webMethods CloudStreams 10.3 Readme

October 2018

This file contains important information you must read before using webMethods CloudStreams 10.3. You can find system requirements, user documentation, and installation and upgrade instructions on the [Documentation website](#) or the [TECHcommunity website](#). At those locations, you can also find suite-related 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.

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 <u>Empower website</u>.

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 <u>Empower website</u>.

CloudStreams Server

- WST-3895
  When a CloudStreams connection referenced by a CloudStreams connector listener explicitly references a proxy configuration, or when a default proxy configuration is available in Integration Server Administrator > Settings > Proxy Servers, and the configured proxy server throws a Basic Authentication challenge to the CloudStreams connector listener, the listener fails to enable.
  There is currently no workaround for this issue.

- WST-3910
  If a user adds a custom header while updating the subscription details for a connector listener, CloudStreams Server ignores it and does not send it in the request.
  There is currently no workaround for this issue.

- WST-3917
  Errors occur while applying OAuth v1.0a alias configurations from a source system to a target system. Because of the errors, OAuth aliases are not listed on the target system, which includes the newly created OAuth aliases. This is because update to the Access Token Secret of the respective OAuth aliases fails on the target system.
  There is currently no workaround for this issue.

- WST-3918
  When a provider is selected in the Integration Server Administrator, CloudStreams page, the provider label text for the selected provider is not visible.
  There is currently no workaround for this issue.

- WST-3921
  The "Notify Meta Channel Events" configuration option is available for a CloudStreams connector listener with the connection type defined as "Bayeux HTTP Long Polling" in the Integration Server Administrator, irrespective of whether the "Logging Invocation" action is configured. However, meta channel events are logged in the server log only if the "Logging Invocation" action is

configured.

There is currently no workaround for this issue.

- WST-3925

  If a connector listener is enabled and the user deletes the actionable service from the Service Development perspective in Software AG Designer, CloudStreams does not notify that the actionable service is not available.

  There is currently no workaround for this issue.

- WST-3930

  Subscription errors for connector listeners with "Bayeux HTTP Long Polling" connection type do not appear on the CloudStreams Administration page if the subscription has failed and the listener is enabled. The errors may be due to connection related issues, wrong subscriber configurations such as invalid or missing PushTopic name, missing or insufficient access permissions, or exceeding the concurrent user limit for the user or organization.

  There is currently no workaround for this issue.

- WST-3963

  "Enable Debug" option does not work for CloudStreams Streaming configuration.

  Enabling the "Enable Debug" option for the CloudStreams Streaming configuration does not log additional connectivity-related information in the server logs. This is because after upgrading the cometD client library adoption, the "Enable Debug" option can no longer be supported.

  There is currently no workaround for this issue.

CloudStreams Development

- WCD-1156

  Assignment from services is not removed from the Connector XML file when the service is deleted from a perspective other than CloudStreams Development.

  When Rest elements such as Parameters, Headers, Body, and Connection properties have assignments from a service and the service is deleted from a perspective other than CloudStreams Development, the user interface and the Connector XML file still show the assignments.

  Workaround: Remove the assignments (*Unassign*) manually.

- WCD-1739

  When a connector listener is either enabled or unlocked for edit, the connector listener fields are disabled in the Service Development perspective in Software AG Designer. If multiple Actions are configured, the user is not able to select the Actions to view the details.

  There is currently no workaround for this issue.

- WCD-1747
  While creating a Schema type abstract object in a SOAP connector, the "Finish" button is not enabled after selecting the service on the "Assign services" page.
  There is currently no workaround for this issue.

3.0   Usage Notes

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

CloudStreams Server

- A CloudStreams REST resource supports only one type of message builder and formatter for all response codes.

- CloudStreams does not support the RPC/encoded style WSDL.

- CloudStreams does not support the RPC/literal style WSDL.

- CloudStreams does not support sharing of Connector Virtual Services, Virtual Services, and Policies across nodes in a clustered setup. These artifacts should be manually deployed to a clustered node on need basis.

