alias for migrated ports. The new naming convention is:  <code>protocolListener_portNumber_hostName_packageName</code></p>
<p>Port number used while generating XIDs</p>	<p>Previously, Integration Server used the default Integration Server primary port number while generating the unique XIDs that are used to persist the state of XA transactions. Now, Integration Server uses the configured primary port number while generating the XIDs.</p>
<p>URL Path field renamed to Default URL Path</p>	<p>On the Settings &gt; URL Alias &gt; Create and Settings &gt; URL Alias page, the URL Path field had been renamed to Default URL Path.</p>

## Release 9.8

Added Item	Description
<p>Basic client authentication performed when connecting Integration Server to a Universal Messaging realm server</p>	<p>When Universal Messaging is the webMethods messaging provider, connections between Integration Server and Universal Messaging servers can now be authenticated using user names and passwords. This authentication is specified in the Client Authentication Settings section on the Settings &gt; Messaging &gt; webMethods Messaging Settings &gt; Universal Messaging Connection Alias &gt; Create screen.</p>

Added Item	Description
Use Secure Socket Layers to connect to a port on a Universal Messaging realm server	When Universal Messaging is the webMethods messaging provider, connections between Integration Server and Universal Messaging servers can now use one-way or two-way SSL once client-side parameters are configured on Integration Server.
Action on Startup Error option for clustering configuration	When configuring a cluster, you can now specify what action Integration Server takes when an error prevents the server from joining a cluster at startup. Previously, Integration Server would shut down if it could not connect to the cluster at start up. Now, you can start Integration Server as a standalone Integration Server, shut down Integration Server, or start the Integration Server in quiesce mode.
Security > Ports > Enterprise Gateway Registration Port Connections screen	The new Enterprise Gateway Registration Port Connections screen lists the connections from Internal Servers to the Enterprise Gateway registration port. To access this screen, go to the Ports Screen and click the port number of an Enterprise Gateway registration port. On the Security > Ports > View Enterprise Gateway Server Details screen, click Display Connections to Enterprise Gateway Registration Port.

Removed Item	Replacement, if any
WmPKI package	The WmPKI package which provides functionality for using PKI profiles in conjunction with Integration Server has been removed from the product. There is no replacement for the WmPKI package.

Changed Item	Description
JMS Trigger Management page	In Integration Server Administrator, the Settings > Messaging > JMS Trigger Management page now expands the Individual Standard JMS Trigger Controls and Individual SOAP JMS Trigger Controls tables by default. Previously, the tables were collapsed. Additionally, the page now

Changed Item	Description
	includes links that you can use to jump from the top of one table to the other. This improves page navigation when there are a large number of JMS triggers.
Handling of undeclared namespaces in the resulting document (IData), when an endpoint service is invoked.	When an endpoint service is invoked, Integration Server now includes the undeclared namespace definitions in the resulting document (IData).
Realm URL parameter	<p>The Realm URL parameter on the on Settings &gt; Messaging &gt; webMethods Messaging Settings &gt; Universal Messaging Connection Alias &gt; Create and Edit pages now accepts a semicolon-separated list of URLs to the servers in a Universal Messaging cluster. Previously, the field accepted a comma-separated list only. Use a comma-separated list for Integration Server to always attempt to connect to the first Universal Messaging server in the list, trying the second server and so forth only if the first server becomes unavailable. Use a semicolon-separated list for Integration Server to connect to a randomly chosen URL from the list.</p> <p>You can now specify realm URLs that use the protocol <code>nsps</code> or <code>nhps</code>.</p>
Handling of HTTP requests with no authentication scheme specified in the Authorization header	Integration Server treats HTTP requests with no authentication scheme in the Authorization header as BASIC authentication requests and performs authentication for valid credentials. Previously, Integration Server did not force requests to have an authentication scheme in the Authorization header.
User Names parameter	The User Names field on the Security > User Management > Add and Remove Users screen no longer allows specifying a <i>username ;password</i> combination per line. Passwords cannot be supplied in the User Names field.
JSON text with an array at the root	Integration Server now accepts JSON text containing an array at its root. If the supplied JSON text contains an array at its root and that array does not have a name, Integration Server uses a fixed name of "\$rootArray" for the array value.

