

# webMethods Product Suite 10.1

## Release Notes

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Software AG's Digital Business Platform powers digital transformation and enables any organization to become a Digital Enterprise. And the webMethods Product Suite, a core component of the Digital Business Platform, helps you achieve this transformation.

webMethods Product Suite includes a broad collection of capabilities including application and partner integration, API management, agile process development, master data management, and operational intelligence. 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, and streamlining process management and agile application development.

Release 10.1 of the webMethods Product Suite provides significant enhancements in every functional area of the suite.

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## Release Highlights

### Integration

Software AG's webMethods Integration Platform is a proven, pre-integrated software suite that enables enterprises to rapidly integrate systems, services, devices, processes, business partners, and data to provide new business value and improve business performance.

The key features include:

- Integration Server, in conjunction with webMethods Designer, supports the ability to read a Swagger specification and automatically generate a REST API descriptor as per the specification. Integration Server creates flow services, document types, and REST V2 resources in which each resource operation lists a defined URL template, the supported HTTP methods, and an associated flow service. A REST API descriptor created from a Swagger document can be refreshed using an updated Swagger document.
- Integration Server provides support for an updated REST resource called REST v2. The REST v2 resource enables developers to define the REST resource and flexible resource URLs.
- Integration Server OAuth 2.0 provider now supports the OAuth 2.0 Introspection specification. Integration Server provides the ability for the resource server to query the webMethods Integration Server OAuth 2.0 authorization provider to determine the active state of the OAuth token issued by the provider.
- Integration Server now allows developers to intercept raw HTTP transport inputs and outputs for a particular service. Integration Server provides a registration framework to register a Java class that can process the intercepted input and output documents. The Java interceptor class can then accept or reject the request.
- Integration Server now provides the ability to authorize OAuth token issues by third-party identity providers Ping Identity and Okta using the OAuth 2.0 Introspection. webMethods ActiveTransfer Server now supports the deployment of ActiveTransfer assets including server configurations, virtual folders, scheduled events, and post-processing events using webMethods Deployer.

- webMethods Active Transfer Server now provides the ability to specify decryption and encryption settings at the Virtual file system level. This enables both decryption and encryption to be performed as part of a single file stream.
- ActiveTransfer Gateway now enables virus scanning for all file uploads. This is supported through integration with a third-party virus scanning tool using the ICAP protocol.
- The Data Steward User Interface in OneData has been enhanced to provide support for browsing as well as data management actions for Data Objects. The new browsing capability includes the standard features of basic filtering, sorting and pagination.
- The Data Interchange capabilities in OneData have been enhanced to enable connectivity with Big Data sources such as Hadoop, in order to send and receive master data.
- The Unit Test Framework now has better integration with Integration Server. This enhancement provides the ability to create unit tests from the run/debug view and out-of-the-box automation to execute Jenkins tasks.
- The CloudStreams Connector Development Plugin for REST has been completely redesigned for better ease-of-use, and to provide additional features. Additionally, it supports quick connector creation from Swagger definitions. The CloudStreams Connector Development Plugin for SOAP has also been redesigned, and a beta version is available with this release.
- CloudStreams Server now allows connector developers to define the operations and resources that can work with multiple operations and multiple business objects within a single web service (SOAP/REST) call.
- CloudStreams server now supports the deployment of cloud connector services, connections and configurations such as Consumer, Database Settings, OAuth tokens, Streaming Providers, and Streaming Subscribers using webMethods Deployer.
- The new Terracotta DB Adapter enables simple point and click functionality to expose data from Terracotta DB, and also provides wizard-driven, code-free development of data services.
- A new and enhanced version of Integration Server Content Adapters has been released, including adapters for Documentum, FileNet, SharePoint, Alfresco, and CMIS. Enhanced Content Adapters and enhancements to the HDFS and HBASE Adapters are also available now.
- New connectors for many SaaS applications are now available for download on the Software AG TECHCommunity website.

## **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 APIs. This API portal not only exposes API documentation to developers inside and outside of your organization but also manages the developer on-boarding process and lets developers use exposed APIs for new and creative uses.

webMethods API Gateway enables you to securely expose your APIs to third-party developers, partners and other consumers for use in web, mobile and Internet of Things (IoT) applications. With webMethods API Gateway you can easily create APIs, define Service Level Agreement (SLA) policies, and seamlessly publish your APIs to webMethods API Portal. webMethods API Gateway provides enhanced API monetization features, including defining and managing API plans and packages, for easily supporting API subscriptions and charge-back services.