- CloudStreams SOAP services support sending an attachment through MTOM as a base64 encoded input. The support to wrap an attachment as a XOPObject type and sending large attachments is not supported.

- For SOAP based connectors, if the WSDL has multiple bindings for a given service, CloudStreams does not support changing multiple URLs dynamically to connect to the service endpoint.

- webMethods Mediator and CloudStreams products are not compatible. The products must be installed on separate webMethods Integration Server instances.

- While enabling a CloudStreams connector listener, if there are connectivity issues such as network and proxy issues while connecting to the streaming API endpoint, the listener automatically goes into retry mode and attempts to connect to the API endpoint until the configured connection timeout is exhausted. The connector listener inherits the timeouts (Connection TimeOut and Socket Read Timeout) from the connector connection. In case the timeout is set to a large value, the update to the connector listener "enabled" status takes quite a while to reflect in the Integration Server Administrator. This may convey an impression to the user that nothing is happening. To confirm the processing, the user should check the server logs with "Streaming" logging component configured to *Debug* or above, or alternatively reduce the timeout values to speed up the "enabled" status update for the connector listener.

- When a user disables a CloudStreams connector listener, a disconnect call is sent to the streaming provider. However, in the server logs, a META_CONNECT event is observed soon after the

META_DISCONNECT event. This is because when a disconnect is sent to the streaming provider, the provider server also wakes up the long poll that may be outstanding, and replies with a connect message that may reach the client after the disconnect reply message. This is expected behavior.

- CloudStreams connector listeners do not have any exclusive support in a clustered setup. The listener behaves in the same way as it behaves in a stand-alone Integration Server setup.

CloudStreams Development

- CloudStreams Provider projects developed using the older plug-in, that is, v9.12 and earlier, cannot be migrated or upgraded to the v10.2 plug-in. You must create new projects.

- While creating a connector, if the connector ID contains dots (.), nested or hierarchical folders will be created. For example, if the connector ID is a.b.c.d.e.f.g, nested folders will be created named as a, b, c, d, e, f, and g. It is recommended to have as less dots as possible in the connector ID in order to have a smaller hierarchical structure in the Package Navigator view in the Service Development perspective.

- While creating a connector using a Swagger file, authentication schemes are not parsed. You must add the authentication schemes after creating the connector.

- You will not be able to delete a provider package if it is published. You must first *unpublish* the provider package and then delete it.

- You will not be able to update the Resource Group reference if a provider package is published. You must first *unpublish* the provider package and then update the Resource Group reference.

- GET, PUT, POST, DELETE, and PATCH are the only methods supported while creating a REST resource. If you are creating a connector using a Swagger file, any other method available in the Swagger file will not be supported.

- In order to view the newly added assets, you must refresh the package from the Package Navigator view in the Service Development perspective.

- In order to import a Provider folder, if the Provider package is created on a different server, you must have access rights on that server.

- In order to import a published Provider package, *nsName* must follow the following namespace convention: <connector_id>.<service_name>. If this convention is not followed, the Provider package can still be imported, but a few functionalities might not work after import.

- Assignment from services is not removed from the Connector XML file when the service is deleted from a perspective other than CloudStreams Development. When Rest elements such as Parameters, Headers, Body, and Connection properties have assignments from a service and the service is deleted from a perspective other than CloudStreams Development, the user interface and the Connector XML file still show the assignments. These assignments will have to be removed (*Unassign*) manually.

- Adding or deleting a user will not reflect automatically on the "Run As User" list for a "Service Invocation" configuration on the "Event" tab of an already open listener node. The listener node must be closed and reopened to reflect the updated user list. Additionally, if the "Service Invocation" action has been configured to be applied on the incoming events and the configured "Run As User" user has been deleted, then the "Run As User" value has to be manually reconfigured.

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.