## Release 9.7

Added Item	Description
Maximum Entries in Cache field	This field is added to the Settings > Caching > <i>cache_manager</i> > Add Cache and Settings > Caching > <i>cache_manager</i> > <i>cache_name</i> > Edit screens and the configuration files to capture the maximum size (in number of elements) that the cache can grow on the Terracotta Server Array.
Encoding published documents as protocol buffers	Documents published as part of webMethods messaging can be encoded and decoded as protocol buffers in addition to IData. When a document is encoded as a protocol buffer, Universal Messaging can filter on the header and body contents. When the document is encoded as IData, Universal Messaging can filter on the header contents only.
Exactly-once support when using webMethods Universal Messaging as the webMethods messaging provider.	Exactly-once processing can now be configured and performed from webMethods messaging triggers that receive documents from Universal Messaging.
Publish and wait when using webMethods Universal Messaging as the webMethods messaging provider.	Publish and wait, also called request-reply, can now be accomplished when Universal Messaging is the webMethods messaging provider. Previously, publish and wait functionality was only available when using webMethods Broker as the webMethods messaging provider or when publishing documents locally.

Removed Item	Replacement, if any
setenv.bat/sh	Integration Server no longer obtains settings from <i>Integration Server_directory</i> \instances\instance_name\bin\setenv.bat/sh. At startup, Integration Server obtains all configuration settings from wrapper.conf and custom_wrapper.conf.
Statistics field	The <b>Statistics</b> field is removed from the <b>Settings &gt; Caching &gt; <i>cache_manager</i> &gt; Add Cache</b> and <b>Settings &gt; Caching &gt; <i>cache_manager</i> &gt; <i>cache_name</i> &gt; Edit</b> screens and the configuration file. Now, the Ehcache Monitor automatically collects statistics.

Removed Item	Replacement, if any
<p>Support for webMethods Nirvana 7.x as a JMS Provider</p>	<p>Integration Server no longer supports using webMethods Nirvana as a JMS provider. For a list of supported JMS providers, see the <i>webMethods Integration Server Administrator's Guide</i>.</p>
Deprecated Item	Replacement, if any
<p>WmPKI package</p> <p>startup.bat/sh and shutdown.bat/sh scripts contained in the following directories: <i>Integration Server_directory</i>\instances\<i>instance_name</i>\bin and <i>Integration Server_directory</i>\bin</p> <p>installSvc.bat script located in the following directory: <i>Integration Server_directory</i>\instances\<i>instance_name</i>\support\win32</p> <p>server.bat/sh scripts contained in the following directories: <i>Integration Server_directory</i>\instances\<i>instance_name</i>\bin and <i>Integration Server_directory</i>\bin</p>	<p>The WmPKI package which provides functionality for using PKI profiles in conjunction with Integration Server has been deprecated. There is no replacement for the WmPKI package.</p> <p>The startup.bat/sh and shutdown.bat/sh scripts contained in the <i>Integration Server_directory</i>\instances\<i>instance_name</i>\bin and <i>Integration Server_directory</i>\bin directories are deprecated. These scripts are replaced by the startup.bat/sh and shutdown.bat/sh scripts respectively in the following directory: <i>Software</i> <i>AG_directory</i>\profiles\<i>IS_instance_name</i>\bin</p> <p>The installSvc.bat script located in the <i>Integration Server_directory</i>\instances\<i>instance_name</i>\support\win32 directory is deprecated. This is replaced by the service.bat file located in the following directory: <i>Software</i> <i>AG_directory</i>\profiles\<i>IS_instance_name</i>\bin</p> <p>The server.bat/sh scripts contained in the <i>Integration Server_directory</i>\instances\<i>instance_name</i>\bin and <i>Integration Server_directory</i>\bin directories are deprecated. These scripts are replaced by the startup.bat/sh scripts in the following directory: <i>Software</i> <i>AG_directory</i>\profiles\<i>IS_instance_name</i>\bin</p>
Changed Item	Description
<p>Use JSSE default setting</p>	<p>When you create a new HTTPS or HTTPS diagnostic port, the <b>Use JSSE</b> setting is set to <b>Yes</b> by default. For Integration Server version 9.6 and</p>