The key features include:

- API Gateway now supports the promotion of assets across different environments (such as, DEV, TEST, STAGE, and PROD). Additionally, API Gateway enables continuous integration (CI) and continuous delivery (CD) practices to be used for development, deployment, and promotion of APIs, applications and other related assets in support of DevOps tooling.
- API Gateway now offers the ability to integrate with any OAuth2 Authorization servers including Ping Identity and Okta.
- API providers can now integrate API Gateway with any OpenId providers for authentication of both REST and SOAP APIs. JWT tokens that are generated from an OpenID Connect IdP can be validated by API Gateway and can also be used for application identification.
- API Gateway now supports Digital Event Services (DES), Email, SNMP, CentraSite, Elastic Search, Local Log, and Audit Log as additional destinations for sending the API run-time events and Key Performance Indicator (KPI) metrics.
- API Gateway now supports JSON Web Token (JWT) authentication for both REST and SOAP APIs.
- All content published to API Portal are now searchable.
- The API try-out page now allows testing of APIs protected with OAuth.
- Administrators can now set up API Portal to require a one-time password in addition to basic authentication.
- API Portal can now run inside Docker containers.
- API Portal now supports an application marketplace where API users can upload, describe and promote applications built using APIs published in the API Portal.
- The CentraSite Business User Interface has been extended to allow LDAP user synchronization (individual users) and the synchronization of consumer applications data.

### **webMethods Dynamic Apps**

Software AG's Digital Business platform capabilities includes all the capabilities required for Dynamic Process Automation, and enables the development of *next gen* digital apps that enhance your user experience, improve operational efficiencies, and extend your business. webMethods Dynamic Apps allows you to build apps on the fly, embrace Citizen Developers from the business-side of the house and, when your needs change, use the same platform to scale and build more complex apps as part of your overall digital transformation initiatives.

The key features include:

- Adoption of webMethods Business Console AppSpaces and OpenUI gadgets in webMethods Mobile Business Console.
- Modularized My webMethods Server: server provides the option to install the portal and business administration user interface separately.
- webMethods Event Persistence (EVP) has been renamed to Digital Event Persistence to reflect its focus on support for DES (Digital Event Services) events, and now provides a persistence framework for the Digital Business Platform.
- A new JDBC-compliant driver is available which provides a query API. With this driver, users can now leverage standard JDBC queries to easily connect to the event persistence store and retrieve events.
- A new Business Rules action type called Predictive Analytics Action, provides integration with Software AG Predictive Analytics. Predictive Analytics can now be used in decision tables and decision trees as a condition or result.

- Users can now speed up the hot deployment of large rules projects by utilizing the new option to disable the verification of a rules project when hot deploying it from the My webMethods Server to Integration Server. Mobile Suite 10.1 introduces a new visual outline preview, giving developers instant visual feedback about the view or template being modeled. This ability provides an improvement to support a what you see is what you get type of modelling experience.
- The new visual icon editor allows easy setup of icons and splash screens within the project. A new editor has been added to greatly improve the creation and management of image assets. Assets can be used from an integrated library or defined from SVG, customized and optimized for all platforms.

## **Operational Intelligence**

Based on a consistent event-driven architecture, Operational Intelligence integrates best-of-breed technologies from existing Software AG products for process and data analytics into a single offering with a novel business-user interface.

The key features include:

- Optimize for Infrastructure now has a KPI and a rule for monitoring long-running threads, reducing the risk of costly outages due to services running longer than expected.
- Users can now leverage Java Management Extensions (JMX) to monitor applications, system objects, devices and more with the new JMX monitoring capability.
- Optimize for Infrastructure (the Infrastructure Data Collector) now has a Command Central template which is preconfigured with all Optimize for Infrastructure defaults. This template is available for Command Central-based installations, and can easily be edited and customized for individual installations.
- Optimize for Process users now have more flexibility in configuring email alerts. Alert emails can display not only the email of the addressee, but the email addresses of others who are on the same notification. All users can then coordinate a response to the alert.
- In addition to core MashZone NextGen features, this release also introduces the MashZone PPM edition for process analytics.
- MashZone NextGen 10.1 introduces a new data source that can be used to build dashboards based on data that is stored within Terracotta DB.
- MashZone NextGen Explorer Add-on 10.1 provides exploratory, ad hoc analysis of streaming and historical data from multiple sources. The product supports Internet of Things (IoT) use cases, as well as additional use cases in retail, financial services or anywhere you have large amounts of data in motion.