CloudStreams Server

Release 10.3

- WST_10.2_Fix2
- WST_10.1_Fix8
- WST_9.12_Fix6

Release 10.2

- WST_10.1_Fix4
- WST_9.12_Fix5
- WST_9.10_Fix11
- WST_9.9_Fix6

Release 10.1

- WST_9.12_Fix3

Release 9.12

- WST_9.10_Fix4

Release 9.10

- WST_9.9_Fix2

Release 9.9

- WST_9.8_Fix2

Release 9.8

- WST_9.7_Fix1

CloudStreams Development

Release 10.3

- WCD_10.2_Fix1
- WCD_10.1_Fix2
- WCD_9.12_Fix2
- WCD_9.10_Fix4

Release 10.2

- WCD_10.1_Fix1

Release 9.12

- WCD_9.10_Fix2

Release 9.8

- WCD_9.7_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.

CloudStreams Server

Release 10.3

- WST-3634
  Migration of CloudStreams user assets to v10.2 is not supported.
  The *pub.cloudstreams.migration:migrate* service does not migrate user assets to v10.2. The following error is observed when this service is run on CloudStreams v10.2 with a package containing assets created on an older version:
  "No CloudStreams migrator found for the package."
  There is currently no workaround for this issue.

- WST-3646
  "SignatureDoesNotMatch" error appears while running an Amazon S3 cloud connector service.
  This error appears if the cloud connector service involves redirection and is created using AWS

Signature Version 3.
There is currently no workaround for this issue.

- WST-3869
  CloudStreams is not able to handle the parenthesis in query parameters and the request call fails.
  CloudStreams Server is not able to encode the URI containing the parenthesis and due to this,
  requests are failing.
  This issue is resolved.

- WST-3884
  Cloud connector service execution fails while sending a JSON payload, which contains German
  characters. This is observed for back ends that use AWS Signature Version 4 for authentication.
  This issue is resolved.

Release 10.2

- WST-3269
  Multiple errors are observed while executing cloud connector services concurrently.
  For some SaaS back ends, errors such as "Read timed out" and "Premature end of Content" are
  observed while invoking cloud connector services at the same time. This issue is found in the
  Apache HTTP library, which is currently used in CloudStreams.
  This issue is resolved.

- WST-3241
  Null JSON response is not supported by CloudStreams server.
  If a REST service returns Null as a JSON response, CloudStreams does not recognize or parse the
  Null JSON response.
  This issue is resolved.

- WST-3344
  CloudStreams Analytics dashboard does not display all the event records for a given date and time.
  In the CloudStreams Analytics dashboard, the grid in the Event tab does not show all the records
  for a given date and time. This is because MashZone NextGen considers date columns as dimension
  columns, as far as aggregation is concerned.
  This issue is resolved.

- WST-3352
  Provider charts in the API Usage tab of the CloudStreams Analytics dashboard also display data for
  inbound invocations.
  The provider charts should display data corresponding to the outbound (cloud connector service)
  invocations only. However, the charts also display data for inbound invocations, with the provider
  names being displayed as blank values.
  This issue is resolved.

- WST-3350

Cloud connector services, which allow multiple operations/objects selection, do not persist duplicate operations/objects in the cloud connector service node.

From v10.1, the CloudStreams server allows one resource/operation that can take/return multiple operations/objects in the request or response. For example, in the OData connector, you can select an operation as *changeset*, which allows you to select multiple operations/objects. For the *changeset* operation, if you select a combination of "create" and "Account" multiple times, even then it does not get stored in the cloud connector service node.

This issue is resolved.

- WST-2819

CloudStreams fails to parse a response when the response formatter/builder is configured as "binary", and the request Accept header is set to "application/json".

When the response formatter/builder for a cloud connector service is configured to "binary", and the Accept header is configured to "application/json", CloudStreams fails to parse the resulting back end response.

This issue is resolved.

Release 10.1

- WST-3213

Issue while adding a custom field as document.

Cloud connector service allows adding a custom field of type Document. When a custom field data type Document is added to a business object, and the field does not have any child fields, the field appears as a string in the cloud connector service signature.

This issue is resolved.

- WST-3165

CloudStreams fails to encode single quotes (') inside a querystring parameter.

This issue occurs when you invoke back end queries that have single quotes, to quantify certain entity values as part of the filtering criteria, and the criteria is a part of the query string parameter. For example, a query that returns details of an account object for a certain id match is as follows: *Select id from account where id = '84'*. This issue prevents encoding the single quote ('), resulting in service execution failure.