Changed Item	Description
Maximum Elements on Disk field	earlier, this was set to <b>No</b> by default. When upgrading to Integration Server version 9.7, existing ports are unaffected: If <b>Use JSSE</b> for the existing port is set to <b>No</b> , that port maintains its setting.  The Maximum Elements on Disk field on the Settings > Caching > <i>cache_manager</i> > Add Cache and Settings > Caching > <i>cache_manager</i> > <i>cache_name</i> > Edit screens and configuration files is now called Maximum Entries Local Disk. When upgrading to Integration Server version 9.7, the value for Maximum Elements on Disk is transferred to Maximum Entries Local Disk.
Default logging mode	When the AuditConfig.xml file is created, the logging mode is now set to “Synchronous” by default. In previous versions of Integration Server, the default logging mode was “Asynchronous”. In most cases, synchronous audit logging is faster.

## 9.0 Added, Removed, Deprecated, or Changed Built-In Services

A release is listed in this section only if changes occurred in that release.

### Release 9.9

Added Service	Description
pub.assets:getChecksums	Retrieves the checksums for assets, specifically namespace elements, on Integration Server.
pub.event.routing:send	Sends events to the messaging provider using Software AG Event Routing.
pub.event.routing:subscribe	Creates a subscription to a particular type of event using Software AG Event Routing.
pub.event.routing:unsubscribe	Removes a subscription to an event type previously subscribed to using the pub.event.routing:subscribe service.
pub.security.enterpriseGateway:customFilterSpec	Specification for services that can be invoked by the custom filter in Enterprise Gateway rules.
pub.xmldata:domNodeToXMLData	Converts a DOM node to a document (XMLData object).

Added Service	Description
pub.xmldata:getAttributes	Retrieves the attribute values from an XMLData object.
pub.xmldata:getInstanceTag	Retrieves the instance (xsi) tag values from an XMLData object.
pub.xmldata:getNamespaceTag	Retrieves the namespace tags values from an XMLData object.
pub.xmldata:setAttribute	Sets the value of an attribute in an XMLData object.
pub.xmldata:setInstanceTag	Sets an instance tag value in an XMLData object.
pub.xmldata.setNamespaceTag	Sets a namespace tag value in an XMLData object.
pub.xmldata:xmlDataToXMLString	Converts a document (XMLData object) to an XML String.
Deprecated Service	Replacement, if any
pub.event.nerv:eventToDocument	No replacement service because the pub.event.routing:subscribe service, which replaces the deprecated pub.event.nerv:subscribe service, handles the conversion of the incoming JMS message into an IS document (IData) now.
pub.event.nerv:send	pub.event.routing:send
pub.event.nerv:subscribe	pub.event.routing:subscribe
pub.event.nerv:unsubscribe	pub.event.routing:unsubscribe
Changed Service	Description
pub.client.ftp:getCompletedNotification	The publishable document type now specifies the IS_LOCAL_CONNECTION alias as the connection alias used to publish and retrieve instances of this document type.
pub.client.ftp:putCompletedNotification	The publishable document type now specifies the IS_LOCAL_CONNECTION alias as the connection alias used to publish and retrieve instances of this document type.
pub.schema:validate	The service can now validate XMLData against an XML document type.