## **Suite Enhancements**

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

The key features include:

- Composite template validation is now supported with Command Central. To ease the development of composite templates, template is now validated at the beginning of each template application.
- Product configuration can now be exported as a composite template snippet in Command Central. Combining those snippets can ease the development of the custom product configurations.

- Alongside the old jobs view, Command Central has a new view that can better show the dependencies between jobs, in cases of a composite template execution, and can provide better job details.
- Command Central now provides repository-based asset deployment capabilities.
- A new public interface has been added in Universal Messaging to for committing and rolling back events.
- Universal Messaging now supports pause publishing, which allows all publishing of all clients publishing to the server to be paused across channels, queues and data groups, without affecting the administration API, inter-cluster communication or joins.
- Serial durable subscriptions in Universal Messaging are now supported in the client API for Java, as well as in an extension to the API for JMS.
- Serial and shared durable subscriptions in Universal Messaging are also now supported in the client API for C#, which provides new public methods for interaction.
- Software AG Designer and its plugins are supported on Eclipse version 4.6.3.
- When migrating silently, the Integration Server migration utility now lets you specify new names for migrated instances in the migration utility command.
- When you install products from Software AG Command Central Bootstrappers using the Software Download Center, Software AG Update Manager is now automatically installed in managed installations.
- The installation time and footprint of the standalone installation of Software AG Update Manager is drastically reduced

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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

### CentraSite Business User Interface

CentraSite Business User Interface has been extended to allow:

- Synchronization of individual LDAP users
- Synchronization of consumer applications data
- Management of asset types

### Command Line Interface

CentraSite Command line utility has been enhanced to allow:

- Management of design-time policy actions
- Synchronization of LDAP users through LDAP groups

## Reports

Predefined reports can now work on aggregated run-time data that queries large databases and provides faster access to frequently-accessed data and queries, and helps generate reports at a much faster speed.

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## MashZone NextGen

MashZone NextGen has the following new feature and enhancements. In addition to core MashZone NextGen features, this release also introduces MashZone PPM edition for process analytics.

### New Data Source

MashZone NextGen 10.1 introduces a new data source for Terracotta DB. This data source can be leveraged to build dashboards based on data stored within Terracotta DB.

### Visualizations Enhancements

Following are the visualization enhancements introduced in 10.1:

- It is now possible to have multiple y-axis in bar and line charts. Improvements to chart legends.
- A new method of filtering between Dashboard tabs has been introduced for both fixed and smart (responsive) dashboards
- A new Action Button has been added allowing a button to be placed on a Dashboard that can trigger an action (change tab, set selection, call URL, Post data, Send Apama Event).
- A new operator has been added to Data Feeds that allow RAQL Statements (a SQL like dialect) to be used directly against any and multiple data sources.
- It is now possible to generate Apama events and send these to an Apama correlator for further processing.
- A new Post Data API has been introduced that allows MashZone NextGen dashboards to bi-directionally communicate with other iframes when MashZone NextGen is embedded within another application. An example WebMethods Business Console Gadget is included within the WebMethods 10.1 release.
- Additional changes including file browsing for file based data sources, improved SQL highlighting for SQL based data sources, and re-use a widget data assignment in a full data feed has been introduced.

### Other Changes

- MashZone NextGen has been migrated from Apache Tomee to Apache Tomcat to allow faster security updates to be deployed.
- Universal Messaging (previously used internally in MashZone NextGen) has been removed and replaced by websocket communication. MashZone NextGen no longer requires the UM port 9009 to be open on the MashZone NextGen server firewall.

- Security improvements include ACLs on aliases (File resources, JDBC, PPM, EDA/DES/Apama, URL)
  - MashZone NextGen is now certified for Microsoft Edge browser and Microsoft SQL Server 2016.
  - MashZone NextGen now support the following functions in Command Central - installation, product fixes, lifecycle (start, stop), logs, KPI's, and configuration.
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## MashZone NextGen Explorer Add-on

MashZone NextGen Explorer Add-on 10.1 provides exploratory, ad hoc analysis of streaming and historical data from multiple sources. The product has a particular focus on Internet of Things (IoT) use cases, but the capabilities provided also support other use cases in retail, financial services – anywhere you have large amounts of data in motion. Explorer allows operations analysts, maintenance specialists, developers, and data scientists to do their job more effectively.