This issue is resolved.

- WST-3165

CloudStreams fails to encode single quotes (') inside a querystring parameter.

This issue occurs when you invoke back end queries that have single quotes, to quantify certain entity values as part of the filtering criteria, and the criteria is a part of the query string parameter. For example, a query that returns details of an account object for a certain id match is as follows: *Select id from account where id = '84'*. This issue prevents encoding the single quote ('), resulting in service execution failure.

This issue is resolved.

- WST-3195

CloudStreams does not throw a fault in case of a stream response, if the cloud connector service

execution fails with client side fault issues.

CloudStreams does not throw a fault in case of a stream response if the cloud connector service execution fails with client side fault issues. Instead of fault, the service execution returns a response with a null body.

This issue is resolved.

- WST-3192

  Error occurred while enabling the connection.

  While enabling the connection, the following errors are found:

  Error occurred while enabling the connection: null and *Connections alias already exist*.

  This issue is resolved.

- WST-2907

  Some of the alert messages shown in the CloudStreams Admin screens are not localized.

  The connectors enable, disable, and delete alert messages are not localized. The alert message shown while enabling the wire logging is also not localized.

  This issue is resolved.

Release 9.12

- WST-3149

  CloudStreams connector uses the default proxy server alias of Integration Server even if the default proxy server alias is disabled.

  Now CloudStreams does not use the default proxy server alias if it is disabled in Integration Server and skips the proxy route for a connection, if the host name of the connection Provider URL is present in the Integration Server "Proxy Bypass" list.

  This issue is resolved.

Release 9.10

- WST-2378

  CloudStreams does not support creating cloud connector services that have an array of JSON objects without the key/root in the request payload.

  In the absence of a parent root for the collection, it is not possible to represent the objects under the request payload. Because of this limitation, it is not possible to create or invoke services, which expect a root less array in the request payload.

  This issue is resolved.

- WST-2644

  Cloud connector services, which require mapping of parameters, fail to run.

  For a REST based connector, a parameter value cannot be assigned to another parameter by specifying a parameter to parameter mapping. This is because CloudStreams does not support parameter to parameter mapping.

  This issue is resolved. Parameter to parameter mapping is now supported.

- WST-2638

  CloudStreams is unable to handle excludeRoot properties in Request signature using XML.

For a REST based connector that communicates in XML, if the "excludeRoot" option is set to "true", then while sending a Request to the back end, CloudStreams is not able to exclude the root of the Request.
This issue is resolved.

▪ WST-2639
Cloud Connector service signature does not populate the picklist values.
Cloud Connector service signature does not populate the picklist values even if the schema element has enumeration defined.
This issue is resolved. Now cloud connector service signature field's picklist attributes are populated with enumerated values available from the schema.

Release 9.9

▪ WST-2555
Authentication failure when Twitter resources expect messages to be sent as a query parameter.
Some Twitter resources expect messages to be sent as a query parameter. While using such resources, if the messages sent contain a space, authentication failure is observed.
This issue is resolved.

▪ WST-2524
User is not able to see service references or dependents for CloudStreams artifacts.
While checking dependents or references for CloudStreams assets using Software AG Designer, the user is not able to see the service references or dependents.
This issue is resolved.

Release 9.8

▪ WST-2126
Connections after given timeouts are not automatically refreshed using OAuth refresh tokens.
If OAuth refresh tokens are provided and session management is turned on, CloudStreams connections are not refreshing the access tokens automatically using the provided refresh tokens.
This functionality may work with only the Salesforce provider and without using any proxies in the connection.
Workaround: Manually update the access tokens with the latest valid access tokens.

