webMethods Product Suite 10.5

Release Notes

Using Software AG's webMethods products, you can build application integration solutions on the top-rated hybrid integration platform and integrate cloud-based apps and on-premises systems without coding, simplify with one toolset for on-premises and cloud integrations and use a microservices-style architecture to deliver and scale new integrations faster. The webMethods suite, with the Integration and API Management products, includes a broad collection of capabilities, including application and partner integration, API management, B2B integration, managed file transfer, building micro-services, high-speed messaging, and in-memory caching.

With webMethods, you have an extensible, scalable and reliable backbone running either on the cloud, on-premises or in hybrid scenarios—providing seamless integration for cloud, mobile, APIs, and Internet of Things (IoT).

Release 10.5 of the webMethods Product Suite provides significant enhancements in every functional area of the suite.

Release Highlights

webMethods Integration Server is the powerful core engine behind the entire webMethods suite, spanning process management, B2B integration, managed file transfer, API management, and more. Our hybrid integration platform is easily scalable, enabling easy integration of your on-premises applications to SaaS applications, programming-model agnostic, and multi-container capable. As a container, the platform ships with hundreds of pre-built useful APIs, services, frameworks, EDA, and in-memory data grid support to save you time. It has a full range of connectors to support the most modern standards, such as OData, REST, and the full complement of SOAP-based Web-service support.

Integration, B2B, and Process Engine

- Integration Server allows developers to create the REST consumer from a given Swagger v2.0 API descriptor. The REST consumer provides support for consumer APIs for all resources and operations defined within the Swagger file.

- Integration Server provides native support for MQTT by allowing developers to define an MQTT-based trigger and provides public services for MQTT-based pub/sub messaging with an MQTT server.

- Integration Server provides support for a new REST-based API for administration purposes. This API enhances the DevOps capabilities of Integration Server. Integration Server can authenticate incoming Webservice requests using Kerberos credentials at the transport layer.

- When publishing SOAP or REST-based APIs to webMethods API Gateway, developers can now specify the API name and version.

- Integration Server supports Solace as a JMS provider and can send and receive data using Solace messaging infrastructure.

- Integration Server provides support for developers to write an interceptor that intercepts outbound HTTP and SOAP consumer calls. Developers can then capture raw outgoing requests and responses in XML/JSON format using this outbound interceptor function.

- Integration Server provides the ability to establish time setting for different JWT token providers which allows Integration Server to factor the time difference between the token issuer and the verifier.

- Designer Service Development allows developers to develop a REST consumer by providing the Swagger v2.0 interface document for a REST API provider.

- Software AG has launched a new lightweight development tool called webMethods Service Designer. The Service Designer combines the Service Development plugin from Designer with Microservices Runtime and the Unit Test Framework. Service Designer can be downloaded from the Software AG Tech Community website.

- Software AG Designer Service Development allows developers to define flat file schema using a graphical wizard. This feature provides an easy to use mechanism for defining complex flat file schemas.

- In collaboration with Integration Server, Software AG Designer enhances the performance of data fetching for GraphQL by providing support for GraphQL dataloaders.

- CloudStreams Server now supports Server Name Indication (SNI) for Applications/Platforms websites. SNI allows multiple websites to exist on the same IP address.

- CloudStreams Server now provides the ability to handle listener runtime errors to recover from unwarranted error events for each SaaS application/provider at the CloudStreams Connector listener level.

- CloudStreams Connector Development plug-in now supports authentication type "OAuth V2.0 (Authorization Code Flow)" and "OAuth V2.0 (JWT Flow)" as part of the authentications type dropdown. The connector developer can use this new authentication type while developing connectors for a SaaS application that supports the same authentication mechanism.

- The full-text search support in webMethods OneData (which was used by many customers in the New Data Steward UI) is now available with the Current Nova UI which will benefit many existing implementations.

- webMethods OneData now supports the REST JSON-based data load capability to accommodate the same data object in different levels of hierarchy in a non-recursive conceptual object.

- Universal Messaging now allows a user to purge a range of event IDs or a single event ID on a queue. This means that purging of events on queues is possible through Enterprise Manager, Command Central and the client API, in the same way as for purging events on channels.

- In Universal Messaging, it is possible to monitor both asynchronous and synchronous subscription to a specific queue similar to the monitoring of connections to durable subscribers.

- The JMS Engine of Universal Messaging can automatically purge individual events from channels whose consumers are exclusively using durable subscriptions of type Shared or Serial.

- With Command Central, it is easy to import composite and micro templates from your own repository or from the default Software AG's GitHub repository. The default templates can be found at: *https://github.com/SoftwareAG/sagdevops-templates-repo*

- Stacks and layers are now available out of the beta state. This includes functionality such as creating stacks and layers based on micro templates, CRUD operations and control the database schemas for the products by using the database layer in a stack.

- Universal Messaging and Digital Event Services have removed the deprecated priority durable which is replaced with the serial durable.

- Delegated administration rights are now available for both external and internal users in webMethods Active Transfer.

- Monitoring and Agents features are available in the new Active Transfer interface.

- webMethods Active Transfer Server can now archive transaction data with the following databases – Oracle, MS SQL, and MySQL.

- The AgileApps platform can now send SAML assertions to MashZone to render MashZone dashboards on the AgileApps user interface.

- Users can customize the number of columns when viewing records in the new AgileApps UI. It applies to all views including custom object views, system object views, and system created views.