### New Capabilities

- The ability to publish an Explorer analysis to a MashZone NextGen dashboard (data-at-rest sources only) for further sharing of insights.
  - Automatic recommendation of appropriate visualization type based on selected dimensions and measures.
  - Line approximation for large datasets.
  - Digital Event Services' (DES) Integration - A new streaming architecture now supports DES streaming data sources and enables advanced time manipulation capabilities, allowing users to play/pause live data streams, jump back in time to replay certain observations, fast forward and even slow down live streams.
  - Simplified start mode for Apache Spark with `—embeddedSpark` flag.
  - Explorer Add-On uses common MashZone NextGen identity management system and supports single sign on (SSO).
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## My webMethods Server

My webMethods Server has the following new feature and enhancements:

- Adoption of webMethods Business Console AppSpaces and OpenUI gadgets in webMethods Mobile Business Console.
- Modularized My webMethods Server: server provides the option to install the portal and business administration user interface separately.
- Common directory service (CDS) support for webMethods Integration Server truststores, providing better operational experience.



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## Software AG Command Central

### Composite Template Validation

To ease the development of composite templates, the template is now validated at the beginning of each template application.

The following checks are now executed at the start of every composite template execution:

- if product repositories exists
- if the products and all their dependencies are available in the repository
- if the fix repository exists
- if the fixes and their dependencies are available in the fix repository
- if SSH access is possible in case the Platform Managers are not running on the target node
- if the OS user can create the installation directory

The validation is executed by default when applying the composite template. It can also be triggered without executing the template (for example, without performing the installation or applying the fixes).

### Configuration Export for Composite Templates Development

Products configuration can now be exported as a composite template snippet. Combining those snippets can ease the development of the custom product configurations.

### New Jobs View with Tree of Dependent Jobs

Along with the old jobs view, we introduce a new one that can better show the dependencies between the jobs, in case of a composite template execution, and can provide better job details. Currently the old and the new jobs views will co-exist and will be opened based on the current context.

### Stacks and Layers User Interface (BETA)

A new user interface representation of your environments that enable you to group your runtimes into layers, for example a group of Integrations Servers into ESB layers, a group of Universal Messaging servers into Messaging layers, a group of My webMethods servers into Presentation layers. This enables you to control the lifecycle of all servers in a layer and compare their binaries, fixes and configurations.

A stack (a term for a server cluster of the same release version) consists of products layers. They can either be created manually and then grouped together, or created through layer templates. These are micro versions of the composite templates, related only to a particular runtime that describe how to install the runtime.

### Asset Deployment (BETA)

Command Central now provides repository-based asset deployment capabilities. In the Repository screen of the Command Central web user interface, you can add a flat file ABE

repository or an ABE repository uploaded on a GIT server. You can then browse and search the registered asset repositories. You can install product assets only through the Command Central CLI.

Command Central currently supports deployment of IS / MCS 10.1 packages. Other composite packages are currently not certified with Command Central.

### **Security Improvement: Encrypted Proxy Authentication**

The proxy authentication for Command Central and Platform Manager is now encrypted.

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## **webMethods API Gateway**

### **Staging, Promotion, and DevOps**

API Gateway now supports promotion of assets across different environments (DEV, TEST, STAGE, PROD and so on). In addition API Gateway enables continuous integration (CI) and continuous delivery (CD) practices to be used for development, deployment, and promotion of an API, Applications and other related assets, and supports the use of DevOps tooling.

### **Support for JWT**

API Gateway now supports JSON Web Token authentication for both REST and SOAP APIs. API Gateway can generate a JWT token itself or validate the JWT token generated by a trusted third-party server. The JWT claims can be used for Application Identification.

### **Support for OpenID**

API providers can now integrate any OpenID providers with API Gateway for authentication of both REST and SOAP APIs. The JWT tokens that are generated from an OpenID Connect Id can be validated by API Gateway and also be used for Application Identification.

### **Support for Third Party OAuth Providers**

API Gateway can now integrate with any OAuth2 Authorization servers, like Ping and Okta, for Authorization.

### **Approval Configurations**

API Gateway allows API providers to configure an approval process to control the Application requests and API Registrations. The approval workflow can be configured for creating or updating an application, registering applications to the APIs, and managing subscriptions to the API Package.

### **User Management and Access Controls**

API Gateway now allows creation of users, groups, and access control permissions. An Administrator can now create a much fine-grained access control for different user groups.

## **API Analytics**

API Gateway now supports Digital Event Services (DES), Email, SNMP, CentraSite, Elastic Search, and Local Log and Audit Log as additional destinations for sending API run-time events and Key Performance Indicator (KPI) metrics.

## **Backup and Restore**

API Providers can now perform a periodic back up of all the assets in API Gateway through a command line utility. The backup location can be configured from local, network file system, or Amazon S3. The same utility can be used to restore the assets into API Gateway.