▪ WST-2142
Virtual service deployment errors are reported by CloudStreams Server at startup, when a cluster is enabled.
In a clustered environment, at server startup, when a CloudStreams Server node joins a cluster, for each virtual service deployed on that node, if there is a corresponding entry in the shared virtual services cache, the CloudStreams Server node attempts to undeploy the existing deployed service, and thereafter attempts to redeploy the same service using the shared cache data for that service entry. Undeploy and subsequent redeploy of the connector virtual service fails with errors reported in the server logs.
Extract of the error for the default SOAP connector virtual service WmCloudStreams.SoapVS:
[CLS.0050.0212E] Unknown exception deploying virtual service: WmCloudStreams.SoapVS Cause: 0

[CLS.0050.0048E] Error getting endpoints for service:WmCloudStreams.SoapVS, Cause: Unknown exception deploying virtual service: WmCloudStreams.SoapVS Cause: 0
[CLS.0030.0356E] VirtualServiceDeployer - unable to get endpoints for WmCloudStreams.SoapVS, caught this: type (com.softwareag.pg.exceptions.PGException), msg (Error getting endpoints for service:WmCloudStreams.SoapVS, Cause: Unknown exception deploying virtual service: WmCloudStreams.SoapVS Cause: 0)
[CLS.0030.0363W] VirtualServiceDeployer.redeployUndeployedIfNecessary - service (WmCloudStreams.SoapVS) caught this: type (com.softwareag.pg.exceptions.DeploymentException) message (VirtualServiceDeployer - unable to get endpoints for WmCloudStreams.SoapVS, caught this: type (com.softwareag.pg.exceptions.PGException), msg (Error getting endpoints for service:WmCloudStreams.SoapVS, Cause: Unknown exception deploying virtual service: WmCloudStreams.SoapVS Cause: 0))

This error is benign. Syncing up virtual service from shared cache is not supported in CloudStreams, so the sync up action performed by the node is redundant.

CloudStreams Development

Release 10.3

- WCD-1593
  Multiple connectors having same IDs and located in different servers cannot be opened.
  This issue is resolved.

Release 10.2

- WCD-1318
  Server name changes when a new entry (user) is added to the Integration Server list.
  In Preferences > Integration Servers, adding a new Integration Server with a different user but with the same host name and port shows only one Integration Server.
  This issue is resolved.

- WCD-1341
  Errors observed while creating a connector, if the connector name has spaces.
  This issue is resolved.

- WCD-1348
  Validation errors are observed while creating a connector from a Swagger file.
  While creating a connector using a Swagger file, validation errors are observed in certain cases where the name/id of a connector, resource name, parameter name, header name, and property name contains characters, which are not supported, for example, spaces or special characters in the name.
  This issue is resolved.

Release 9.9

- WCD-716

  For a cloud connector service, fields that have the *recordList* parameter populated, do not show up as documents.

  While creating a cloud connector service, once an operation and object are selected, the next screen shows a list of fields. While choosing a field, if the field has the *recordList* parameter populated, it should show up as a Document. Currently these fields show up as String fields.

  This issue is resolved.

- WCD-724

  Errors that are related to creating or editing a Cloud Connector Service are not displayed in a dialog box.

  While creating or editing a Cloud Connector Service, if there is any error, the error is logged only in the error logs and not displayed in a dialog box. As a result, the user is not informed about the problem.

  This issue is resolved. The error information now appears in a dialog box.

Release 9.8

- WCD-612

  Older connectors do not appear in the Integration Server Administration page even after a successful deployment from Designer.

  The following errors are observed in the Integration Server error log:

  com.wm.app.b2b.server.ServiceException: java.io.FileNotFoundException:
  C:\SoftwareAG\profiles\IS_default\workspace\temp\tempDocTypeDir\sqs.xsd (The system cannot find the file specified)
  Caused by: com.wm.app.b2b.server.ServiceException: java.io.FileNotFoundException:
  C:\SoftwareAG\profiles\IS_default\workspace\temp\tempDocTypeDir\sqs.xsd (The system cannot find the file specified)
  Caused by: java.io.FileNotFoundException:
  C:\SoftwareAG\profiles\IS_default\workspace\temp\tempDocTypeDir\sqs.xsd (The system cannot find the file specified).

  This issue is 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.

CloudStreams Server

Release 9.9

▪ The *webMethods CloudStreams FAQ and Troubleshooting* guide available at http://documentation.softwareag.com/ provides FAQs and troubleshooting tips.