Changed Service	Description
pub.remote:invoke	Integration Server now ignores the value of the \$close input parameter when a trigger service for a webMethods messaging trigger executes the pub.remote:invoke service, if the watt.server.trigger.reuseSession server configuration parameter is set to true.
pub.trigger:resumeProcessing	The <i>applyChangeAcrossCluster</i> input parameter now applies to webMethods messaging triggers that receive documents from Universal Messaging. Previously, the <i>applyChangeAcrossCluster</i> input parameter applied only to triggers that received documents from Broker.
pub.trigger:resumeRetrieval	The <i>applyChangeAcrossCluster</i> input parameter now applies to webMethods messaging triggers that receive documents from Universal Messaging. Previously, the <i>applyChangeAcrossCluster</i> input parameter applied only to triggers that received documents from Broker.
pub.trigger:suspendProcessing	The <i>applyChangeAcrossCluster</i> input parameter now applies to webMethods messaging triggers that receive documents from Universal Messaging. Previously, the <i>applyChangeAcrossCluster</i> input parameter applied only to triggers that received documents from Broker.
pub.trigger:suspendRetrieval	The <i>applyChangeAcrossCluster</i> input parameter now applies to webMethods messaging triggers that receive documents from Universal Messaging. Previously, the <i>applyChangeAcrossCluster</i> input parameter applied only to triggers that received documents from Broker.

## Release 9.8

Added Service	Description
pub.cache:getAll	Retrieves the values of the cached elements for the specified keys.
pub.cache:putAll	Populates a collection of elements in the cache with the specified key-value pairs.

Added Service	Description
pub.cache:removeAll	Removes the cached elements associated with a list of keys or, if no keys are specified, removes all elements from the cache.
pub.flow:getCallingService	Retrieves the service name and package name of the parent of the calling child service.
pub.event.nerv:subscribe	Subscribes to a particular type of event on the Network for Event Routing and Variation (NERV) and identifies the service that will act as the event handler.
pub.event.nerv:unsubscribe	Unsubscribes from an event type previously subscribed to using the pub.event.nerv:subscribe service.
pub.utils.messaging:migrateDocTypesTriggersToUM	Migrates the messaging provider for publishable document types and webMethods messaging triggers from webMethods Broker to webMethods Universal Messaging.
pub.utils:transcode	Transcodes data from one encoding to another.

Removed Service	Replacement, if any
pub.pki.pkcs7:sign	
pub.pki.pkcs7:verify	
pub.pki.smime:createSignedAndEncryptedData	
pub.pki.smime:createSignedData	
pub.pki.smime:processEncryptedData	
pub.pki.smime:processSignedData	

Changed Service	Description
pub.cache:remove	Added <i>useWriter</i> input parameter.
pub.flow:savePipelineToFile	Before writing the pipeline to a file, Integration Server verifies whether the provided path is specified in the allowedWritePaths parameter of the file access control configuration file (fileAccessControl.cnf). If it is not, Integration Server does not write the pipeline to a file.

Changed Service	Description
pub.publish:deliver	Added the ability to deliver documents with webMethods Universal Messaging.
pub.publish:deliverAndWait	Added the ability to publish documents with webMethods Universal Messaging.
pub.publish:envelope	webMethods Universal Messaging now supports the read-only parameter <i>destID</i> .
pub.string:bytesToString	Added <i>ignoreBOMChars</i> input parameter.

## Release 9.7

Added Service	Description
pub.publish:syncToProvider	Synchronizes one or more publishable document types with their associated provider definitions by pushing the publishable document types to the associated message provider.

Removed Service	Replacement, if any
pub.event.eda:send	pub.event.nerv:send

Deprecated Service	Replacement, if any
pub.event.eda:eventToDocument	pub.event.nerv:eventToDocument
pub.publish:syncToBroker	pub.publish:syncToProvider
pub.pki.pkcs7:sign	
pub.pki.pkcs7:verify	
pub.pki.smime:createSignedAndEncryptedData	
pub.pki.smime:createSignedData	
pub.pki.smime:processEncryptedData	
pub.pki.smime:processSignedData	

Changed Service	Description
pub.event.nerv:send	Added new <i>encode</i> input parameter.