- Users can invoke Integration Server services from business rules using the new action Invoke IS Service which is available in the Actions to Perform option under Event Rules. Application Designers can configure invocation of Integration Server services on execution of the business rules with which it is associated.

- The classical Process Engine supports hosting on a Docker container, and can also be initialized in the Microservices Runtime.

- The process archiving feature of Process Engine is enhanced to include the parent-child relationship between the parent process and sub processes.

- webMethods Monitor is compliant with GDPR regulations and customers can choose to remove user information from the Monitor database. It is also supported on Docker as well as Microservices Runtime.

- Task Engine now provides archival of all the Task data.Terracotta Ehcache now supports Write Behind: the asynchronous writing of data to systems of record. Cache and systems of record are kept in sync without impacting responsiveness to the user.

- Terracotta 10.5 clients for both cache and store can co-exist with any BigMemory Max *4.3. x* client.

- A single application can now use both BigMemory Max, Terracotta Ehcache and Terracotta Store, allowing gradual migration to Terracotta.

API Management and Microservices

The API Engagement Platform is a new product added to our Software AG API Management Stack. It is a developer outreach platform for API businesses. This is a cloud-native and cloud-only platform for all the API brands to reach the right developers and partners. It helps them with the growth of their API business and revenues.

Software AG's webMethods API Portal provides a comprehensive solution that allows the developer community to find, learn about, discuss, and test an organization's APIswebMethods API Gateway securely exposes APIs to consumers, third-party developers, and other partners for use on web, mobile and IoT applications. webMethods Microgateway is an independent offering which is light-weight, agile, and fast. It works with webMethods API Gateway or as a standalone solution to control API access to microservices in a distributed environment. It supports service mesh architectures offering independent and sidecar deployments.

- API engagement platform allows you to build an eco-system around the APIs you want to offer as products. With this, you can manage APIs as products, proactively promote, market and launch APIs as well as engage the developer community and foster

collaboration and run campaigns and evangelize API usage and adoption. API Engagement platform allows users to create, manage and judge API Hackathons.

- API Engagement platform enables an organization to conduct customized beta-programs to test APIs in a beta state.

- API providers can now use custom extensions (also known as custom runtime policies) in the following API policy stages: Identify and access, request processing, routing, response processing and error handling.

- Support for API First implementation approach has been enhanced to allow for sending provider-side API specification to the selected Integration Server when an implementation stub is created. It enables pulling provider-side API specification from third-party service runtimes and programmatically notifying API Gateway about implementation being completed in the backend to disable mocking in API Gateway.

- Team work support in API Gateway provides isolation for multiple teams working in single API Gateway.

- API gateway now provides isolation for multiple teams working in one API Gateway instance.

- Externalization of configurations in API Gateway to allow configurations to be read from a file or provided via an API.

- If CentraSite destination is configured within API Gateway, then the essential details of APIs provided by CentraSite are now considered read-only.

- API Portal configuration now allows for using tenant-specific domain names and the ability to configure SMTP servers specific for a tenant

- CentraSite can synchronize and store consumer applications that are created in the API Gateways and registered with the APIs deployed from CentraSite.

- To ensure API Gateway being source of truth, CentraSite now has the capability to publish the APIs to API Portals through the API Gateways where it is deployed. This allows the API Provider to choose which endpoints and stages must be exposed in the API Portal.

- Microservices Runtime supports OpenShift. The Software AG github website provides the sample openshift scripts.

- webMethods Microgateway introduces support for a few additional policies in the following stages: Identify and access policies, Identify and authorize application, Hostname address, IP address range, and SSL enhancements.

- Microgateway now supports configuration of SSL truststore and keystores based on API Gateway configuration.

- Microgateway now supports configuration of all aliases using environment variables which simplifies the configuration of Microgateway containers in Kubernetes deployment filesMicroservices Runtime supports OpenShift. The Software AG github website provides the sample openshift scripts.

Contents

For more details about the key additions and enhancements for this release, see the product descriptions.

For important updates and a list of enhancements and issues that have been addressed since the previous release of each product, see the webMethods product readme files. You can access these documents, as well as all product documentation, from the webMethods area on the

API Engagement Platform

API Engagement Platform is a new product added to SoftwareAG's API Management Stack. It is a developer outreach platform for API businesses. This is a cloud-native and cloud-only platform for all the API brands to reach the right developers and partners, and engage them with the growth of their API business and revenues.

Manage API Hackathon

API Hackathon is the foundation for an organization or brands to have better engagements with the developer communities. Developers are the organic evangelists for an organization to spread the word and make the organization more popular. A hackathon (also known as a hack day, hackfest or codefest) is a design sprint-like event in which computer programmers and others involved in software development, including graphic designers, interface designers, project managers, and others, often including domain experts, collaborate intensively on software projects. The goal of a hackathon is to create usable software or hardware by creating a functioning product by the end of the event. Hackathons tend to have a specific focus, which can include the programming language used, the operating system, an application, an API, or the subject and the demographic group of programmers. In other cases, there is no restriction on the type of software being created.

Salient Features

- An organization admin can create hackathons

- An organization admin can add judging jury for the API hackathon created.

- An organization admin can provide the judgment criteria for each hackathon being created.

- An organization admin or a program manager can design questionnaires for the user feedback on the hackathon.

- Any registered user or developer can view the available list of public API hackathons that can be added to participate.

- Any registered user or developer can see all the details of an API hackathon.

- Any registered user or developer can invite outside users to participate in the hackathon by providing the email ID.