Release 9.8

▪ Software AG documentation is now no longer available on the Software AG installer from this release. You can access all Software AG documentation on the Documentation website.

CloudStreams Development

Release 10.1

▪ The CloudStreams Provider Project chapter in the context-sensitive webMethods CloudStreams Development Help has been completely rewritten.

Release 9.8

▪ Software AG documentation is no longer available on the Software AG installer. You can now access all Software AG documentation on the Documentation website.

7.0   Terminology Changes

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

CloudStreams Development

Release 10.2

Old Term	New Term
Login/Logout Sequence	Start/Stop Sequence
CFG Parameter	Internal

Release 9.8

Old Term	New Term
Group	Provider Group
Connector Package	Package
Plug-In Content	Connector Content

8.0   Added, Removed, Deprecated, or Changed Items

This section lists 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.

CloudStreams Server

Release 10.3

Added Item	Description
Support for streaming at the connector level	You can now use a CloudStreams connector to connect to streaming APIs. You can create a CloudStreams connector listener, select a subscription channel from a list of available channels for an endpoint, and configure the action(s) to be applied on the incoming events.
Support for dynamic/inline connection	You can now run a cloud connector service by passing connection details that are different than the connection details configured in the connection configuration page in webMethods Integration Server Administrator. The cloud connector service input signature is automatically updated based on your selections in the *Connection* panel.
Support for multipart/form-data request payload	You can now send a multipart/form-data payload which contains either a file, or text, or a document type to a service provider. The multipart/form-data payload is supported only at the request level, that is, only in the input signature.

Added Item	Description
Support for dynamic configurations with Microservices	CloudStreams now allows you to use a configuration variables template to externalize the configuration information and pass the configuration information to the Microservices Runtime at startup. By externalizing configuration information, a single Docker image created for a Microservices Runtime can be used across multiple environments, including different stages of the production cycle. The configuration variables template contains configuration properties that map to properties on the Microservices Runtime. The property values can be set externally in the template and then passed to the Microservices Runtime when it starts up. As part of the startup process, Microservices Runtime loads the information from the configuration variables template and replaces the configuration information stored in the file system.
Deployer support for large payload handling configurations and listeners	Deployer now supports deploying large payload handling configurations and connector level listeners.

Changed Item	Description
CloudStreams User Interface	Selecting a connector from a provider connector list under Integration Server Administrator > CloudStreams, now opens up a tabbed page display. The page defaults to the Connections tab which lists the connections configured for the selected connector. The newly introduced *Listener* tab displays the listeners configured for the selected listener. Additionally, the CloudStreams Administration pages in Integration Server Administrator now use a primary blue colour scheme, which is optimized for accessibility and for brightness.

Release 10.2

Added Item	Description
Changes in connection configuration fields	The following new connection fields are added: • Validate After Inactivity • Enable Compression The following connection fields are updated: • Hostname verifier* • Use Stale Checking** The following connection fields are deleted: • Element Character Set • Wait For Continue Time • Strict Transfer Encoding *The Hostname verifier field exposes the following closed set of updated options: • org.apache.http.conn.ssl.DefaultHostnameVerifier • org.apache.http.conn.ssl.NoopHostnameVerifier **The default value of *Use Stale Checking* has been set to *true*.
Support for large data configuration	Large data configuration enables CloudStreams to send and receive large binary streams over HTTP/HTTPS. If the new option *Handle Binary Streams* is enabled, then during outbound and inbound invocations, if the stream is greater than the *Threshold Size (bytes)*, the entire stream is not stored in memory. Threshold Size (bytes) is applicable only if *Handle Binary Streams* is enabled. Before enabling the large data handling capability of CloudStreams, configure the TSpace properties (watt.server.tspace.*) in the webMethods Integration Server Administrator.
MTOM	You can now transmit and receive binary content from SaaS providers in an optimized and efficient way using the Message Transmission Optimization Mechanism (MTOM).
Enhanced Concurrency Support	CloudStreams server now handles concurrent executions of cloud connector services in a more efficient way. This improves how parallel requests are handled without running into concurrency issues.
Enhanced server redirection capabilities	CloudStreams server now supports redirection capabilities with other HTTP methods like PUT and DELETE too. This allows interacting with back ends like AWS S3 for redirected data transfers across different regions and geographies.