Changed Service	Description
pub.flow:getTransportInfo	Service can now return transport information for services invoked by webMethods messaging triggers because the document reference output parameter uses pub.flow:transportInfo which has been updated to include webMethods messaging transport information.
pub.flow:transportInfo	Added new <i>messaging</i> field to contain transport information for webMethods messaging triggers.
pub.publish:publishAndWait	Added the ability to publish documents to webMethods Universal Messaging.
pub.publish:reply	Added the ability to reply to documents via webMethods Universal Messaging.
pub.publish:waitForReply	Added the ability to wait for reply documents routed through webMethods Universal Messaging.
pub.trigger:createTrigger	Modified the service so that it can be used to create webMethods messaging triggers that subscribe to documents routed through webMethods Universal Messaging. Added the new input parameters <i>properties\executeUser</i> and <i>conditions\messageTypeFilterPairs\providerFilter</i> .

## Release 9.6

Added Service	Description
pub.cache:search	Searches through an indexed cache and returns the results.
pub.flow:invokeService	Dynamically invokes any Integration Server public service and optionally returns the output from the invoked service in the pipeline for pub.flow:invokeService.
pub.flow:setResponse2	Forces a specified response to be returned by the Integration Server to a calling process (such as a browser or application server). Replaces pub.flow:setResponse.
pub.security.xml:signXML	New <i>addSignatureAsLastElement</i> input parameter to indicate whether Integration Server should add the signature element as the last child of the root.
pub.soap.handler:getInitialSoapRequest	Gets the initial SOAP request message from a given

Added Service	Description
pub.soap.utils:callbackServiceSpec	message context. Defines the input signature for an outbound callback service.

Removed Service	Replacement, if any
pub.event.eda:send	pub.event.nerv:send

Deprecated Service	Replacement, if any
pub.flow:setResponse	pub.flow:setResponse2

Changed Service	Description
pub.client:http	Added new key <i>Digest</i> to the <i>auth\type</i> parameter.  If a value for <i>connectTimeout</i> is not specified, Integration Server uses the value specified for the <i>watt.net.timeout</i> server configuration parameter. If no value is specified for <i>watt.net.timeout</i> , the server will wait for the timeout value defined by the operating system before terminating the connection request.
pub.client:soapClient	Added new key <i>Digest</i> to the <i>auth\transport\type</i> parameter.
pub.flow:setResponse	Added new parameters <i>responseString</i> and <i>responseBytes</i> . Deprecated parameters <i>response</i> , <i>string</i> , and <i>bytes</i> .
pub.soap.wsrn:createSequence	Both the <i>auth &gt; message</i> input parameter and <i>sequenceKey</i> output parameter were removed.

## Release 9.5

Added Service	Description
pub.event:auditError	Specification for audit error event handlers.
pub.soap.wsrn:createSequence	Both the <i>auth &gt; message</i> input parameter and <i>sequenceKey</i> output parameter were removed.

Changed Service	Description
pub.client.oauth.executeRequest	Removed Google, Facebook, and Twitter as options for the <i>provider</i> parameter. Possible options for the <i>provider</i> parameter are now IntegrationServer and Other.
pub.flow:transportInfo	Added new keys <i>clientIP</i> and <i>clientPort</i> to the <i>HTTP ipInfo</i> parameter.
pub.publish:publish	Added the ability to publish documents to webMethods Universal Messaging.
pub.security.xml:signXML	Added <i>signatureAlgorithm</i> and <i>digestAlgorithm</i> as new input parameters. Possible values for each field are SHA1 (the default), SHA256, SHA384, and SHA512.

## 10.0 Added, Removed, Deprecated, or Changed Parameters

A release is listed in this section only if changes occurred in that release.

### Release 9.9

Added Parameter	Description
watt.core.validation.skipNoNamespaceReference	Indicates whether or not Integration Server skips validation of references to elements that are not namespace qualified made from within a namespace qualified element during XML validation against a schema.
watt.net.jsse.client.enabled CipherSuiteList	Specifies, using a comma-separated list, the cipher suites used on JSSE sockets that are used while making outbound HTTPS requests.
watt.net.ssl.client.useJSSE	Controls the use of JSSE for all of the outbound HTTPS connections from Integration Server.
watt.net.jsse.server.enabled CipherSuiteList	Specifies, using a comma-separated list, the cipher suites used on Integration Server ports that use JSSE and handle inbound requests.
watt.server.audit.failFastLoggers	Specifies a comma-separated list of the loggers that can enter into fail-fast mode. If this parameter is empty and fail-fast is enabled in the ISCoreAudit functional alias, all synchronous audit loggers with a database destination will have fail-fast capability.

