

# webMethods Product Suite 10.7

## Release Notes

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Software AG's webMethods hybrid integration platform enables you to build application integration solutions and integrate cloud-based apps and on-premises systems without coding. This top-rated platform simplifies development with one toolset for on-premises and cloud integrations and uses a microservices-style architecture to deliver and scale new integrations faster. The webMethods suite, with 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 in the cloud, on-premises or in hybrid scenarios—providing seamless integration for cloud, mobile, APIs, and Internet of Things (IoT).

Release 10.7 of the webMethods Product Suite provides significant enhancements in every functional area of the suite.

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## Release Highlights

### Integration and Microservices

webMethods Integration Server is the powerful core engine behind the entire webMethods suite, spanning business process management, B2B integration, managed file transfer, API management, and more. Our hybrid integration platform is easily scalable, enabling easy integration of your on-premise applications to SaaS applications, is 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.

The key new features include:

- Support for an OpenAPI v3.0-based REST API provider. The REST provider can now be developed using the OpenAPI-first approach.
- SFTP server alias support is now enhanced with new configuration properties and supports additional Key Exchange Algorithms, Machine Access Code (MAC) algorithms, and Ciphers.
- Support for a REST-based Administrator API which allows developers to automate deployment and support continuous integration and deployment scripts.
- Support for TLS (Transport Layer Security) v1.1 and v1.2 while configuring email ports.
- Enhanced ease of use while working with JSON Schemas.
- Integration Server Administrator provides access to all administrative tasks through a brand new, simplified, graphically rich, tab-based interface with improved accessibility, simpler debugging tools, and server controls.
- The new Admin UI enables users to see all key Integration Server Administrator metrics via an interactive dashboard that provides visual details of monitoring system status,

health, usage patterns and overall performance of Integration Server including JVM, usage, services, and API-related metrics.

- Microservices Runtime now provides support to inject new configuration assets into an existing Microservices Runtime Docker image, which will be updated every three months on Docker Hub.
- Microservices Runtime is now certified to work with Istio Service Mesh. The Microservices hosted on the Microservices Runtime can be managed by the Istio Service Mesh control plane and can work with Istio components such as Envoy.
- webMethods Service Development allows developers to define flat file schema using a graphical wizard and to create a schema from a sample file that has multiple nested definitions.
- webMethods Service Development plugin can now work with Cloud Container, allowing developers to browse Integration Server packages, services, and APIs hosted in Cloud Container.
- The *Trading Networks Built-In Services* guide is now integrated with Software AG Designer in service development mode to help you create custom flows for business use cases.
- Universal Messaging now provides liveness/readiness probes that can be leveraged by Kubernetes to determine the state of the software and native Prometheus support with additional new metrics.
- Fixes can now be applied on an Active/Active UM cluster without cluster shutdown, with the intention of providing zero-downtime updates of the servers. Functionality is available also in 10.3 after fix 16.
- Universal Messaging now has a server-side setting that causes non-master nodes in the cluster to reject client connections, so that client connections are only accepted on the master node.
- Universal Messaging has also added many Health Checker improvements in the health checker tool.
- CloudStreams Server now supports additional options for replaying Salesforce streaming events, such as a CloudStreams connector listener for Salesforce Streaming API can replay events from the last received event, and a CloudStreams connector listener can now attempt recovery for errors configured as recoverable in the associated CloudStreams Connector.
- CloudStreams Server now supports the ability to create a connector by consuming an OpenAPI 3.0 definition of a webservice.
- Defining version specific connectors for Workday is now possible as well as defining a single generic connector connecting to any version of the Workday backend.
- CloudStreams Server now provides the ability to test connectivity with the respective SaaS application, while configuring a connection or post enabling a connection.
- CloudStreams Server can now configure JWT or Service Account Authentication with Adobe Experience Platform.
- New and updated connectors for the following SaaS Applications can now be downloaded from the Software AG TECHCommunity website at <http://techcommunity.softwareag.com>.
- webMethods OneData has added Data Interchange Enhancements including granular control on the visibility of columns of a data object in the service layer APIs.

- Terracotta has added features for supporting Java 11 runtimes for both client and server side (and continued Java 8 support) as well as an improved configuration system, which is more friendly to cloud/container environments.
- Users can now customize the look and feel of the run-time user interface of the AgileApps platform using Custom User Interface (CUI) templates.
- The new runtime UI is enabled by default now for all new tenants that are created in the AgileApps Cloud platform.
- AgileApps now provides an additional security layer in content loading and cross origin resource sharing policies with Content Security Policy (CSP) and Cross-Origin Resource Sharing (CORS) mechanisms.

## API Management

Software AG's webMethods API Portal provides a comprehensive solution that allows the developer community to find, learn about, discuss, and test your organization's APIs. API Portal not only exposes API documentation to developers inside and outside your organization, but also manages the developer on-boarding process, and lets the developers use the exposed APIs for new and creative uses. webMethods API Gateway securely exposes your APIs to consumer, third-party developers, and other partners for use on the web, mobile and IoT applications. webMethods Microgateway is an independent offering—lightweight, agile, and fast. It works with webMethods API Gateway or as a standalone solution to control API access to micro-services in a distributed environment and supports service mesh architectures offering independent and sidecar deployments.

- API Management in the Software AG hosted cloud now offers an Azure hosting option in addition to AWS and allows switching between tenants used as different development stages.
- API Gateway now supports OpenShift and in addition to standard swagger descriptors, users can get Postman collection documentation with examples on how public APIs of the API Gateway can be used.
- Major and minor version upgrades can now be performed without requiring API Gateway instances to be shut down. This approach is used in Software AG hosted cloud and can be used by customers deploying API Gateway on premises or in private clouds, regardless of how API Gateway is deployed.
- The events for applications (consumers) being registered to use APIs in API Gateway can now be automatically synchronized with other gateways (even if they are not clustered) across multiple data centers (including geographically distributed ones).
- API Gateway now provides support for AppMesh, in which API Gateway acts as the controlling and monitoring body. Microgateway acts as the body enforcing policies defined in API Gateway, acting as a sidecar to microservices. Users can now configure connection to Kubernetes clusters where service mesh resides. API Gateway also supports Istio-enabled service meshes as well as plain Kubernetes. API Gateway also displays all the subscriptions made (along with plans and packages) and their status which includes data on package, plan, the current usage, and the percentage of time and quota used.
- API Gateway now features a user interface for users with accessibility needs. This UI has been simplified and caters only to a small subset of API Gateway functionality such as searching and browsing APIs.
- API Gateway now displays all the subscriptions made (along with plans and packages) and their status which includes data on package, plan, the current usage, and the percentage of time and quota used.