- Hackathon participants can submit their application information developed based on the API hackathon details.

- Any hackathon participant can submit the feedback for hackathon participated, which directly provides an early feedback for the business API's.

- Judgment panel rates the participant application based on the judgment criteria decided and announce the winning participant of a hackathon.

- Organization Stakeholder or API Program Manager can view the analytic dashboard and generate the summary report for an API hackathon.

CentraSite

Governed API Portal publish using Gateways

Previously, users were able to publish the APIs to API Portal directly from Centrasite. To ensure API Gateway being source of truth, CentraSite now has the capability to publish the APIs to API Portals through the API Gateways where it is deployed. This allows the API Provider to choose which endpoints and stages must be exposed in the API Portal.

- In CentraSite, you can now trigger multiple API Gateways to publish deployed Virtual Services to API Portal.

- The publishing API Gateways become the API (Virtual Service) owner in API Portal.

Improved Governed Consumer Registration

- Now, CentraSite can synchronize and store the consumer applications that are created in the API Gateways and registered with the APIs deployed from CentraSite.

- The asset navigator visualization and runtime reporting now provides a landscape of the consumption of APIs by all applications that originated in CentraSite, API Gateway, and API Portal.

Improved runtime policy rendering from APIs deployed to Gateway

- CentraSite now provides enhanced rendering of the runtime policies configured for an API in the various API Gateways where it is deployed.

- CentraSite now allows a detailed view of the granular policy definitions for the API at the parent level, and the resource and method or operation scope levels.

- A user can now filter APIs based on methods, hierarchy, as well as based on active or inactive state.

My webMethods Server

For details, see the webMethods BPMS section.

Terracotta

Ehcache Write Behind Support

Terracotta Ehcache now supports write behind:

- Asynchronous writing of data to system of record

- Cache and system of record kept in sync without impacting responsiveness to the user.

Client Co-existence with BigMemory Max

Terracotta 10.5 clients for both cache and store can co-exist with any BigMemory Max *4.3.x* client:

- A single application can use both BigMemory Max, Terracotta Ehcache and Terracotta Store allowing gradual migration to Terracotta

Embeddable Usage Monitor

Migration assistant that can be embedded in your application to monitor the API use of BigMemory. The assistant then provides a report on the usage with suggestions on the Terracotta API to use to aid migration from BigMemory to Terracotta.

- Removes some of the pain of a migration from one product to another with suggestions and code to aid with the required alterations.

Software AG Command Central

Template Repository

You can easily import composite and micro templates from your own repository or from the default SoftwareAG's GitHub repository.

The default templates can be found at:

https://github.com/SoftwareAG/sagdevops-templates-repo

Which is a tested and qualified build of:

https://github.com/SoftwareAG/sagdevops-templates

Stacks and Layers New Functionality

Stacks and layers are now out of the beta state. The following functionality is included:

- Creating stacks and layers based on micro templates. When a template requires many properties, the properties can be exported and imported in consecutive templates executions.
- CRUD operations on the stacks and layers. Removing a layer or a whole stack does not remove the installation, just the metadata in Command Central.
- Control the database schemas for the products by using the database layer in a stack.

Save Products as Micro Template from UI

From release 10.5 you can save a product instance as a template using the Command Central user interface. In Command Central 10.5 you can save a product instance from the instance view of an installed product. This template will contain all configurations that are default and/or applied to the product. The following functionality is included:

- Save an instance as template action can be triggered from the user interface.
- The saved template will contain all default and applied configurations.
  Note that configuration filtering is available only through the CLI by using an XML file for filtering. For more information, see the official Software AG documentation.
- Saved templates can be directly reused in stacks and layers for creating new product installations based on the generated template.

Composite Template Database Fix Handling

If you use a composite template to apply fixes, you should no longer take special care of the database fixes. When database connectivity and authentication information is available, those fixes will be automatically applied without any further template modifications. The following functionality is included:

- Applying database fixes without composite template modification.

Support for Encrypted Passwords in Composite Templates

You are no longer required to add an environment password in plain text in your composite template or property files. The values can be encrypted with the following Command Central CLI command:

sagcc exec security encrypt password=MyPassword sharedsecret=manage

This results in an output that is the encrypted variant of MyPassword in the form of an {AES-128}encryptedvalue

Afterwards you can use this value in a template, for example:

templates:

  <myConfig>:

   products:

    CCE:

     default:

      configuration:

       OSGI-CCE:

        COMMON-PROXY:

         COMMON-PROXY-HTTP:

          '@alias': HTTP

          Enabled: 'true'

          Protocol: HTTP

          Host: host123

          Port: '12313'

          Username: user

          Password: '{AES-128}encryptedvalue'

          NonProxyHosts: localhost|.local

Software AG Digital Event Services

Priority Durable replaced with Serial Durable

Universal Messaging has removed the deprecated priority durable which is replaced with the serial durable. Digital Event Services has removed the priority durable and replaced it with the serial durable.

In addition:

- Events are still delivered in strict order.

- Multiple subscribers are supported.

- Events are delivered to the next subscriber only when the current subscriber has acknowledged all events.

Software AG Universal Messaging

Support for Purging Events on a Queue Using Command Central

It is now possible to purge a range of event IDs or a single event ID on a queue.

This means that purging of events on queues is possible through Enterprise Manager, Command Central and the client API, in the same way as for purging events on channels.