## **Transaction-Based License**

API Gateway now supports transaction-based licensing model. Here, every service invocation is considered as a transaction and API Gateway keeps a track of these transactions. In addition, a notification function is supported for license-based alerts.

## **API Mocking**

In API Gateway, you can mock an API implementation. API Gateway lets you mock an API by simulating the native service, for instance in an API first approach. With this, the provider may choose to expose the mocked API to the consumers when the actual API does not exist or is not complete.

## **Search**

API Gateway now provides a global search that allows the API providers to search across different assets such as Services, Applications, Aliases, and so on.

## **Docker**

API Gateway provides scripts that allow the users to create API Gateway docker images.

## **SOAP over JMS**

API Gateway now supports JMS as a protocol for SOAP APIs. API Providers can use the API Gateway to provide HTTP <-> JMS protocol bridging between the clients and native endpoints.

## **CentraSite and API Gateway Integration**

API Gateway provides integration with CentraSite, where in an API provider can publish the APIs, Applications, and Aliases from CentraSite and manage the runtime policy enforcements in API Gateway.

## **Migration**

Mediator customers can migrate their APIs, policy enforcements, applications, and other assets to API Gateway. Customers who use Mediator 9.7 and higher versions can migrate to API Gateway.

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## webMethods API Portal

### **Search Functionality**

API Portal now provides a global search that allows a user to search across all content published to API Portal.

### **Multifactor Authentication Support**

Administrations can now set up API Portal to require a one-time password in addition to the basic authentication.

### **OAuth Support Enhancements**

API try-out page now allows testing APIs that are protected with OAuth.

### **API Editing**

API Portal users can edit some API details from the API Portal user interface. Such edits are Portal-specific and subsequent API publishes (from API Gateway) do not affect the incorporated changes. API Portal also allows a single-click reset of such edits.

### **Docker Support**

API Portal can now run inside a docker container.

### **API Marketplace**

API Portal now provides a place for API users to upload, describe, and promote the application built using an API published in the Portal.

### **Additional Languages support**

API Portal can now be displayed in Arabic language.

### **Backup and Restore Support for Consumer Analytical Data**

An Administrator can now perform a backup and restore the consumer analytical data stored in API Portal data store.

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## webMethods Mediator

There are no changes in webMethods Mediator for 10.1.

webMethods Mediator will reach its end-of-life in October 2017. In the coming years, implementations need to be migrated to use API Gateway instead. Software AG has invested significantly in ensuring maximum compatibility and making this migration as smooth as possible.

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## **webMethods ActiveTransfer Server**

### **Support for webMethods Deployer**

ActiveTransfer server now supports deployment of ActiveTransfer assets including server configurations, virtual folders, scheduled events, and post-processing events through Deployer.

### **Encryption and Decryption at VFS Level**

ActiveTransfer server now supports the ability to specify decryption and encryption settings at the virtual file system (VFS) level. This enables both decryption and encryption to be performed as part of a single file stream. For example, files can be decrypted as they are uploaded and then stored in a file system encrypted using a different set of keys. ActiveTransfer supports this functionality for downloads as well.

### **Delete Original Files after Encryption and Decryption**

ActiveTransfer now supports deletion of original files as part of encrypt or decrypt event actions. A new field, Delete Original File, in the event encrypt and decrypt actions explicitly specifies the deletion of the original file in the actions. This option ensures that only the desired set of files is carried over in the pipeline for subsequent file operations.

### **Usability Enhancements**

ActiveTransfer now supports the ability to activate, deactivate, or delete more than one post-processing event or scheduled event through a single click in the Post-Processing Events or Scheduled Events tabs of the Event Management page.

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## **webMethods ActiveTransfer Gateway**

### **Support for Virus Scanning**

ActiveTransfer Gateway now supports virus scanning for all file uploads. Virus scanning is supported through integration with a third-party virus scanning tool using the Internet Content Adaptation Protocol (ICAP). The antivirus scan filter in ActiveTransfer Gateway passes the file stream to the virus scanning tool and terminates the file transfer if a virus is found. You can configure the scan size of the file passed to ICAP server, the total scan size across sessions, and the ICAP server settings in ActiveTransfer Gateway.

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## **webMethods Broker**

webMethods Broker 9.6 is tested and supported with webMethods 10.1.

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## webMethods Business Rules

### Integration with Software AG Predictive Analytics

The new Business Rules action type Predictive Analytics Action, provides integration with Software AG Predictive Analytics. Predictive Analytics can now be used in decision tables and decision trees as a condition or result.