- API Gateway captures all the data flowing through it with API calls. Additionally, it captures “design-time” events data about actions performed by users or others.
- API Gateway’s public API for retrieving transactional events data now offers bucket aggregation to support grouping based on multiple fields and date histogram aggregation to support time series data in an interval-based count.
- Conditional error processing has been enhanced with variable-based error processing and transformation where multiple fault cases can be grouped based on conditions.
- API Gateway administrators can now configure the account locking mechanism by specifying the maximum number of failed authentications within API calls.
- API Providers can now edit the API Gateway endpoint URL per API from the API details page.
- API Gateway is now able to handle streaming (responses sent as stream and byte) in API responses.
- CentraSite users can now import APIs from OpenAPI 3 compliant descriptors. It is also possible to create OpenAPI Specification (OAS3) compliant APIs from scratch.
- API Portal deployment now allows for using Postgres as external database, provides the availability API for monitoring the health of an API Portal application, and is Prometheus compliant for monitoring runtime aspects of the API Portal application.

## Suite Enhancements

The webMethods Suite includes enhancements that improve functionality across multiple products.

- Customers can now leverage the new automatic creation of stacks to build a view of their environments in the Stacks view of the Command Central web user interface. They can then manage their landscape using the entire set of functions supported by the stacks.
- Command Central now provides the ability to upgrade a set of installations grouped as a stack through the web user interface. This will enable customers to easily upgrade to a major version, for example, from 10.3 to 10.5. After upgrading a stack, the stack has the same name and configurations, but an upgraded release version and applied fixes (if available).
- Enhanced Command Central templates and documentation are available on GitHub for better on-premise infrastructure automation.
- Software AG Designer now supports the new Eclipse version 4.15.
- The stored procedure for archiving process instances now retains the relationship between parent and child process instances after completing the archiving.
- All components of the BPMS platform (except Optimize) have been certified to run on docker containers. My webMethods Server now supports running Business Rules and Process Engine/Monitor separately.
- A REST based adapter available for OpenText Document Management System and a Sharepoint Adapter is available for various platforms.
- You can now use the Software AG Installer to install your products and the latest or selected updates. You can use this feature when installing the 10.7 or 10.5 release.
- Using the Software AG Installer command line interface, you can now build Docker images for the combination of Microservices Runtime, layered products such as API

Gateway, and Universal Messaging. One use of such images is to aid in the move from on-premises to private cloud.

- Code coverage functionality is now enhanced in Unit Test Framework to ensure that the validated information about mocked services is accurately depicted in the report.

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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 [Software AG Documentation website](#).

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## CentraSite

### OpenAPI 3 support

CentraSite users can now import APIs from OpenAPI 3 compliant descriptors. It is also possible to create OpenAPI Specification (OAS3) compliant APIs from scratch.

### Rest API for Metrics from API Gateway

CentraSite now exposes a REST API for receiving runtime metrics data from API Gateways. (Coming early 2021)

### Docker

CentraSite can now be deployed on Docker. It is now possible to create and run docker containers for registry and repository as well as the application layer separately.

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## Terracotta

### Terracotta

Terracotta has the following features and enhancements for this release:

- Support for Java 11 runtimes both client and server side (and continued Java 8 support)
- Improved configuration system, more friendly to cloud/container environments
- Improvements to scaling out or up without downtime
- Improvements to backup and restore functionalities
- Many new administrative features in the Terracotta Management Console

### Terracotta BigMemory

Terracotta BigMemory has the following features and enhancements for this release:

- Support for Java 11 runtimes for both client and server side (and continued Java 8 support)
  - Improvements to LDAP authentication support
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## Software AG Command Central

### Automatic Creation of Stacks

Customers that have an existing landscape in Command Central, but no stacks can now leverage the new automatic creation of stacks to build a new view of their environments in the Stacks view. They can then manage their landscape using the entire set of functionalities provided by the stacks.

***Examples of CLI commands for automatic stack creation:***

To automatically create stacks based on all nodes in the landscape:

```
$ SAGCC CREATE STACKS AUTO
```

To automatically create stacks only for the nodes in the QA environment:

```
$ SAGCC CREATE STACKS AUTO ENVIRONMENT=QA
```

Command Central groups the existing nodes in a single stack if they:

- run on the same operating system.
- have the same release version.
- are in the same installation directory.
- are managed by the same Platform Manager, based on port number and protocol (HTTP/HTTPS).

Based on these four criteria, Command Central creates different stacks, where: each stack contains nodes that have an equal operating system, release version, and installation directory. The nodes contained in each stack are further grouped into layers that include only process-category components, and each layer contains components with equal same run-time component IDs.

***Additional notes when automatically creating stacks:***

- Command Central does not consider nodes that are part of an existing stack.
- Command Central excludes the local node from automatically created stacks, because Command Central should function independently from the suite.
- Command Central does not automatically add database layers to stacks. You must add the database layers manually after the automatic creation.

## **One-Click Stack Upgrade**

Command Central provides the ability to upgrade a set of installations grouped as a stack through the web user interface. This will enable customers to easily upgrade to a major version, for example from 10.3 to 10.5. As a prerequisite, you must add in Command Central the product and fix repositories for the new version.

After upgrading a stack, the stack has the same name and configurations, but an upgraded release version and applied fixes (if available).

The upgrade can be performed using a dedicated wizard in the Stacks view of the user interface, which provides three flavors

- Same host upgrade with over-install. This upgrade works over the same installation directory.
- Same host upgrade with side-by-side installation. This upgrade installs the new version in a side directory and makes it easy to revert the upgrade.
- Cross host upgrade – the installation can be performed on a remote host. All configurations are migrated, but the hosts are not automatically adjusted. You must adjust manually the configuration to the new physical address after the upgrade.

The following products can leverage this feature:

- webMethods Integration Server
- SoftwareAG Universal Messaging

- My WebMethods Server

### **Command Line Interface – version parameter**

After upgrading Command Central customers often don't adjust their PATH variable and use the old Command Central CLI client to communicate with the server. Now customers can easily check whether they are accidentally using the old version of the CLI, by leveraging the new --version parameter that displays the version, client path, and *cc.properties* file path of the CLI client.

### **New Algorithm Support for SSH connectivity**

Command Central 10.7 supports diffie-hellman-group14-sha256 for its SSH connectivity.

### **Support for Substitute User During Bootstrap and Migration**

The bootstrap and migration process can now be performed with two users - a user that establishes the SSH connection and a user that executes all runtime activities after the SSH connection is established. For example:

*bootstrapInfo:*

*installDir: \${install.dir}*

*port: \${os.port}*

*installer: cc-def-10.7-release-lnxamd64.sh*

*substituteUserCredentials:*

*userName: vmtest*

*password: vmtest*

*credentials:*

*userName: \${os.username}*

*password: \${os.password}*

*authenticationMethod: \${os.auth.method}*

*privateKey: \${os.auth.key}*

### **Deprecation of License Manifest Files and Reports**

The license manifest is deprecated as of release 10.7 and will be removed in the next version of Command Central. Our legal department will soon stop generating license manifests. The report that maps the manifest against the actual environment will be replaced with a report that just shows the inventory of an installation.

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## Software AG Designer

Software AG Designer now supports the new Eclipse version 4.15.