Monitoring Queue-Level Connections

It is now possible to monitor both asynchronous and synchronous subscription to a specific queue similar to the monitoring of connections to durable subscribers. This is available programmatically through *nQueueNode*, similar to *nDurableNode*. Both Enterprise Manager and the Command Central UI have been updated to show these statistics; they are almost identical to how connections for durable subscribers are shown.

In Enterprise Manager they can be seen under a specific queue in the **Consumer Info** tab. In Command Central they are under in the **Administration** tab when you click on a specific queue and go to **Consumer Info** tab. Additionally there are few new queue properties present in the **Status** tab of the queue under Consumer Status.

Individual Purging of Events on Shared/Serial Durables

The JMS Engine of Universal Messaging now can automatically purge individual events from channels whose consumers are exclusively using durable subscriptions of type *Shared* or *Serial*.

Changed Features in 10.5

The following Universal Messaging features already available in the previous product release have been changed in Universal Messaging 10.5:

Health Checker Error and Warning messages
Some messages which were previously reported as error messages during a health check of a live cluster have now been changed to warning messages. This is because small synchronization delays across the live cluster can occur that cause the health checker to detect discrepancies, although the cluster is working correctly. Such discrepancies are therefore now classified as warnings rather than errors.

Re-worked queue implementation
In v10.5 the queue implementation in Universal Messaging has been reworked. This was done in order reduce internal complexity regarding queue usage, and to increase their stability and maintainability.

Queue subscriber filtering

In previous product versions, queue subscriber filtering was always enabled, which led to a certain amount of processing overhead. In v10.5 this has been changed, so that the feature can be activated or deactivated by using the new realm property *QueueSubscriberFiltering* in the Event Storage configuration group.

By default, this property is set to false, meaning that queue subscriber filtering is deactivated. If you set this property to true, this activates the feature whereby events published to a queue can be read by selected subscribers only.

Removed Features in 10.5

To continue the simplification of the product the following Universal Messaging features have been removed in Universal Messaging 10.5:

API for Microsoft Silverlight
The Universal Messaging client API for Microsoft Silverlight has been removed.

API for Windows Phone
The Universal Messaging client API for Windows Phone has been removed.

Removal of Store Types
Support for the channel/queue types Simple, Paged, Transient and Offheap has been removed.

If a Universal Messaging client from an earlier product version connects to the version 10.5 server, the client might wish to create a store (channel or queue) that has a store type of Simple, Paged, Transient or Offheap. In this case, these store types will be remapped to one of the existing ones as follows:

- Simple -> Reliable
- Transient -> Reliable with a TTL (time to live) of 1 millisecond
- Off-heap -> Reliable
- Paged -> Mixed

Also, log message will be visible in the nirvana.log file.

For further information on the migration of store types that have been removed, see the section Migration Notes in these Release Notes.

Removal of Durable Types "Priority" and "Shared-Queued"
The durable types "Priority" and "Shared-Queued" have been removed.

Clients connections from previous product versions that use these durable types will be automatically mapped to other types if they connect to a v10.5 server:

- "Priority" will be mapped to "Serial".
- "Shared-Queued" will be mapped to "Shared".

Removal of *nNamedObject* -based API from the *nChannel* API

The previously deprecated *nNamedObject -based* API has been removed from the *nChannel* public API. If you have client applications that use *nNamedObject*, you will need to change them to use the *nDurable* API instead.

For further information on the migration of applications that use *nNamedObject*, see the section Migration Notes in these Release Notes.

Client API for Java

The option *-autoconvert* has been removed from the Java client API. This option converted clustered transient channels and queues to mixed channels and queues when you imported a realm configuration from an XML file. The option has also been removed from the sample program *nimportrealmxml* that is delivered with the product.

Realm Configuration Properties

The following list shows the realm configuration properties that are no longer available. The names are given in the form *<category>*: *<property>*, where *<category>* is the category to which the property belongs, and *<property>* is the property name.

- Event Storage: *QueueDeliveryPersistencePolicy*

- Fanout Values: *SyncQueueDelay*

- Fanout Values: *SyncQueuePublisher*

If you exported a realm configuration containing any of these removed properties to an XML file in a previous product version, the XML file can still be imported into a newer realm, but in this case the properties will be ignored, regardless of the value that they were set to.

Transient Queue Events

The transient event flag of an *nConsumeEvent(setTransient())* for events published to a queue is no longer supported and will be ignored. Consequently, transient events will always be stored on the queue, even if there are no active subscribers.

webMethods ActiveTransfer Server

Additional Features Supported in ActiveTransfer New User Interface

The following features are added to the new user interface that was introduced in 10.3:

- **Delegated administration**

The delegated administration rights are now available for both external and internal users.

- **Archiving**

Support for archiving transaction data is now available for the Oracle and MS SQL databases.

- **Monitoring and Agents**

Monitoring and Agents features are now available in the new user interface.

Localization

ActiveTransfer now supports the languages added to the new user interface and the ActiveTransfer web client.

webMethods AgileApps

The webMethods AgileApps 10.13 release (October 2019) is available for on-premise customers only. The Cloud update will follow subsequently.

Following features are available with this release:

Single Sign on Between AgileApps and Mashzone

AgileApps platform is now able to send SAML assertions to Mashzone to render Mashzone dashboards on AgileApps user interface.

Customize the Number of Columns When Viewing Records in the New UI

- User can now configure the record views to show any number of columns.

- It applies to all views including custom object views, system object views, and system created views.