Added Parameter	Description
watt.server.serverlogRotateSize	Specifies the file size at which Integration Server rolls over the server.log file.
watt.server.SOAP.ignoreMissingResponseHeader	Determines whether missing required headers in a SOAP response results in an error.
watt.server.SOAP.treatNilAsNull	Indicates whether or not Integration Server generates an @xsi:nil field for an element for which the xsi:nil attribute is set to true.
watt.server.trigger.preprocess.monitorDatabaseOnConnectionException	Indicates whether Integration Server schedules a system task to monitor the document history database when a ConnectionException causes a transient error occurs during trigger preprocessing.

Changed Parameter	Description
watt.net.jsse.server.enabledProtocols	Modified to include “SSLv2Hello” as a default value.
watt.server.soap.decodeElementWithPrefix	Extended to work with the decoding of SOAP response messages received by a web service connector and with the pub.xml:xmlNodeToDocument service Previously, this parameter affected the decoding of SOAP request message received by a web service provider only.
watt.server.trigger.preprocess.suspendAndRetryOnError	This server configuration parameter now applies to all trigger types and messaging providers. Previously, the behavior provided by this property applied only to webMethods messaging triggers that received messages from webMethods Broker. Now, this property also works with webMethods messaging triggers that receive messages from Universal Messaging as well as JMS triggers.

## **Release 9.8**

Added Parameter	Description
watt.cachedirective.exclude.packages	Specifies a comma-separated list of packages whose Dynamic Server Pages you want the browser to cache.
watt.debug.warnOnClasspathError	Specifies whether or not a warning message about a missing classpath entry will be written to standard out.

Added Parameter	Description
watt.net.jsse.client.enabledProtocols	Specifies the SSL protocol versions that Integration Server supports when acting as a client making outbound requests.
watt.net.jsse.server.enabledProtocols	Specifies the SSL protocol versions that Integration Server supports when acting as a server handling inbound requests.
watt.net.ssl.randomAlgorithm	Identifies the random algorithm name used by Integration Server on HP-UX.
watt.net.ssl.server.handshake.maxVersion	Specifies the maximum version of the SSL protocol that Integration Server supports when acting as the server handling inbound requests.
watt.net.ssl.server.handshake.minVersion	Specifies the minimum version of the SSL protocol that Integration Server supports when acting as the server handling inbound requests.
watt.server.cluster.action.errorOnStartup	Specifies how Integration Server responds when an error at start up prevents Integration Server from joining the cluster.
watt.server.auth.oauth.accessToken.useHeaderFields	Specifies whether Integration Server performs OAuth authentication when an inbound HTTP/S request includes an access_token in the header fields.
watt.server.auth.oauth.accessToken.useQueryParameters	Specifies whether Integration Server performs OAuth authentication when an inbound HTTP/S request includes an access_token in the query parameter
watt.server.enableHotDeployment	This is an internal property.
watt.server.event.nerv.subscribeService.user	Specifies the default user who will invoke the service specified in the pub.event.nerv:subscribe built-in service when an event is received for a subscribed event type.
watt.server.hotDeploymentTimeout	This is an internal property.
watt.server.hotDeploymentAutoRecover	This is an internal property.