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## Software AG Installer

### Install Updates on Products as Part of Product Installation

In previous releases, you installed your products using the Software AG Installer, and then had to immediately install the latest updates (fixes) separately using the Software AG Update Manager.

In this release, when you are installing into a new, empty directory, you can install your products AND the latest or selected updates, all using the Software AG Installer. You can use this feature when installing the 10.7 or 10.5 release.

*Note:* As time goes on and other updates are released by Software AG for your 10.7 or 10.5 products, you must use Software AG Update Manager as usual to install those updates.

### Build Custom Docker Images

Until now, Software AG Docker images were predefined, and included a single product.

In this release, you can use the Software AG Installer command line interface to build Docker images for the combination of Microservices Runtime, layered products such as API Gateway, and Universal Messaging. One use of such images is to aid in the move from on prem to private cloud.

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## webMethods ActiveTransfer Gateway

### User permissions

Any user permission changes to a Virtual File System (VFS) are applied within the active user session.

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## webMethods ActiveTransfer Server

### Post-processing event configuration changes for active user sessions

Any configuration changes in a post-processing action get applied to all active user sessions.

### Virtual File System (VFS) configuration changes

Any configuration changes in any VFS get applied to all active user sessions.

### Event trigger based on folder monitoring

ActiveTransfer now recognizes new files or folders created through the user interface, and as a result, ActiveTransfer initiates downstream processing.

### **Amazon S3 and Azure file storage**

Support file transfers between ActiveTransfer and Amazon S3 or Azure service. Administrators can configure Amazon S3 or Azure as the source or destination of files. Also, can specify folders on these services like how local file system or remote folders are specified today.

### **Copy/move task enhancements**

Ability to fail the Copy/Move task, if the file with the same filename exists at the destination.

### **Transactions table enhancements**

Capability to export transaction tables to a local file in CSV format based on the applied filter.

### **MySQL version compatibility**

webMethods ActiveTransfer 10.7 is certified with MySQL version 8.x community edition.

### **Server properties user interface**

A new screen for configuring the server properties is added with field property verifications.

### **User permissions**

Any user permission changes to a VFS are applied within the active user session.

### **Two-factor authentication**

Support for two-factor authentication is added using both client certificates and user password for SSL connections. For example, FTPS.

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## **webMethods AgileApps**

### **Custom UI Templates**

User can now customize the look and feel of the run-time user interface of the AgileApps platform using Custom User Interface (CUI) templates. Using this feature, user can design and deploy a CUI to an AgileApps application.

### **Support for Guest Access**

Data stored in AgileApps is secure and only authenticated users can create and view records. This feature allows a guest user to perform CRUD operations on an object without any authentication or login to AgileApps.

### **New Runtime UI Enablement**

The new runtime UI is now enabled by default for all new tenants that are created in the AgileApps Cloud platform.

In the mobile access, the default login page is the new runtime UI login page.

### **Additional Security Layer in Content Loading and Cross-origin Resource Sharing Policies**

AgileApps now provides an additional security layer in content loading and cross origin resource sharing policies with Content Security Policy (CSP) and Cross-Origin Resource Sharing (CORS) mechanisms.

It resolves possible security attacks related to cross-origin by supporting additional HTTP headers for CSP and CORS.

### **AgileApps Installation in New Format Documentation**

AgileApps installation instructions are now available as part of the new documentation format. This documentation site provides a different look and feel as compared to the previous documentation in Mediawiki. See <https://docs.webmethods.io/AgileApps> for details.

### **Support for Chinese Language**

Chinese language is now added to the list of supported languages on the AgileApps platform.

### **3 and 4 Column Layouts for Forms in the New UI**

User can now configure up to 4 columns when designing a form layout. This is applicable only for viewing via the new AgileApps Runtime UI.

### **Default Mailbox Support**

The default mailbox support is now removed from the platform. This is applicable only for cloud customers.

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## **webMethods ApplinX**

### **Natural-IO Protocol Support**

ApplinX support of the Natural-IO protocol enables you to create an SSL connection to a Natural UNIX host without the need of a third-party component.

### **Natural Screen Tester is part of ApplinX**

The product Natural Screen Tester has now been incorporated in ApplinX.

### **Administration using Batch Commands**

You can now perform various administration tasks from a command line using the tool `gxadminconsole.sh` (UNIX) or `gxadminconsole.bat` (Windows) in the ApplinX utilities folder.

## ApplinX REST API

You can now create and disconnect a session, and get and update a screen, using the ApplinX REST API.

## Printing with BaseObject API

New classes in the ApplinX BaseObject API provide an additional means of activating a mainframe or AS/400 printer session.

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# webMethods API Gateway

## Software as a Service

API Management in the Software AG hosted cloud is extended:

- To allow Azure hosting option in addition to AWS.
- To allow switching between tenants used as different development stages (for example, DEV, TEST, PROD) from the product user interface.
- To allow configuring Enterprise Disaster Recovery across cloud hosting regions.
- To allow configuring geo-based routing rules in cases where multiple API Gateways are used and there is a need to route the incoming API call to the nearest API Gateway. This enhancement is currently available in case of Azure cloud hosting.

## Infrastructure, architecture, operations

API Gateway now offers the Availability API for monitoring the health of API Gateway instance. The following endpoints are available:

- [api-gateway-url]/rest/apigateway/health – basic health probe returning HTTP 200 or 400 status depending on the health of the API Gateway instance.
- [api-gateway-url]/rest/apigateway/health/admin – health probe reporting the status of API Gateway components used for administrative and design-time purposes (that is, user interface and analytical dashboards engine).
- [api-gateway-url]/rest/apigateway/health/engine – health probe reporting the status of API Gateway components used in runtime (that is, API Gateway runtime container (Integration Server), persistence store (Elasticsearch), caching engine (Terracotta)).
- [api-gateway-url]/rest/apigateway/health/externalServices – health probe reporting the status of connectivity to external systems configured in API Gateway (that is, destinations) and connectivity to external accounts configured in API Gateway (that is, service registries, AWS Lambda, and so on).

[api-gateway-url]/rest/apigateway/health/all – health probe combining all the information from other probes in one call.

## OpenShift

API Gateway now supports OpenShift.

In addition to standard swagger descriptors, users can now get Postman collection documentation with examples how public APIs of the API Gateway can be used. This collection is

available on Software AG GitHub repository under <https://github.com/SoftwareAG/webmethods-api-gateway/tree/master/apigateway/services/postmancollections>.

Elasticsearch used by API Gateway has been upgraded to version 7.7.1. Additionally, API Gateway does not use the Search Guard component anymore.

The externalized configurations of API Gateways have been extended to also include:

- Master password
- Default passwords
- UI ports
- Aliases
- User creation

### ***Zero downtime upgrades***

Major and minor version upgrades can now be performed without requiring API Gateway instances to be shut down. This approach is used in Software AG hosted cloud and can be used by customers deploying API Gateway on premises or in private clouds, regardless of how API Gateway is deployed (installable software, Docker, Kubernetes).