### Option to Disable Verification When Hot Deploying a Rule Project

There is a new option available to disable the verification of a rule project when hot deploying it from My webMethods Server to Integration Server. This can significantly speed up the hot deployment of large rule projects.

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## webMethods Mobile Suite

### Visual Outline Editor

With Mobile Suite 10.1 an all new visual outline preview has been introduced, giving the developer instant visual feedback of the view or template being modeled. This is the first step towards real what you see is what you get like modelling experience. The new Outline comes with all new property views to change colors, alignments, etc.

### Visual Icon Editor

The new visual icon editor allows to easily setup icons and splash screens within the project. It allows automatic scaling for all icon dimensions required per platform and updates the project to use the correct icons.

### Visual Asset Editor

Working with Assets (images) has been greatly improved. A new editor has been added to create and manage image assets and use those in the project. Assets can be used from an integrated library or defined from SVG, customized and optimized for all platforms.

### Added New UI Control `nUIListView` and `nUIListElement`

The new `nUIListView` and `nUIListElement` controls (`ListView`) allow to efficiently manage an endless number of any kind of `nUIDisplayObjects` in a single column. `ListsViews` only load and render the `nUIDisplayObjects` visible on screen. As the user scrolls the `ListView` vertically, the managed `nUIDisplayObjects` are (lazy) loaded and rendered to provide best performance and user experience.

This first version of `nUIListView` and `nUIListViewElements` supports pull-to-refresh and endless scrolling events to allow loading of data to be displayed on demand.

## **Added New UI Control nUISwitch**

With nUISwitch, an alternative to nUICheckbox has been introduced for a better native experience for on and off states in your applications.

## **New Sample Project**

A new sample app Cocktails has been added to show loading and parsing of JSON data using EML modeling, feeding a Datasource and providing the data into a ListView without coding. It also features a navigation drawer and shows how to use the all new Asset & App Icon Editors for icons and images and how to use styling to define global UI properties. The whole app comes with almost zero custom code.

## **New File Management API**

A new File Management API has been introduced. It allows the user to read and write files and folders on the filesystem of the device at runtime. To access files across all platforms, virtual root folders for documents, cache, resources and external storage are provided by the File Management API.

## **New Asset Loading API**

Picking the correct assets for a handset can be quite a tricky task for developers. Image sizes can depend on screen resolution, pixel density, and handset rotation, as well as any number of application-specific concerns. Most handsets have a concept of an Asset Catalog - that is, multiple Images targeting the possible resolution/density setups are registered with one common name, and the Mobile OS selects the correct file to return for that name based on the information it has about the display. With the new AssetImageLoader, a new API has been introduced to provide access to Asset Catalog functionality at design and runtime.

## **New RuntimeInfo and SystemInfo API**

With RuntimeInfo and SystemInfo classes a new API has been introduced to provide easy access to device specific runtime properties, such as screen dimension, ppi value, form factor, location enabled, system info, and so on.

## **Enhanced Connection API**

A new Connection API has been introduced to simplify working with HTTP connections. The new API supports synchronous and asynchronous connections and makes HttpURLConnectionHandler obsolete.

## **Enhanced Push Notification API**

Push Notification API has been enhanced. It allows the developer to implement different workflows depending if the app was started from push notification.

## **New Online Connectivity Status Change Notifications**

For monitoring and polling the connectivity state of the device at runtime, a new API has been introduced. It allows to receive notifications when the device's network adapters change state and to find out about the connection type, such as Wifi, cellular, etc.

## **Operation Queues**

With introduction of OperationQueues it is now possible to manage instances of IOperation more conveniently. Using queues it is now easy to run operations in parallel or sequentially, pause and resume. Queues even help to execute operations in when online or offline.

## **Enhancements to Phoney Simulator**

Phoney has been greatly improved to support the new features described. It now also has an option to start with screen rotated and will now listen to mouse wheel events to simplify scrolling experience. Along with the new Online Connectivity status change notifications, Phoney can now simulate no-connectivity situations. In the drop-down menus, there are options for simulated Wi-Fi and Cellular connections.

## **Native Runtime Performance Optimization**

A new runtime has been introduced to remove Mobile Designer Midlet Thread from applications. The new runtime application does not spawn a new thread for UI operations and utilizes instead the main thread provided by the particular native platform. This is very important for multi-threaded applications and enables great performance optimization for all platforms, including Phoney. Read more in the documentation.

## **Enhanced Performance for JSON Processing On Android**

Android now makes use of the internal, native JSON APIs by default, resulting in a great speedup in org.json.JSONTokener performance. This is very important when processing really large JSON files on Android platform with lots of update operations.