Added Item	Description
Support for form encoded parameter	You can now send simple key value parameters embedded in the Request Body for POST or PUT requests. This uses the default web form encoding, which is *application/x-www-form-urlencoded*.
Support for CloudStreams Analytics dashboard on MashZone NextGen instead of the legacy MashZone	You can now use the CloudStreams Analytics dashboard with Software AG Mashzone NextGen Server.
Support for deploying CloudStreams user-created assets using webMethods Deployer	You can now deploy CloudStreams user-created assets such as connections, connector services, and administrative assets or configurations such as oauth token, streaming provider, streaming subscriber and database settings that reside on source webMethods repositories to target webMethods runtime components (runtimes) using webMethods Deployer. You can deploy CloudStreams user-created assets in repository-based deployment only.
Support for Single or Multiple Operations and Multiple Business Objects with dependencies	Software AG Designer now displays different Business Object panels based on the following scenarios: • Single Operation has a single Business Object • Single Operation has multiple Business Objects • Single Operation has multiple Business Objects with dependencies • Multiple Operations have multiple Business Objects • Multiple Operations have multiple Business Objects with dependencies
Support for nested, hierarchical, or multi-level business objects	Software AG Designer now displays nested, hierarchical, or multi-level business objects if the resource is designed to support nested business objects. You can expand the nested business objects to display the child-level objects.
Support for NTLM basic authentication	CloudStreams now supports NT LAN Manager (NTLM) authentication protocol. CloudStreams provides basic support for NTLM authentication protocol using the credentials connection group. Limited support is available in this release.

Added Item	Description
Support for service signatures for back ends having very complex nested document structures	You can now create service signatures for back ends with extremely complex and deep signature structures.
Support for adding nested custom fields in the cloud connector service business object fields.	You can now add complex nested custom fields while selecting a cloud connector service business object field. This is useful for SaaS back ends where the metadata is dynamic, for example, Amazon DynamoDB.

Release 9.12

Added Item	Description
Support for Transport Layer Security (TLS) 1.1 and 1.2	CloudStreams now supports the latest versions of TLS standard v1.1 and v1.2. Using Java Secure Socket Extension (JSSE) based libraries, CloudStreams supports TLS v1.1 and v1.2 for outbound connections.
Wire logging message	If you now enable the **Connection factory wire logging** option from the **CloudStreams > Administration > Genera**l screen in the Integration Server Administrator, a warning message appears. The message informs the side effects of turning on this setting.

Changed Item	Description
Regrouping between *Basic* and *Advanced* views and reordering of fields within the *Credentials*, *Transport Protocol*, and *Request Headers* connection groups.	**Authentication Type** field is now moved ahead of the **Preemptive Auth** field so that fields in the **Basic** view stay ahead of the fields visible in the **Advanced** view for the **Credentials** connection group.
	Element Character Set and **Strict Transfer Encoding** fields are moved to the **Advanced** view for the **Transport Protocol** connection group.
	Request Header Names and **Request Header Values** fields are moved to the **Advanced** view for the **Request Headers** connection group.

Release 9.10

Deprecated Item	Replacement, if any
Software AG MashZone based CloudStreams Analytics dashboard.	The Software AG MashZone based CloudStreams Analytics dashboard is deprecated from this release.

Changed Item	Description
CloudStreams User Interface	The HTML-based utility used to administer webMethods CloudStreams has a new look and feel. Menu and screen locations have not changed and there is no change in the User Interface functionality.

CloudStreams Development

Release 10.3

Added Item	Description
Support for assignments on Cookies and Service Context	You can now apply assignments on Cookies and Service Context.
Support for applying assignments at the Resource Group level	You can now apply assignments at the *Resource Group* level, which enables you to apply assignments to each resource and operation in the selected Resource Group. Further, assignments are applied in the sequence they appear in the *Configure Assignment* panel.