- This customization is available with the new AgileApps user interface only.

Invoke IS Service from Business Rules

- Users can now invoke Integration Server services from business rules.

- A new action Invoke IS Service is now available in the Actions to Perform option under Event Rules.

- Application Designers can configure invocation of Integration Server services on execution of the business rules with which it is associated.

- This will be extended to all rule types (Timer Rules, Rule Sets, Scheduled Rules) in an upcoming patch. Once available in Rule Sets, application designers can configure invocation of IS services from process models.

Record Pinning

- Users can now store their last visited records as favorites in the new UI.

- The user can access these favorites anytime.

- The bookmarked records are available from any screen of AgileApps.

Multi-select Picklist

User can make multiple selections from a list of values in a global picklist for a record field.

Record Views

- Record views provide the user with options to activate and retain specific user-selected views as display tabs in the new UI.

- The user can also toggle the views list.

AgileApps Runtime UI Upgrade to Angular 7

The AgileApps Runtime UI is upgraded to Angular 7 along with all the dependent packages.

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webMethods ApplinX

ApplinX Web Emulator as Part of the ApplinX Docker Image

The ApplinX Docker image now contains an ApplinX web emulation. Here you can configure host connectivity and various application settings within the browser.

Administration Improvements for the Natural-UNIX Host

- It is now easier to track the ApplinX session ID for a NATAPX process within the Natural environment, and the Natural user used by an ApplinX session within the ApplinX Administrator.

- A Health Check utility is provided to check that all components (ApplinX server, ApplinX Natural daemon, Natural, Adabas) are functioning in a Docker environment.

- You can now customize the startup of a Natural application in ApplinX by specifying additional information with the CUSTOM argument.

- In a Natural for UNIX environment you can specify system security, or you can now configure PAM authentication (for LDAP/Kerberos integration) within the ApplinX Natural daemon.

ApplinX Session ID

The ApplinX session ID is visible in the Administrator session view. You can copy this ID to your clipboard with CTRL+C, the context menu or by pressing the Copy icon.

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webMethods API Gateway

Custom Policies Enhancements

API providers can now use custom extensions (also known as custom policies) in the following API policy stages:

- Identify & Access

- Request Processing

- Routing

- Response Processing

- Error Handling

Custom extensions can be configured as:

- Calls to remote Integration Server services

- Calls to external HTTP URI

- Massages being sent to or from messaging providers using JMS/AMQP

- Calls to AWS Lambda functions

Team Support

API Gateway now provides isolation for multiple teams working in one API Gateway instance. It provides access control based on team-specific privileges. Assets like APIs, Applications, Packages, and Plans can be configured as team-specific, that is, belonging to specific teams.

Teams feature can be disabled using API Gateway extended setting.

API First implementation Approach Enhancements

Support for API First implementation approach has been enhanced to allow for:

- Sending provider-side API specification to the selected Integration Server when an implementation stub is created.
- Pulling provider-side API specification from third-party service runtimes.
- Programmatically notifying API Gateway about implementation being completed in the backend to disable mocking in API Gateway.

Support for Changing Ownership of Assets

API Gateway now allows transferring ownership of assets to different users or teams. Ownership change can be configured to require approval or not.

Externalization of Configurations

From this release, the following configurations have been externalized and centralized for easier operations:

- API Gateway, Kibana, and filebeat connections to Elasticsearch
- API Gateway, Elasticsearch, and Terracotta cluster configurations

These configurations can be applied in API Gateway either by API Gateway reading a configuration file or by making calls to API Gateway public APIs.

Enhanced Centrasite integration for Governed API Development

From this release, essential details of APIs provided by CentraSite are considered read-only if CentraSite destination is configured within API Gateway. API Gateway provides visual clues to differentiate such APIs from the ones not published from CentraSite.

Command Central Support Enhancements

API Gateway integration with Command Central is enhanced for managing API Gateway instances through Command Central for the following configurations:

- Logs
- Ports
- Licensing
- Clustering

These configurations are now also supported through Command Central templates.

webMethods API Portal

Tenant-Specific Sub-domain

API Portal configuration now allows for using tenant specific domain names.

Tenant-Specific SMTP Server Configuration

It is now possible to configure SMTP servers specific for a tenant.

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webMethods BPMS

Process Engine

- The classical Process Engine now supports hosting on a Docker container and can also be initialized on an MSR.

- The Process Archiving feature of Process Engine is now enhanced to include the parent child relationship between the parent process and sub-processes.

Monitor

- Monitor is now compliant with GDPR regulations and customers can now choose to remove any user information from the Monitor database.

- Monitor is also supported on Docker as well as MSR.

My webMethods Server

- **SP initiated SSO with a third-party identity provider**
  You can configure My webMethods Server for a service provider-initiated single sign-on authentication flow with SAML2 and a third-party identity provider.

- **Database JMS for CD**S
  My webMethods Server now supports using the database as a JMS provider for synchronization with the CDS component in Integration Server and in small My webMethods Server clusters.

- **Enhanced support for upgrading with Command Central**
  The migration utility for MWS now provides options to skip the deletion of existing instances when run for a second time over the same installation. The option is enabled by default when the migration utility is used through Command Central templates.

Task Engine

- **New collaborative task workflow with votable tasks**
  You can create and configure votable task types that allow assigning the task instances to multiple users who vote to make a collaborative decision for setting the task status. The minimum number of user votes required to update the task status can be configured as a number or percentage.