Added Parameter	Description
watt.server.json.allowUnquotedFieldNames	Specifies whether or not unquoted field names are allowed in JSON text sent to the pub.json:jsonStringToDocument and pub.json:jsonStreamToDocument services. This parameter also determines whether document types created from JSON text contains fields that correspond to unquoted fields as well as quoted fields
watt.server.json.quoteFieldNames	Specifies whether or not the pub.json:documentToJSONString service encloses all generated JSON field names in double quotes.
watt.server.SOAP.generateRequiredTags	Specifies whether or not a SOAP message generated by Integration Server includes empty element tags for required parameters for which a value was not supplied at run time.
watt.server.SOAP.hideEPRHostInFault	Hides the endpoint reference host name and IP address details in the SOAP fault.
watt.server.xml.encoding	Specifies the encoding that Integration Server must use when processing incoming XML files.
watt.server.xml.xmlNodeToDocument.makeArrayforWS	Specifies how Integration Server decodes duplicate elements contained in an anyType element.

Removed Parameter	Replacement, if any
watt.security.pki.jnditimeout	
watt.security.pki.performSync	

## **Release 9.7**

Added Parameter	Description
watt.server.audit.dbEncoding	Specifies the character set used by the audit logging database.
watt.server.audit.schemaName	Specifies the user name of the ISCoreAudit JDBC functional alias that Integration Server should use while requesting metadata for the audit logging database.
watt.server.auth.session.retainJaasSubject	Specifies whether Integration Server should retain authentication credentials as part of a session.

Added Parameter	Description
watt.server.http.preserveUriReservedChars	Specifies whether Integration Server should decode percent-encoded URI paths in requests before evaluating URI paths.
watt.server.ssl.keyStoreAlias	Name of the keystore alias for the Integration Server keystore that contains the information needed to establish an SSL connection with the JMS provider.
watt.server.ssl.trustStoreAlias	Name of the truststore alias for the Integration Server truststore that contains the information needed to establish an SSL connection with the JMS provider.
watt.server.statsLogRotateInterval	Specifies the length of the log recycle interval (in minutes) for the stats.log file.
watt.ssh.jsch.ciphers	Specifies a list of ciphers that JSch supports by default.
watt.ssh.jsch.logging	Enables JSch logging.

Removed Parameter	Replacement, if any
watt.server.logRotateInterval	<p>watt.server.statsLogRotateInterval</p> <p><b>Note:</b> The watt.server.logRotateInterval server configuration parameter was reintroduced for the following fixes. When reintroduced, the scope of the parameter changed so that it affected only the stats.log:</p> <ul style="list-style-type: none"> <li>- IS_9.0_SP1_Core_Fix6</li> <li>- IS_9.5_SP1_Core_Fix3</li> <li>- IS_9.6_Core_Fix2</li> </ul>

Changed Parameter	Description
watt.server.jms.trigger.concurrent.primaryThread.pollingInterval	Modified to remove the upper limit of 10000 milliseconds.
watt.server.jms.trigger.serial.primaryThread.pollingInterval	Modified to remove the upper limit of 10000 milliseconds.
wm.mobile.datasync:synchronize	Added new <i>filter</i> input parameter to filter the data that Mobile Support returns to the requesting mobile application.

## Release 9.6

Added Parameter	Description
watt.server.diagnostic.tabular	Specifies whether Integration Server should generate diagnostic files in tabular format.
watt.server.http.x-frame-options	Controls how Integration Server is to handle the X-Frame-Options attribute in response headers.
watt.server.jdbc.datadirect.snoop.default	Specifies the default settings for the DataDirect Snoop tool for DataDirect Connect JDBC drivers.
watt.server.jdbc.datadirect.spy.default	Specifies the default settings for the DataDirect Spy diagnostic feature for DataDirect Connect JDBC drivers.
watt.server.json.optimizeForUniqueKeys	Changes to watt.server.json.optimizeForUniqueKeys no longer go into effect immediately. You must restart Integration Server in order for changes to this property to take effect.
watt.server.setResponse.pre82Mode	Specifies the order in which the pub.flow:setResponse service looks for and uses the deprecated input parameters when neither of the input parameters <i>responseString</i> or <i>responseBytes</i> are provided.
watt.server.soap.decodeElementWithPrefix	Specifies whether Integration Server recognizes document types that have defined XML namespace URIs but do not have prefixes associated with each namespace.
watt.server.SOAP.setNamespaceURIsToRoot	Specifies how Integration Server declares XML namespaces in a SOAP response.
watt.server.SOAP.warnOnPartValidation	When creating a web service descriptor from a WSDL document, indicates whether Integration Server should treat message parts that are defined by the type attribute instead of the element attribute as a warning and not an error.
wm.mobile.datasync.specs:downloadSpec	Specification for the flow service used to send data from a backend database to a mobile device in a webMethods Mobile Support data synchronization solution.
wm.mobile.datasync.specs:uploadSpec	Specification for the flow service used to send data to webMethods Mobile Support in a mobile data synchronization solution.