### ***Cross Data Center synchronization***

The events for Applications (consumers) being registered to use APIs in API Gateway can now be automatically synchronized with other gateways (even if they are not clustered) across multiple data centers (including geographically distributed ones).

The mechanism uses consistent hashing ring and gRPC-based gossip protocol – thus avoiding additional component in the architecture.

API Gateway has been enhanced to be aware of other API Gateways in a different data center and establish a channel using gRPC protocol. API Gateway nodes could be combined in a group to form a consistent hash ring. This consistent hash ring is maintained in correct state using a gossip protocol. Whenever a write request is sent to a server, based on the hash API Gateway stores it in the hashed node. Whenever a read request is received, API Gateway would try to read from cache. If that fails, (cache not present) API Gateway would hash it and read it from the node it is present in.

### ***DevOps and CI/CD***

In addition to the staging and promotion features documented in previous versions, users can now use the sample DevOps project set up documented with samples and utilities on Software AG GitHub repository under <https://github.com/SoftwareAG/webmethods-api-gateway-devops/>.

## **AppMesh**

This version of API Gateway provides support for AppMesh, in which API Gateway acts as the controlling and monitoring body. Users now can:

- Configure connection to Kubernetes cluster where service mesh resides. API Gateway supports Istio-enabled service meshes as well as plain Kubernetes.
- Configure the location of Microgateway vanilla Docker image, which will be injected by API Gateway into service mesh as a sidecar proxy to enforce policies defined in API Gateway.
- Configure the connectivity details for the Microgateways injected to the service mesh to communicate back with this API Gateway.
- See the services available in the service mesh in the dedicated AppMesh page.

- View the details of these service deployments.
- APIfy selected services, that is, define the API contract for them.
- Deploy the Microgateway into the service mesh to enforce policies defined on APIs.
- See the deployed Microgateways (in the Microgateways page) and analytics they gather in runtime.

## **User Interface**

### ***Accessibility***

API Gateway now features a user interface for users with accessibility needs. This UI has been simplified and caters only for a small subset of API Gateway functionality like searching and browsing APIs.

### ***Usability improvements***

API Gateway's UI usability has been improved in the following areas:

- Sorting in the API listing page now considers the version indicator and the time of creation of the API.
- Publish and Export action buttons are now also available from within the API Details page.
- API listing now includes the date column to show when the API was created.
- OAuth2, Applications, and Policies screen have been enhanced to include pagination.
- API calls' payloads are now searchable in Audit Logs available within the gateway-wide analytics.
- Configuration page for API Portal destination now allows testing the connection before saving it.

## **API Monetization and Analytics**

### ***API Monetization***

API Gateway now displays all the subscriptions made (along with plans and packages) and their status (for which package, which plan, what's the current usage, how much left (time and quota)).

Calendar week and calendar month metrics are now added to quota definitions (in addition to existing metrics).

### ***Custom destinations***

API Gateway captures all the data flowing through it with API calls. Additionally, it captures "design-time" events data about things done by users or happening any other way. This data is used by API Gateway itself (to notify users, to provide analytical dashboards, and so on.)

The same data can be made available to other solutions using the concept of destinations (send the data to the configured destination). Until now, API Gateway had support for destinations such as Software AG's products (API Gateway, API Portal, CentraSite), external solutions like Elasticsearch or relational database or files, and so on.

In this release, API Gateway has been enhanced with the capability to define custom destination (using existing custom extensions feature available in policies) through:

- Custom HTTP URL
- Messaging
- Amazon Lambda

- webMethods IS

When defined, these custom destinations can be used the same way as the built-in ones.

Additionally, custom extension allows for filtering what is be sent to them.

#### ***Analytical dashboards improvements***

- Functional
  - Filters defined by users on the dashboards are now persisted for the duration of user session.
  - User can now build and save custom dashboards – both global and API-specific
  - New widgets:
    - Gateway vs Provider time comparison line chart
    - API Invocations number based on status.
- Non-functional: Improved performance and rendering time of dashboard screens.

#### ***API transactions REST API***

API Gateway's public API for retrieving transactional events data has been enhanced in the following areas:

- Bucket aggregation to support grouping based on multiple fields.
- Date histogram aggregation to support time series data - interval-based count.
- Metrics aggregation to support sum, min, max, and avg.
- Allow range as request criteria to filter.
- Enhance the search functionality to support all 7 event types.

There is a Postman collection available of Software AG GitHub repository under <https://github.com/SoftwareAG/webmethods-api-gateway/tree/master/apigateway/services/postmancollections/apis/search-service>.

#### **Policies framework**

##### ***Conditional error processing policy***

Conditional Error Processing has been enhanced with variable-based error processing and transformation where multiple fault cases can be grouped based on conditions.

Additionally, response headers and status codes can now be transformed as per the defined policy conditions.

Conditional Error Processing configuration capabilities are now aligned with options available in Response Transformation policy.

##### ***Account locking***

API Gateway administrators can now configure the account locking mechanism by specifying the maximum number of failed authentications within API calls (calls resulting with HTTP status codes of 401, 402, 403) after which the caller's IP is blocked permanently or for a specified time period.

##### ***Variable framework enhancements***

Variable framework is the capability of API Gateway to declaratively manipulate data and metadata while handling API calls, for example, if you say “parse this JWT, extract the user name and put it in the path parameter of outgoing backend call”; in most platforms, it requires coding. In API Gateway, it is a single line declaration: `${request.authorization.claims.user} = ${request.path.user}`

This framework has been enhanced to additionally include:

- Access to aliases (for example, env specific values for URLs, and so on). Additionally, aliases are available across all (API call) stages.
- Make the variables available across all the (API call) stages.
- Context variables - system and custom.
- Custom variables (ability to define and initialize a custom variable for any use).
- Enhance the Request and Response transformation policies for payload like the custom policy or mashups.
- Route based on a specified condition.
- Ability to use the custom variables that are defined in Mashups and custom extension in Request and Response transformation steps.
- Access to all application details (for example, Partner Id, and so on).
- Access to more data from transaction events like `${providerTime}`, `${packageId}`, `${planId}`.

Additionally, there are some usability improvements made for better readability and syntax highlighting.

### ***Global policies***

Global policies functionality has been enhanced to use tags on multiple levels of the API as well as allow multiple filter criteria groups in one policy.

### ***2-way SSL***

The routing policies and endpoint aliases have been enhanced to handle SSL/TLS connections between API Gateway and the native endpoint.

During the SSL handshake between API Gateway and the native service, the server certificate, which is sent by the native service, must be validated against a truststore in API Gateway. API Gateway UI has been enhanced to make configuration of the verification possible. This setting is also now saved in Elasticsearch and synchronized between the cluster nodes if needed.

## **API Management**

### ***API Gateway endpoint URL***

API Providers can now edit API Gateway endpoint URL per API from the API Details page. When editing, you can use static values and predefined keys for `${apiName}`, `${apiVersion}` and `${defaultPrefix}`.