Release 10.2

Added Item	Description
Change the sequence of assignments	You can now change the sequence of both local and global assignments. The assignments will be applied in the sequence they appear in the *Order* pane.
Support for Start and Stop sequences	You can now define optional Start and Stop sequences, which allow you to manage the connection behavior for both REST-based and SOAP-based providers. Start and Stop sequence is currently in BETA.

Added Item	Description
Support for moving and copying elements	You can now cut, copy, and paste request parameters, request headers, and response headers for REST-based connectors. For SOAP-based connectors, only request parameters can be currently moved or copied.
Enhanced provider package import process	Import process has been enhanced and allows you to import a provider package as an archive file or import the package from a workspace. Importing published packages is currently in BETA.
Refresh providers and connectors	Refresh button has now been added for enhanced usability to sync assets between the plugin and server for providers and connectors.
Support for Record type Parameter Formatter	You can now add record type parameter formatters. A new parameter style *Record (as Query)* has been added, which is a complex record structure representation, split into one or more query string parameters.

Release 10.1

Added Item	Description
Redesigned connector development plug-in	In this release, the *CloudStreams Provider Project* in the CloudStreams connector development plug-in has been redesigned and enhanced for better usability. **Note:** SOAP connector development is in BETA.

Deprecated Item	Replacement, if any
Old connector development plug-in	New connector development plug-in.

Release 9.12

Changed Item	Description
Icons updated to reflect changes in corporate branding.	Icons are updated in Perspectives, Views, Welcome screen, and About contributions.

Release 9.10

Removed Item	Replacement, if any
Redundant fields in REST service interface	**Serialization type** fields are removed from the Cloud Connector Service (REST) > Resource tab > **Request Processing** section. **Parsing type** fields are removed from the Cloud Connector Service (REST) > Resource tab > **Response Processing** section.

Release 9.9

Added Item	Description
Publisher	An optional field "Publisher" is added for the CloudStreams Provider and CloudSteams Governance projects to obtain the publisher name.
Description	An optional field "Description" is added for the CloudStreams Provider and CloudSteams Governance projects to obtain the description.

Release 9.8

Added Item	Description
Display Name	Added an optional field "Display Name" for Services, Operations, and Resources. This value is used for displaying the name of the item (Service, Operation, or Resource) in a connector.
New Group Dialog	Added the "New Group" dialog for a connection group selection which shows all available connection groups.
Copy	Added the "Copy" menu item in the CloudStreams Connector view to copy the CloudStreams Provider Project into the system clipboard.
Paste	Added the "Paste" menu item in the CloudStreams Connector view to paste the CloudStreams Provider Project from the system clipboard.
Hide	Added an optional field "Hide" for Operations for the SOAP Connector development. The CloudStreams Server will hide the operations during the Cloud Connector Service creation/selection.

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

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

CloudStreams Server

Release 10.3

Added Service	Description
pub.cloudstreams.admin.listener:enable	Enables an existing listener.
pub.cloudstreams.admin.listener:disable	Disables an existing listener. Also, disconnects the listener.
pub.cloudstreams.admin.listener:queryListenerState	Returns the current listener state (enabled/disabled) for a listener node.
pub.cloudstreams.admin.listener:listEnabledListeners	Returns a list of aliases for listeners in enabled state for a given connection alias.
pub.cloudstreams.admin.listener:update	Updates a CloudStreams connector listener node with a new set of inputs.

Release 9.9

Added Service	Description
pub.cloudstreams.admin.service:batchupdate	The *batchUpdate* service complements the update service by allowing batches of CloudStreams connector service nodes to be updated in one operation. You can use the batchUpdate service to update multiple CloudStreams connector service nodes from a lower version of the connector API to a higher version.

Changed Service	Description
pub.cloudstreams.admin.service:update	This service allows you to update a CloudStreams connector service node from one version of connector API to a higher version for various attributes such as the *Connection Alias* and the *Virtual Service Name*. The changes in this service are two new input parameters, *simulate* and *force*.

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