- **New administration interface for Task Engine on Integration Server**
  In addition to the built-in services in the wmTaskEngine package, Task Engine instances,

running on Integration Server now provide a new graphical administration interface for task monitoring and administration.

- **Enhanced UI support for searching task instance data in archived data sources**
  In addition to the ability to archive task instance data in a separate data source, Task Engine instances, running on My webMethods Server now provide enhanced UI support for searching for archived data from different archive data sources.

Composite Application Framework

- **Default support for JSF2.x in CAF application**
  All CAF and task portlets, pages, and views are created using xhtml files with support for JSF 2.x support by default. The .view format is deprecated. You can create legacy .view files for CAF applications and tasks for backward compatibility, or use the built-in project migration functionality to migrate your projects to JSF2.x.

Mobile Business Console (MBC)

- **Discontinued support**
  MBC is no more supported and has been removed from all app stores and play stores.

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webMethods Broker

webMethods Broker is now replaced by Software AG Universal Messaging. webMethods Broker 10.5 is a refresh of the product to update some third-party libraries and incorporate fixes. It is strongly recommended to use Universal Messaging for any new developments.

For more details, see https://empower.softwareag.com/brokerendoflife/.

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webMethods Business Rules

SSL for Rule Connections

SSL is now enabled when rule projects are deployed from Software AG Designer to My webMethods Server and when hot deployment is executed from the Rules Management Console.

Containerization Support for Rules Engine

The Rules Engine is now supported both on Docker and as a Microservice Runtime.

Import CSV Files into Decision Tables via Rules Management Console

Business analysts or production support users can now import rules defined in CSV files into a decision table using the Rules Management Console.

Edit Decision Tables via Rules Management Console

It is now possible for a user to insert a row at any given place in the decision table using the Rules Management Console.

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webMethods Content Adapters

CMIS Adapter

The CMIS Adapter is now based on REST APIs

Alfresco Adapter

The Alfresco Adapter is now based on REST APIs keeping in mind the latest versions of Alfresco being released which also includes Alfresco Cloud.

Sharepoint Adapter

The Sharepoint Adapter is now based on REST APIs keeping in mind the latest versions of Sharepoint being released by Microsoft which includes Sharepoint Online.

Documentum Adapter

The Documentum Adapter is now based on REST APIs keeping in mind the latest versions of Documentum being released by OpenText.

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webMethods CloudStreams

CloudStreams Server Enhancements

Server Name Indication (SNI) Support

CloudStreams Server now supports Server Name Indication (SNI) for Applications/Platforms websites. SNI allows multiple websites to exist on the same IP address. Without SNI, each hostname would require its IP address for an SSL certificate to be installed. However, SNI solves this problem. CloudStreams now provides SNI supported connection with configurable parameters such as 'Enable SNI' and 'SNI Server Name'.

Connector Listener's Runtime Error Handling Support

CloudStreams Server now provides the ability to handle listener runtime errors to recover and/or notify from unwarranted error events which can be handled specifically for each SaaS application/provider at the CloudStreams Connector listener level.

CloudStreams OAuth 1.0a Authentication Scheme Enhancements

CloudStreams OAuth 1.0a authentication scheme is now enhanced to provide support for realm and user specified signing algorithm.

Field Lookup Support in CloudStreams Connectors

CloudStreams Server now provides the ability to configure lookup for any field with a possible list of values from respective SaaS application, which is available in the header, parameter and input

signature of a Cloud Connector Service. The field lookup provides the ease of use for end users to choose a value for a field rather than manually entering the same.

CloudStreams Server support for MySQL CE 5.7 on Amazon RDS

CloudStreams Server now supports MySQL CE 5.7 on Amazon RDS instance, for persisting governance and analytics data.

CloudStreams Development Plugin

OAuth and JWT Token Support

CloudStreams Connector Development plugin now supports the authentication type "OAuth V2.0 (JWT Flow)" as part of the **Authentication Type** drop-down list. The connector developer can use this new authentication type while developing a connector for a SaaS application supporting the same authentication mechanism.

OAuth with Token Flow Credentials Support

CloudStreams Connector Development plugin now supports the authentication type "OAuth V2.0 (Authorization Code Flow)" as part of the **Authentication Type** drop-down list. The connector developer can use this new authentication type while developing a connector for a SaaS application supporting the same authentication mechanism to provide the capability to generate access tokens.

Cloudstreams Connectors

New and Updated Connectors

New and updated connectors for the following SaaS applications can now be downloaded from the Software AG TECHcommunity website at http://techcommunity.softwareag.com.

- **New Connectors**
    - Workday® HCM, SOAP Version 31.1
    - Salesforce® CRM REST Version 45
    - DocuSign®, Version 2
    - Microsoft® Azure Data Lake, Version 1
    - Zuora®, REST Version 1
    - Shopify®, Version v2019-04

- **Updated Connectors**
    - NetSuite®, SOAP Version 2018_2
    - Cumulocity, Version 0.9, Streaming Listeners Support
    - Salesforce® CRM and Bulk, SOAP Version 44, Multi Authentication Support
    - Google Cloud Pub/Sub, Version 1 – Multi Authentication Support

webMethods Deployer

Deprecations of Runtime Deployment

The runtime deployment mechanism will be deprecated from the 10.5 release on. We recommend that all customers start using Asset Build Environment and the repository base deployment mechanism.

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webMethods EntireX

REST API Enablement

EntireX now supports scenarios where you have a REST API and want to call this from a COBOL or Natural application.