Additionally, it is possible to configure a global custom URL, which would be applied to all APIs in the API Gateway. Globally defined custom URLs can coexist with the local ones and API Gateway responds to calls made on all of them at the same time.

### ***Bind APIs to API Gateway ports***

API Gateway's port configurations now allow adding specific APIs to allow or deny list for the port.

### ***Improvements to the passman imports***

In the export functionality, all the password imports now honor the overwrite option of the corresponding parent entity. For example, alias password gets imported if the overwrite option of alias is selected. API Gateway skips the import of it, if the alias overwrite is set to false.

### **Streaming**

API Gateway is now able to handle streaming (responses sent as stream and byte[]) in API responses.

### **Tagging**

The use of tags in API Gateway is now enhanced in the following areas:

- Tagging APIs in API Details page has been enhanced for type-ahead support in all drop-down lists that allow selecting and adding tags.
- Global policies now use tags on all levels in APIs (API-level, resource-level, and method-level).
- With Teams concept enabled, it is possible to define global team assignment rules (ownership of assets) using API level tags.

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## **webMethods API Portal**

### **Support for external Postgres**

API Portal deployment now allows for using Postgres as external database.

### **Azure certification**

API Portal has been certified to run on Azure cloud platform.

### **Monitoring**

API Portal now provides:

- The Availability API for monitoring the health of API Portal application
- Prometheus compliant Metrics API for monitoring runtime aspects of API Portal application

### **Documentation**

API Portal documentation has been enhanced to cover in more detail the following topics:

- HA configuration
- HA configuration with external database
- Configuration for LDAP integration for SSO using SAML
- External database configuration for Oracle 12c
- LDAP configuration in UMC
- Load Balancer configuration and administration

## webMethods BPMS (Process, Rules, MWS, Optimize and Content Adapters)

### Process Archiving

The stored procedure for archiving process instances now retains the relationship between parent and child process instances after the archival is completed.

### Containerization

- All components of the BPMS platform (except Optimize) have been certified to run on docker containers.
- MWS is now aware of Rules and Process/Monitor running separately

### Business Rules Management Console enhancements

There have been multiple enhancements made in the RMC UI to improve the customer experience:

- It is now possible to shift-select decision table rows in the RMC UI
- It is also possible to display more than 5 decision entities in the RMC UI
- There is now a configuration setting available in the RMC UI to toggle the full function display
- It is now possible to use constants in the RMC UI instead of exporting them from the Designer UI.

### Easing Business Rules Licensing restrictions

There have been multiple enhancements made to the WOK and WOKAA Rules licenses to increase usage for Integration only use cases:

- Rules now exposes a REST API available by default in the **WmBusinessRules** package to help invocation of Rules from non-webMethods applications.
- Rules can now be invoked from an IS Flow service or from MWS with an existing WOK license itself.
- WOK license is completely removed from the 10.7 release. Hence, there is now only one license for Rules (WOKAA) which will be available to be sold to customers.

### My webMethods Server

- MWS now supports the latest stable Jetty version (9.4.28)
- Central User Management of an old version of MWS is now interoperable with the latest version of Integration Server
- CDS UI has been deprecated from MWS and is now available as part of the newly designed IS Admin UI itself.
- There is now an option to suspend all task instances of a given task type using one REST API call.

## Optimize Enhancements

- There is a new migration utility which provides better customer experience when upgrading Optimize environments.
- Since Adobe Flash will stop working on all browsers in December 2020, webMethods Optimize now uses JavaScript to display the graphics and charts.
- There is now a custom solution for detecting rule violations based on the standard deviation. This custom solution provides the option to exclude the zero-value KPI readings from the rule calculation.

## Content Adapters

- A REST-based adapter is now available for OpenText Document Management System.
- Sharepoint Adapter is now available for various platforms such as Solaris, HP-UX, AIX, and zLinux.

## Deprecation Notice

- All Business Rules functionalities related to the creation, display, and use of external event rules are deprecated, as the underlying Event Driven Architecture (EDA) has been deprecated since April 2018.
- Use of all EDA event types in BPMN message events in a Process model is also deprecated.
- Process-specific predefined EDA event types or any custom EDA event types developed using the Software AG Designer EDA event type editor in the Events Development perspective are also deprecated.
- Process Simulation functionality and perspective in Software AG Designer has been deprecated with immediate effect. Similar functionality is now available through the ARIS Suite of products. This functionality will be completely removed from Software AG Designer by December 2022.

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# webMethods CloudStreams

## CloudStreams Server Enhancements

### ***Listener Extended Replay Events Support in CloudStreams Salesforce Connectors***

CloudStreams Server now supports additional options for replaying Salesforce streaming events. A CloudStreams connector listener for Salesforce Streaming API can now replay events from the last received event. Additionally, the connector listener can be configured to leverage a custom implementation to resolve the replay id for replaying events. If both these options do not meet the user requirement, then there is an additional option to manually specify the exact replay id while enabling the connector listener. The additional replay option offers a better control over replaying events besides the earlier options and their effective usage can reduce the inflow of duplicate events as well as reduce the risk of exceeding Salesforce event limits.

### ***Listener Error Handling and Callback Support for CloudStreams Connectors***

CloudStreams Server now provides the ability for a CloudStreams connector listener to attempt recovery for errors configured as recoverable in the associated CloudStreams Connector.

Additionally, CloudStreams Server provides the ability to configure a callback service that is invoked with the error details in case of any errors. The error recovery support attempts to offer a seamless real-time integration experience for the user. The error callback support allows the user to take any desired action such as (disable connector listener, send email) based on the error reported.

#### ***OpenAPI 3.0 Support***

CloudStreams Server now supports the ability to create a connector by consuming OpenAPI 3.0 definition of a webservice.

#### ***Workday - Multi Version Support***

CloudStreams Server now supports defining version specific connectors for Workday besides defining a single generic connector connecting to any version of the Workday backend. Multi-version support is required for Workday because the Workday backend does not guarantee backward compatibility for its API interfaces.

#### ***Connection JWT (Service Account) Authentication Support in CloudStreams Adobe Experience Platform Connector***

CloudStreams Server now provides the ability to configure JWT or Service Account Authentication with Adobe Experience Platform. Additionally, it also maintains the validity of the authentication tokens by periodically refreshing the underlying tokens. The JWT authentication support provides a seamless connectivity experience with Adobe Experience Platform for the user.

#### ***Connection Field Lookup Support in CloudStreams Connectors***

CloudStreams Server now provides the ability to configure lookup for any connection field with a possible list of values from respective SaaS applications. The field lookup support provides ease of use for end users to choose a value for a field rather than manually entering the same.

#### ***Connection Test Support in CloudStreams Connectors***

CloudStreams Server now provides the ability to test connectivity with the respective SaaS application, while configuring a connection or post enabling a connection. The test connection support allows a user to quickly validate the connection configuration before saving a connection. Additionally, it allows a user to check the status of the connection once the connection is enabled.