## **Deprecation of Mobile Administrator**

Mobile Administrator is now deprecated.

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# **webMethods Microservices Container**

Microservices is a new architectural style for developing a single application as a suite of small services, each running in its own process and communicating with light weight mechanisms, such as an HTTP resource API. Software AG is now offering a light weight container called the Microservices Container to host these small services. Microservices Container is fully compatible with Integration Server and can host all services developed on Integration Server. Microservices Container is optimized to have a reduced disk and memory footprint.

webMethods Microservices Container provides a superset of the functionality available in webMethods Integration Server. Review the webMethods Integration Server 10.1 release notes for information about functionality available in webMethods Integration Server 10.1.

## **Support for Consul Service Registry**

Microservices Container supports dynamic lookup of service endpoints using the Consul service registry. Each individual package (containing multiple services) can be registered in the Consul service registry. This registration process is automated by adding the package endpoint during



the package loading process and by removing the package endpoint during the package unloading process. Microservices Container provides facilities to look up the endpoint information, which can be used to call the service at run time.

### **Support for Docker**

Microservices Container supports Docker. Microservices Container provides out of the box scripts to create Docker images.

### **Support for Pluggable Framework for Service Registries**

Microservices Container provides a pluggable framework for working with third-party registries. Developers can make use of this framework to add support for third-party registries.

### **Support for Circuit Breaker**

Microservices Container supports the ability to add a circuit breaker construct to any flow service. Using a circuit breaker allows the service to handle errors gracefully and provides a consistent response to the end user. Circuit breaker is a common pattern for a microservices-based architecture.

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## **webMethods Integration Server**

### **Support for Creating a REST API Descriptor Using a Swagger First Approach**

In conjunction with Software AG Designer, Integration Server provides the ability to generate a REST API descriptor from a Swagger document. Using the Swagger document, Integration Server creates flow services, document types, and REST V2 resources in which each resource operation lists a defined URL template, the supported HTTP methods, and an associated flow service. A REST API descriptor created from a Swagger document can be refreshed using an updated Swagger document.

### **Support for REST v2 resource**

Integration Server provides support for an updated type of REST resource called REST V2. The REST V2 resource allows a developer to define operations with flexible resource URLs. A developer can define a resource URL irrespective of the folder structure within the package that contains the REST resource to invoke.

### **Support for JSON Schema Validation**

Integration Server provides support for validating a JSON payload against a JSON schema.

### **Support for using JWT for Authentication**

Integration Server provides support for authenticating incoming requests with JSON Web Tokens (JWT).

## **Support for OAuth 2.0 Token Introspection and Revocation**

Integration Server provides support for RFC 7662, OAuth 2.0 Token Introspection. Access tokens generated by an Integration Server authorization server can be used to access resources in a resource sever that is not an Integration Server. Additionally, access tokens generated by an external authorization server such as PingFederate and Okta, can be used to access resources in Integration Server. In providing support for RFC 7009, OAuth 2.0 Token Revocation, Integration Server allows revocation of access tokens generated by Integration Server.

## **Support for HTTP Interceptor**

Integration Server provides a framework for creating and registering an HTTP interceptor. An HTTP interceptor intercepts all received HTTP requests and outbound HTTP responses. Integration Server makes the raw HTTP request and response, including the HTTP header information, accessible to the HTTP interceptor. For HTTP requests, the HTTP interceptor can perform a check of the request and then, if necessary, reject the request.

## **Support for Sending Multiple JMS Messages at Once**

Integration Server can send a batch of JMS messages to Universal Messaging as part of one call.

## **Support for Creating Administered Objects on Universal Messaging on Demand**

Integration Server can create JMS administered objects on demand. Using Integration Server to create administered objects on demand provides convenience and possible time savings during the development cycle.

## **Support for Serial JMS Triggers with Universal Messaging**

Integration Server supports using a serial JMS trigger with Universal Messaging.

## **Enhanced Support for Defining REST Resources**

Integration Server provides improved support for defining REST resources. Integration Server now permits identically named resources that are created in different Integration Server namespaces. The base path of the Rest API Descriptor can be edited while defining resources using the resource first implementation style.

## **Enhanced Support for Swagger-First REST APIs**

Integration Server provides enhanced support for created REST APIs from Swagger files, offering support for resources with a base path (/) and allowing the grouping of resources based on paths and tags.

## **Server Log Written to stdout**

Integration Server can send the server.log to multiple destinations including stdout. This is useful when the Microservices Container is used with container orchestration tools such as OpenShift and Kubernetes.