Application Monitoring Enhancements

- The Application Monitoring Data Collector is now available as a component running inside an Integration Server using the EntireX Adapter.

- Dynamic configuration of Application Monitoring is now possible while the EntireX Broker is running.

- The message ID and correlation ID of a message are now available as new Application Monitoring KPIs.

- CIS version 11 provides commands to enable/disable the Application Monitoring feature and to define the collector Broker ID for Application Monitoring.

  The information reply structure BROKER was enhanced to return the current status of Application Monitoring and the collector Broker ID.

- Broker supports new operator commands DISPLAY APPMON, APPMON=NO|YES and COLLECTOR=host:portr.

- Using Command Central you can now change Data Collector settings dynamically. The change is effective immediately; there is no need to restart the broker.

High Availability

- An additional ping command is now available for all EntireX RPC servers to test the server's availability. This command is particularly useful in a clustering scenario. You do not need a running Broker to execute this command.

- Container orchestration, which allows automated deployment, scaling and management of EntireX Brokers and EntireX RPC Servers running in Docker containers, is now described in the EntireX documentation.

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webMethods Integration Server

Support for REST Consumer

Integration Server allows developers to develop REST consumer from a given Swagger v2.0 API descriptor. The REST consumer provides support for consumer APIs for all resources and operations defined within the Swagger file. The REST consumer supports SSL connections while calling the provider API. The REST Consumer can authenticate with the API provider by passing the correct HTTP basic based credentials.

Support for MQTT Trigger and Publisher

MQTT is one of the most commonly used protocols in IoT projects. MQTT exchanges data between clients and a broker using the publish/subscribe model. Integration Server provides native support for MQTT version 3.1.1 by allowing developers to create subscriptions to MQTT topics using an MQTT trigger and providing public services to publish MQTT messages to a 3 rd party MQTT provider.

Enhanced Support for Publishing APIs to API Gateway

When publishing SOAP or REST based APIs to webMethods API Gateway, developers can now specify the API name and version.

Support for Admin API

Integration Server provides support for a new REST-based API for administration purposes. This API enhances the DevOps capabilities of Integration Server. DevOps personnel can create scripts that make use of these APIs to automate the administration tasks associated with Integration Server. In the v10.5 release of Integration Server, administrative APIs are supported for the following: -

- Server resource
- License resource
- Package

Enhanced Command Central support for Integration Server

Command Central can manage additional Integration Server configuration related to the scheduled task configuration.

Enhanced GraphQL Support

Integration Server enhances support for GraphQL by providing support GraphQL data loaders which improve the performance of data fetching. Integration Server allows developers to create dataloader services that will provide caching of data and improved performance.

Record SSL handshake details in a File

Integration Server supports the ability to log protocol details during the SSL handshake process for inbound connections. The details are logged in a separate file in json format.

Provide Support for Kerberos Credentials at Transport Level for Web Services

Support for Kerberos authentication at the HTTP/S transport level for consumer web services

Enhanced Support for JSON Schema

Integration Server provides enhanced support for JSON Schema. Integration Server supports advanced JSON Schema constructs like $id, readOnly, writeOnly, and if-then-else.

Enhanced Support for Clock Skew in JWT Token Verification

Integration Server provides the ability to set time setting for different JWT token providers. This setting allows Integration Server to factor the time difference between the token issuer and the verifier (Integration Server in this case). This reduces the errors associated with JWT token validation.

Provide Support for Outbound Interceptor

Integration Server provides support for developers to write an outbound interceptor that intercepts outbound http and soap consumer calls. Developers can capture raw outgoing requests, responses in XML / JSON format using the outbound interceptor function.

Support Compressing Content in HTTP-based Services

Integration Server supports gzip-based content encoding functions like compress and deflate. Clients can send compressed content to Integration Server and the content handler will automatically decompress the request. Integration Server can send compressed content in the response and the clients can decompress that content.

Deprecate Legacy REST Support

Integration Server legacy REST support is deprecated. The new REST capabilities are exposed by the REST v2 feature.

Certify Solace as JMS Provider

Integration Server supports Solace as a JMS provider. Integration Server can send and receive data using Solace messaging infrastructure.

Provide SSL Support between IS and JMS Provider Communication

Integration Server supports connectivity to 3rd party JMS providers using SSL-based connectivity. Integration Server supports both one-way and two-way SSL connectivity with JMS providers.

Support PostGreSQL for Integration Server

Integration Server supports PostGreSQL database for storing audit data and other related information.

Enhanced support for OAuth2

Integration Server OAuth2 tokens can be used to authenticate access to REST v2 APIs.

Enhanced hybrid integration with webMethods Integration Cloud

Integration Server now supports concurrent execution of requests sent from webMethods Integration Cloud.

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webMethods Microgateway

Additional Policies Support

This release introduces support for a few additional policies in the following stages:

- Identify and Access policies
    - Identify and Authorize Application - The following additional identification types are supported:
        - Hostname Address
        - IP Address Range
        - Payload element
        - SSL Certificate
    - Authorize User
- Request Processing policies
    - Validate API Specification
- Response Processing policies
    - Validate API Specification
- Traffic Monitoring policies
    - Monitor Service Performance
    - Monitor Service Level Agreement
- Routing policies
    - Support for transport security aliases across all routing policies

SSL Enhancements

Microgateway now supports configuration of SSL truststore and keystores based on API Gateway configuration.