Added Parameter	Description
wm.mobile.datasync:synchronize	Synchronizes data received from mobile devices and backend applications in a webMethods Mobile Support data synchronization solution.

Changed Parameter	Description
watt.server.centralusers.shutdownOnError	Changed default setting to false.
watt.server.http.returnException	Changed default setting to false.

## **Release 9.5**

Added Parameter	Description
watt.server.http.jsonFormat	Specifies how Integration Server handles JSON content in HTTP client requests.
watt.server.json.optimizeForUniqueKeys	Controls how Integration Server parses JSON documents based on whether the document has unique keys or duplicate keys.
watt.server.SOAP.encodeXSITypeValue	Indicates whether Integration Server should include the xsi:type attribute and its value for an element of xsd:anyType in SOAP requests and responses.
watt.server.SOAP. useStringforAnyTypewithSimpleValue	Specifies how Integration Server decodes an xsd:anyType element with simple content in SOAP responses.
watt.server.threadKill. interruptThread.enabled	Specifies whether Integration Server should interrupt a service for which a timeout is triggered.
watt.server.thread.aging.limit	Specifies the length of time, in minutes, a thread can remain in the thread pool. Note that the value for watt.server.thread.usage.limit must also be reached before the thread is removed from the pool.
watt.server.thread.usage.limit	Specifies the maximum number of times a pooled thread can be used. Note that the value for watt.server.thread.aging.limit must also be reached before the thread is removed from the pool.

## 11.0 Added, Removed, Deprecated, or Changed APIs

A release is listed in this section only if changes occurred in that release.

### Release 9.7

Added API	Description
<code>com.softwareag.mobile.data.sync.Filter</code>	Defines filter criteria for Mobile Support to use in mobile data synchronization requests to download and synchronize a subset of data.
<code>com.softwareag.mobile.data.client.Context</code>	Added new <code>getDeviceType</code> method to return the type of mobile device for use by the Mobile Support Client.
<code>com.wm.app.b2b.client.JSONClient</code>	Extends <code>com.wm.app.b2b.client.Context</code> with <code>invoke</code> and <code>invokeThreaded</code> methods that accept JSON text.

Changed API	Description
<code>com.softwareag.mobile.data.sync.DataSynchronization</code>	Added new <code>filter</code> parameter to the <code>download()</code> method to filter the data that Mobile Support returns to the Mobile Support Client.
<code>com.softwareag.mobile.data.client.Context</code>	Added new <code>conProtocolType</code> parameter to the <code>setInitializeConf()</code> method to specify the type of communication protocol (HTTP or HTTPS) that the Mobile Support Client should use to connect to the Integration Server that hosts Mobile Support.

### Release 9.6

Added API	Description
<code>com.softwareag.mobile.data.client.Context</code>	Creates a context for mobile applications that use the webMethods Mobile Support Client to synchronize data with a backend database.
<code>com.softwareag.mobile.data.sync.DataSynchronization</code>	Synchronizes data between mobile applications and a backend database in a webMethods Mobile Support data synchronization solution.
<code>com.softwareag.mobile.data.sync.ResponseSet</code>	Encapsulates a response to a mobile data synchronization request.

Added API	Description
com.softwareag.mobile.data.sync. RowStructure	Defines the structure of the data to be synchronized in a mobile data synchronization solution.

## 12.0 Copyright Information

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## 13.0 Support

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