#### ***Connection Enhanced Logging Support for OAuth Refresh***

CloudStreams Server now supports enhanced logging and a separate logger facility for session management. A separate logger facility would allow a better control over the logs related to session management. A user can increase the logging level for this facility to capture additional logs while debugging session expiry issues besides turning on CloudStreams wire logging that requires an Integration Server restart to take effect.

#### ***CloudStreams Server Support for MySQL version 8.x Community edition***

CloudStreams Server now supports MySQL version 8.x Community edition, for persisting governance and analytics data.

#### ***CloudStreams Server Support for PostgreSQL 10.11***

CloudStreams Server now supports PostgreSQL 10.11, for persisting governance and analytics data.

#### ***CloudStreams Server Support for MS SQL Server 2019***

CloudStreams Server now supports MS SQL Server 2019 , for persisting governance and analytics data.

### ***CloudStreams Server Support for Oracle 19c***

CloudStreams Server now supports Oracle 19c, for persisting governance and analytics data.

### **CloudStreams Service Development Plugin**

#### ***Support for Dynamic Operation Signature for WSDL based SOAP Connectors***

CloudStreams Service Development now provides support for generating a cloud connector service operation signature dynamically for a WSDL based SOAP connector. The WSDL is retrieved from the backend while configuring the operation, based on the endpoint configured in the connection. In case CloudStreams Server fails to resolve the WSDL endpoint from the connection, CloudStreams Service Development provides alternative options to the user. The user can directly specify the alternate WSDL endpoint or upload the WSDL file from a local path.

### **CloudStreams Development Plugin**

#### ***OpenAPI 3.0 Support***

CloudStreams Connector Development Plug-in for REST now supports the ability to read an OpenAPI 3.0 definition and automatically generate a connector.

### **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**

- SAP S/4 HANA Cloud Edition OData v2, Version 1
- Adobe Experience Platform, Version 1
- Microsoft Dynamics 365 Business Central OData v4, Version 1
- Amazon Aurora DB, Version 1
- Adobe E-Sign, Version 6
- Alibaba Cloud Object Storage Service, Version 1.0
- Gainsight NXT, Version 1
- Loqate, Version 1
- FreshSales, Version 1
- FreshDesk, Version 2
- Aha, Version 1
- Egnyte, Version 1
- ChargeBee, Version 2
- Recurly, Version 2
- SalesLoft, Version 2
- ABBY, Version 1
- Acuity Scheduling, Version 1

## Updated Connectors

- Salesforce® CRM REST, Version 48
  - Salesforce Bulk V2, REST Version 44, OAuth Support
  - ServiceNow, Version Orlando, OAuth 2 Support
  - Coupa, Version R27
  - Magento, Version 2.3, 2.4
  - Marketo, Version 1, Bulk API Support
  - NetSuite®, SOAP Version 2018\_2, Token Based OAuth Support
  - Amazon Simple Notification Service (SNS), Version 2010-03 -31, AWS Signature v4 support
  - Microsoft Azure Data Lake Store, Version 2
  - Google Cloud Storage, Version 1, OAuth + JWT Support
  - Atlassian Jira, Version 2, OAuth Support
  - IBM Watson Tone Analyzer, Version 2017-09-21
- 

## webMethods EntireX

### FIPS Support

EntireX now supports FIPS-140 compliant SSL communication. This is available for:

- EntireX Adapter
- Multiple EntireX RPC Servers and Listeners
- EntireX Adapter

### SSL Client Certificates on z/OS

EntireX Broker on z/OS supports authentication of participants with their SSL certificate.

### Generating Adapter Assets via REST

A REST API is now provided for the following actions:

- Creating and updating adapter connections, adapter services, and adapter listeners
  - Extracting IDL and creating a listener connection service
- 

## webMethods Integration Server

### Support OpenAPI v3.0 Standard

Integration Server offers support for an OpenAPI v3.0 based REST API provider. The REST provider can be developed using the OpenAPI-first approach. For OpenAPI, Integration Server

supports authentication mechanisms such as OAuth, JWT, and Digest along with Basic. There is also support for media types with JSON/XML/multipart. The feature has support for complete OpenAPI defined extended JSON Schema. Support for servers, callbacks, and links provide more capability for users to define their APIs as per their business needs.

### **Enhanced Support for SFTP**

SFTP server alias support in Integration Server is enhanced with new configuration properties and supports additional Key Exchange Algorithms, Machine Access Code (MAC) algorithms, and Ciphers. The preferred key exchange algorithms, ciphers, and MAC algorithms are now configurable from Integration Server Administrator.

Integration Server provides public services for connecting and communicating with SFTP server. These services are also now enhanced to accept additional parameters like server name, username and password. This reduces the need for customers to maintain multiple SFTP server aliases.

### **Support for Integration Server Administrator API**

Integration Server provides support for a REST-based Administrator API. This API allows developers to automate deployment and support continuous integration and deployment scripts. In this release, Integration Server is supporting the following resources in the Admin API: global variables, CSRF configuration, Kerberos settings, job deployment, JWT, quiesce, proxy server, JDBC resources, health gauge, audit log, journal (server) log, package management, server certificates, client certificates, WebSocket port, LDAP, email port, SFTP server alias, SFTP user alias, Enterprise Gateway ports, IMAP ports, file access control, scheduled tasks, extended settings, HTTP ports, HTTPS ports, messaging configuration, trigger management, cache managers, caches, email notifications, threadpool, sessions, server memory, outbound HTTP, single sign-on, keystore, truststore, license, and remote servers.

### **Enhanced User Management APIs in Integration Server**

Integration Server now includes user management APIs to identify if a user is part of an LDAP group, access users belonging to a certain LDAP group, and retrieve user attributes (e.g. email address) from the user profile.

### **Support Command Line interface (CLI) for the Administrator API**

Integration Server provides a command line utility to access Administrator API operations via the command line interface. This utility will assist developers in creating advanced devops scripts and automate deployment and management of Integration Server environments.

### **Support TLS v1.1 and v1.2 with Email Ports**

Integration Server supports TLS (Transport Layer Security) v1.1 and v1.2 while configuring email ports.

### **Support OAuth 2.0 Token Authentication for Email ports Configured with IMAP Protocol**

Integration Server supports OAuth v2.0-based authentication for email ports configured with IMAP protocol. This allows users to integrate with 3rd party SMTP providers like Microsoft Outlook using OAuth v2.0 token. The SMTP public service has also been enhanced to support OAuth token authentication.

## **Enhanced Support for Integration Server Configuration via Command Central**

Administrator can use Command Central to centrally configure and manage SFTP server and user alias configuration for the Integration Server.

## **Alert and Notification Framework**

Integration Server now includes an alerting and notification framework that is used by the new Integration Server Administration to notify users about alerts generated in the Integration Server such as password expiry, certificate expiry, and configuration changes that require a server restart.