Kubernetes Support

Microgateway now supports configuration of all aliases using environment variables. This simplifies the configuration of Microgateway containers in Kubernetes deployment files.

Prometheus Support

Prometheus metrics have been enhanced to include Microgateway JVM runtime data.

Runtime Service Registry Support

Configuration of service registries has changed to enable configuration of service registries using environment variables. Microgateway now uses maps holding service registry configurations. Each entry in the map is identified by the name of the service registry configuration and provides the configuration itself. From this release, API registration within the service registry must be configured explicitly.

Aliases Support

Configuration of aliases has been enhanced to enable configuring them using environment variables. Microgateway now uses maps holding alias configurations. Each map entry is identified by the alias name and holds the alias configuration itself.

webMethods Microservices Runtime

Enhanced support for OpenShift

Microservices Runtime enhances support for OpenShift by providing sample OpenShift scripts in the Software AG repository on GitHub (https://github.com/SoftwareAG/). The updated scripts allow user to run, scale, and manage Microservices Runtime using the OpenShift container platform.

webMethods OneData

Support for full-text search in the OneData Search Capabilities

The full-text search support that was used by customers was part of the New Data Steward UI. The same is now available with the Current Nova UI that will benefit lot of existing implementations.

Following are the enhancements:

- The menu option in OneData (**Home** > **View** > **Search**) has been enhanced to support full-text search in addition to the existing database search capabilities on the Nova UI.

- The full-text search option was previously available only in the New Data Steward UI, now it is available on Nova UI.

- The elasticsearch-based full-text search capabilities will return search results even if there are typos in the search criterion etc.

Data Quality Enhancements

The Data Quality capabilities in OneData has been enhanced with the following:

- Skipping the cleansing process for those records that have been already cleansed outside of the DQ process so that redundant cleansing as part of the OneData DQ process can be avoided. For the same, the data records should already be marked in Cleansed status.

- The Manual Match Screen showing the list of candidate gold records has been enhanced to display more columns than only the columns used in the matching process. This additional information will allow the users to better identify the gold record to be matched against, A new column qualifier **Show In DQ Manual Match** Screen is introduced.

- Processing of columns of CLOB datatype as part of the DQ survivorship process. (If enabled by a OneData property: onedata.dataquality.enableCLOBColumnProcessing).

Data Interchange Enhancements

Support in REST JSON-based data load capability to accommodate the same data object in different levels of hierarchy in a non-recursive conceptual object.

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webMethods Service Development

Introduction of Lightweight webMethods Service Designer

Software AG has launched a new lightweight development tool called webMethods Service Designer. The Service Designer combines the Service Development plugin from Designer with Microservices Runtime and the Unit Test Framework. Service Designer can be downloaded from the Software AG Tech Community website.

Support for building REST Consumers

Designer allows developers to build a REST consumer by providing the Swagger v2.0 interface document for a REST API provider. The REST consumer wizard takes the name or URL of the Swagger document and generates client operations for each resource / method combination in the Swagger document.

Support for easy to use flat file schema generation

Designer provides a graphical click-and-configure wizard for defining a flat file schema. Developers upload a sample flat file to the wizard and then click the fields to define and configure the schema. This feature provides an easy to use mechanism for defining complex flat file schemas.

Support for Sending and Receiving MQTT Messages

MQTT messages can now be received and processed via an MQTT trigger. The MQTT trigger establishes subscriptions to topics on a third party MQTT provider and then invokes a service to process messages from the topic. Services can also publish messages to an MQTT provider.

Enhancements for Publishing APIs to API Gateway

When publishing SOAP or REST based APIs to webMethods API Gateway, users can now specify the API name and version.

Support for GraphQL Dataloaders

In collaboration with Integration Server, Designer enhances the performance of data fetching for GraphQL by providing support for GraphQL dataloaders.

Deprecate legacy REST support

Integration Server legacy REST support is deprecated. The new REST capabilities are exposed by the REST v2 feature.

Enhanced support for JSON Schema

In collaboration with Integration Server, Designer provides enhanced support for JSON Schema. The new Read only and Write only properties in Designer provide support for the "readOnly" and "writeOnly" JSON schema annotations.

Enhanced support for OAuth2

Designer supports the creation of security definitions based on OAuth security schemes You can add these security definitions to REST resources and REST operations.

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webMethods Update Manager

The key features are:

- Software AG Update Manager has a new user interface and architecture in this latest version v11.

- The new 'Service' menu (in the top left corner) is intuitive and provides convenience, information, and configurational services.

- Software AG Update Manager has an improved and simplified workflow and user experience. It introduces the concept of Focus Paths (Workflow Directions) at the home page of Software AG Update Manager and has integrated some new features that optimizes the user experience in both online and offline mode.

Software AG Installer

New Software AG Installer Client Available for UNIX and Linux

In previous releases, when you wanted to install on UNIX or Linux systems, you had to first install a specific JDK to run the installer client. In this release, Software AG delivers a *bin* file for UNIX and Linux that includes the JDK needed to run the installer client.

Documentation

The "Using Terracotta with webMethods Products" guide is renamed

The "Using Terracotta with webMethods Products" guide is now renamed to "Using BigMemory with webMethods Products"

New Installing and Upgrading Guide for webMethods Broker

webMethods Broker now contains a new document, Installing and Upgrading webMethods Broker.

New Integrated web help for webMethods Broker

Documentation for webMethods Broker is now available as HTML in an integrated web help format. The web help allows you to access and search the whole documentation set.