## **Support SHA2 in SMIME Services**

Integration Server supports SHA2 standard when using SMIME public services. Integration Server now includes a security library Server that supports various algorithms for signing and verification including SHA1, SHA224, SHA256, SHA384, SHA512 and MD5.

## **Enhanced Support for JSON Schema**

Integration Server offers enhanced ease of use while working with JSON Schemas. The enhanced JSON Schema feature provides lucid and easy to understand messages while creating and validating JSON documents using the built-in json schema services. With the enhanced support, JSON document types can be validated when used in the flow service signature at runtime.

## **Support for Parquet File Format**

Integration Server supports the Parquet file format. Integration Server can read, parse, and convert Parquet files to IData format. Integration Server also provides the ability to convert IData format to Parquet. Integration Server includes a batch iterator function for reading large Parquet files. Integration Server can convert an IS document type (IData) to Parquet schema.

## **Support for HEAD HTTP method in REST resources**

Integration Server supports HTTP HEAD method while creating REST resources. Developers can send HEAD HTTP requests and they will be handled by the corresponding REST resource implementation.

## **Support for 2-Way SSL while Connecting to webMethods.io Integration**

Integration Server supports 2-way SSL while configuring the hybrid integration connection between the on-premises hosted Integration Server and Cloud hosted wM.io Integration.

## **Enhanced Support for Swagger-Based REST Consumer**

Integration Server provides enhanced support for the Swagger consumer. Integration Server enables the user to select one or more operations from operation list defined in the swagger descriptor and generates consumer operations for the selected operations only. This reduces the size and the complexity of the consumer code.

## **Support for SSL/TLS with MQTT Connection**

Integration Server provides one-way and two-way SSL support while connecting to a MQTT server. This feature enhances the security of MQTT support.

## **Enhanced Interaction between Integration Server and Universal Messaging**

Enhancements to the connectivity between Integration Server and Universal Messaging offer improved performance and ease of use.

- Universal Messaging provides a new API to consume multiple messages with a single request. Integration Server supports this API and JMS triggers can now consume multiple messages more efficiently.
- Integration Server uses a new pause subscription API provided by Universal Messaging. This API allows the suspending of message retrieval for a webMethods messaging trigger to be a pause in the subscription instead of a stopping and closing the subscription as in previous releases. This reduces the processing of duplicate events or messages.

## **Enable TLS 1.3**

Integration Server supports TLS v1.3 for secure inbound and outbound connections that use JSSE.

## **Statistics Related Improvements**

Integration Server now captures and displays timeseries data for different statistics in the Dashboard available in the new Integration Server Administrator. In addition, the format for the statistics logs is changed to CSV format to more easily operate with tools such as Microsoft Excel.

## **SSL Improvements**

Integration Server now allows specifying secondary truststore as part of the truststore alias definition. In addition, Integration Server now creates default truststore pointing to JVM provided truststore.

## **Default HTTPS Port**

Integration Server creates default HTTPS port 5543 that can be used for HTTPS-based communication.

## **Improvements for Integration Server Administrator**

### ***Enhanced Graphical Interface***

Integration Server Administrator provides access to all administrative tasks through a brand new, simplified, graphically rich, tab-based interface with improved accessibility, simpler debugging tools, and server controls. All key points of navigation are now accessible from a collapsible menu structure that allows a user to maximize page real estate and ensure a clutter-free layout.

### ***Dashboard***

Users can now see all key Integration Server Administrator metrics via an interactive Dashboard that provides visually detailed monitor system status, health, usage patterns and overall performance of Integration Server including JVM, Usage, Services, and API-related metrics.

### **Monitoring**

Users can now monitor flow services and coded services such as Java services as well as documents data including key metrics around failure, trigger retries, and error details, via a graphically rich, user-definable interface that features a simple-to-use, custom date/time filtering component.

### **Archiving**

To ensure peak performance of service monitoring, users can archive or delete monitored data for user-selected periods via the Archiving component in Integration Server Administrator.

### **Bundled Common Directory Services (CDS)**

The bundled CDS component provides a unified mechanism within Integration Server Administrator to connect to various user directories and provides the ability to manage users, groups and roles.

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## **webMethods Microgateway**

### **AppMesh**

This version of Microgateway provides support for AppMesh, in which Microgateway acts as the body enforcing policies defined in API Gateway, acting as a sidecar to microservices. Users now can:

Deploy the Microgateway into the service mesh to enforce policies defined on APIs.

See the deployed Microgateways (in the Microgateways page in the API Gateway user interface) and analytics they gather in runtime.

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## **webMethods Microservices Runtime**

### **Ability to Inject Configuration into Microservices Runtime Docker Images**

Microservices Runtime provides support to inject new configuration assets into an existing Microservices Runtime Docker image. This feature allows the developer to create a single Microservices Runtime Docker image and use the same image to host multiple different microservices having a unique configuration asset for each microservice.

### **Provide Latest Microservices Runtime Docker image on Docker Hub**

Microservices Runtime Docker image will now be updated every 3 months on Docker Hub.

### **Support Istio Service Mesh with Microservices Runtime**

Istio is a leading service mesh offering. Microservices Runtime is certified to work with Istio. Microservices hosted on the Microservices Runtime can be managed by the Istio control plane and can work with Istio components like Envoy.

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## webMethods OneData

### Data Interchange Enhancements

There is more granular control on the visibility of columns of a data object in the service layer APIs.

A new column level property **Hide In Service Layer** is now introduced to control the visibility of columns in a data object in the service layer APIs for data retrieval and data load. Previously, the visibility of columns in a data object, for both the Manage Data UI screen and service layer API was controlled by the same column level property **Hide In Display Screen?** whereby the column was visible in both places or none. With the addition of this new property, administrators can now control the visibility of the columns in the service layer API.

This functionality is applicable for both REST and JMS based service layer APIs.

The documentation around REST-based service layer capabilities is also enhanced in the OneData Developer Guide.

### Data Quality Enhancements

The Locate cleansing engine is now upgraded to the latest version.

The documentation is also enhanced to include more use-case specific steps to enable the ease of data quality project configuration.

### Platform Enhancements

OneData is now certified to work with the following:

- Azure Cloud Platform
- Oracle 19c database
- ElasticSearch 7.7.1

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## webMethods Service Development

### Enhanced support for graphical development of flat file schemas

webMethods Service Development allows developers to define flat file schema using a graphical wizard. The new enhancements allow the developer to create a schema from a sample file that has multiple nested definitions. The new enhancements offer a better way to handle whitespaces and support different file formats.

### Support for OpenAPI v3.0 provider

webMethods Service Development enables developers to create REST provider based on the webMethods Service Development provides support for an OpenAPI v3.0 based REST API descriptor. The REST descriptor can be developed using the OpenAPI-first approach. For OpenAPI, Integration Server supports authentication mechanisms such as OAuth, JWT, and Digest along with Basic. There is also support for media types with JSON/XML/multipart. The feature has support for complete OpenAPIdefined extended JSON Schema. Support for servers,

callbacks, and links provide more capability for users to define their APIs as per their business needs.

### **Support to browse and debug Flow services in Cloud Container**

webMethods Service Development plugin can work with Cloud Container. Developers can browse Integration Server packages, services, and APIs hosted in Cloud Container. Developers can run these services and debug them using the capabilities of webMethods Service Development plug-in.

### **Support for HEAD HTTP method in REST resources**

webMethods Service Development in conjunction with Integration Server supports HTTP HEAD method while creating REST resources. Developers can send HEAD HTTP requests and they will be handled by the corresponding REST resource implementation.

### **Enhanced Support for Swagger-Based REST Consumer**

webMethods Service Development in conjunction with Integration Server provides enhanced support for the Swagger consumer. Developer can select one or more operations from operation list defined in the swagger descriptor and generates consumer operations for the selected operations only. This reduces the size and the complexity of the consumer code.

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## **webMethods Trading Networks**

### **Built-In Guide for WmTN Public Services**

The Trading Networks Built-In Services Guide is now integrated with Software AG Designer in Service Development mode to help you develop custom flows for business use cases. The input and output parameters of each service appears on the UI of Software AG Designer.

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## **Software AG Universal Messaging**

### **Release of fixes on Docker hub**

Fixes are released as minor versions of the product.

- 10.3 Fix 17 is released as 10.3.0.17
- 10.5 Fix 7 is released as 10.5.0.7

### **Liveness/Readiness probes for Kubernetes**

Universal Messaging 10.7 provides liveness/readiness probes that Kubernetes can leverage to determine the state of the software.

### **Support for Native Prometheus**

Universal Messaging 10.7 provides Prometheus support with the following metrics:

- Number of performed requests - to monitor overall user traffic/load.
- Number of request errors - to calculate error rates. Important!
- Response time - to measure performance. Important!
- Number of logged errors - to measure the rate of errors that are not visible at the request level.

### **Live Update of an A/A Cluster**

Fixes can now be applied on an Active/Active cluster without cluster shutdown, with the intention of providing zero-downtime updates of the servers. This functionality is also available in 10.3 after fix 16.

### **Enhanced Command Central**

Enhanced Command Central templates and documentation are available on GitHub for better on-premise infrastructure automation.

### **Event lifecycle logging**

All state changes and movements of an event in and out of the server can be logged for better traceability.

### **Server-side setting enforcing follow-the-master (Replication Mode)**

Universal Messaging has added a server-side setting that causes non-master nodes in the cluster to reject client connections, so that client connections are only accepted on the master node. All nodes should be present in the connection URL list, so that the customer can eventually connect to the only node that accepts the connection – the primary one on the cluster. Since it is server-side, this will force all client implementations to only connect to the master of the cluster, whereas currently we only have the “follow the master” feature in Java/JMS clients. This is valuable for customers using .Net, C++, and MQTT clients.

### **Health Checker Improvements**

Following are the improvements available on the health checker tool:

- Check if Connection factory has the *syncSendPersistent* property set.
- Check JNDI if an XA connection factory exists - and WARN if it does.
- ACLs - warn if any ACL group has full access.
- For channel and realm:
  - Issue a warning for higher memory usages if store caching at the realm is enabled.
  - Check a channel with subscriber for the JMS engine.
  - Ignore the JNDI properties check for a store with proto buffer.
  - Fix honor capacity warning; when capacity is set to 0 ignore warning.
  - Check for any configuration changes from the default – the report should give the current and the default value.

- Check that the system properties set in realms within a cluster agree. Check languishing durables - configurable as to how long languishing constitutes.
  - Check languishing join.
- 

## **webMethods Update Manager**

### **Revert Product Installations to an Earlier Fix State**

You can select an earlier fix state to which to revert your product installation. Software AG Update Manager will remove fixes or add earlier fixes as necessary to return you to the selected state.:

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## **webMethods Upgrade**

### **Pre-Upgrade Analyzer**

You can now use a tool called the Pre-Upgrade Analyzer to compare your old Integration Server product installation to the new Integration Server release, and generate a report that indicates how changes in the new release affect your custom assets, so you can adjust those assets. For example, if a built-in service has been deprecated in the new Integration Server release, the Pre-Upgrade Analyzer will generate a report that lists the custom services in your old installation that are affected by the deprecation.

### **Upgrade Assessment and Readiness Guide**

The new Upgrade Assessment and Readiness Guide helps you plan your upgrade. It explains such topics as the major phases involved in upgrade and an estimate of the amount of time for each, assessing your upgrade (for example, your objectives, interfaces to other systems, version management, code deployment, testing, and project timelines), and how to prepare a checklist to help you work through the upgrade project with full visibility. The guide is available in the Installation and Upgrade webhelp on the Software AG documentation website.

### **Testing Documents**

The installation and Upgrade webhelp on the Software AG documentation website now includes testing guidelines created by a webMethods Architect and the webMethods suite testing team. You can use these guidelines to create the testing strategy for your upgrade, and beyond.

### **Automated webMethods Optimize Upgrade**

Many steps in the webMethods Optimize upgrade have now been automated and can be run using a migration utility.

### **One-click Upgrade from Command Central**

You can use Command Central software stacks to simplify upgrade now and in the future. A software stack is a set of product runtimes and related database components that serve one or more purposes, such as application integration, API management, or business process management. Software stacks enable you to use Command Central to create, monitor, and maintain multiple product installations using bulk operations. The stack upgrade feature is

available in the Command Central GUI and lets you automatically generate composite templates that you can then use to upgrade a single environment or automate the upgrade of multiple environments.

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## Unit Test Framework

### Enhancement to code coverage functionality

The code coverage functionality is now enhanced in Unit Test Framework to ensure that the validated information about mocked services is accurately depicted in the report.

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## Documentation

### webMethods ActiveTransfer Quick Start Guide is no longer available to users

The webMethods ActiveTransfer Quick Start Guide is no longer part of ActiveTransfer product documentation.

### REST Developer's Guide is no longer delivered with the webMethods Integration Server documentation set

The REST Developer's Guide is no longer delivered with the webMethods Integration Server documentation set as the contents of the guide are now available in the webMethods Service Development Help.

### A new guide titled Service Monitoring in Integration Server is now part of Integration Server documentation set

*Service Monitoring in Integration Server* is a new guide that describes how to monitor flow services, coded services (such as JAVA services), and documents through the new Integration Server Administrator.

### A new guide titled Managing Users with Common Directory Services is now available

A new guide titled *Managing Users with Common Directory Services* is now available for the Common Directory Services component in the new Integration Server Administrator.

### Installation and Upgrade webhelp offers upgrade assessment/readiness guide and testing guidelines

The Complete Installation and Upgrade Information for Software AG Products webhelp now offers two new guides:

- Software AG Upgrade Assessment and Readiness Guide to help you prepare for and plan your upgrade
- Upgrade Testing Guidelines to help you design your testing strategy

The webhelp is available on the Software AG Empower documentation web site.

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WEBM-RN-107-20210304