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## webMethods CloudStreams

### CloudStreams Development Plug-in Enhancements

- **Enhanced CloudStreams Connector Development Plug-in**

CloudStreams Connector Development Plug-in is now completely redesigned for better usability. Support for developing SOAP based connectors is currently in Beta.
- **Support for Creating REST Connectors using a Swagger first approach**

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

### CloudStreams Server Enhancements

- **Support for Multiple Operations in a Connector Service**

CloudStreams server now allows connector developers to define operations/resources, which can work with multiple operations and multiple business objects within a single web service (SOAP/REST) call. For example, OData change set operation allows you to send the mime part containing multiple operations (create, update, delete, and so on) on multiple business objects (account, contact, and so on) in a single invocation.
- **Support for Multiple Objects in a Connector Service**

CloudStreams server now allows connector developers to define the operations/resources, which can work on multiple business objects within a single web service (SOAP/REST) call. For example, SaaS providers like Salesforce.com allow you to create multiple business objects (Account, Contact, and so on) in a single create operation.
- **Support for Complex Nested Service Signature Structures**

CloudStreams server now allows you to create services having complex and deep nested signature structures in an optimized way. In earlier releases, CloudStreams always used to clone and create concrete copies of the referred document in the signature itself, which resulted in very large service nodes. This led to out of memory errors and service creation issues.
- **Enhanced Custom Fields Support**

CloudStreams server now allows cloud connector services to define the custom fields during service configuration. This feature allows defining nested custom fields, and supports most of the data types and field constraints.
- **Support for Nested Business Objects in a Connector Service**

CloudStreams server now allows connector developers to list nested business objects based on objects relationship. Now a connector end user can navigate to the desired business objects during the cloud service configuration. For example, OData connector can support querying the derived entity types.
- **Support for REST Parameters within POST Body**

CloudStreams server now allows you to send simple key value parameters embedded in the request body for POST or PUT requests in REST connector services. This uses the default web form encoding, which is application/x-www-form-urlencoded .

- **NTLM Basic Authentication Support**  
CloudStreams server now supports the NT LAN Manager (NTLM) authentication protocol. CloudStreams provides basic support for NTLM authentication protocol using the credentials connection group.
- **webMethods Deployer Support**  
CloudStreams server now supports deployment of cloud connector services, connections, and configurations such as Consumer, Database Settings, OAuth tokens, Streaming Providers, and Streaming Subscribers using webMethods Deployer.
- **Migrating CloudStreams Analytics Dashboard from MashZone Legacy to MashZone NextGen**  
CloudStreams Analytics dashboard is updated and migrated from MashZone Legacy to the MashZone NextGen.
- **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**
  - Apache Solr, version 6.1.
  - OData, version 4.0
  - SAP Cloud for Customer (C4C) OData, version 2.0
  - Marketo REST API, version 1.0
  - Google Admin, version 1.0
  - Google Big Query, version 2.0
  - Google Cloud Storage, version 1.0
  - Google Drive, version 3.0
  - Google Pub/Sub, version 1.0
  - Google Sheets, version 4.0
  - Google Analytics, version 3.0 and 4.0
  - Google Prediction, version 1.6
  - IBM Watson, version 3.0
  - Microsoft Azure Storage, version 2016-05-31
  - Slack, version 1.0
  - Sugar CRM, version 10.0
  - Zendesk, version 3.0
- **Updated Connectors**
  - Amazon Simple Queue Service (SQS) connector is updated with support for version 4.
  - Salesforce CRM and Bulk Data Loader connectors are updated with support for version 37.
  - ServiceNOW REST connector is updated with support for the Istanbul version.

- OData version 2.0 connector is updated with support for additional functionalities.

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## **webMethods OneData**

### **Enhanced Data Steward User Interface**

The New UI interface has been enhanced to provide support for browsing as well as data management actions for data objects as follows:

- Browsing of data objects includes the standard features of basic filtering on individual columns, sorting of individual columns, and pagination.
- All data management actions for data objects include insert, update, delete, restore, and purge.
- Users can navigate through different objects more easily by using individual tabs instead of opening new browser windows.
- In the data grid display, inline editing is now possible for the standard data types such as numeric, character, date and Boolean columns.
- The data entry screens support complex configurations such as, supertype, subtype, temporal, and time bound objects.

### **Data Interchange Enhancements**

The data interchange capabilities have been enhanced to provide the following:

- Enable OneData connectivity with big data sources such as Hadoop to send and receive master data by using Data Interchange Export and Import Jobs for the Database type.
- Support for JSON payload format in REST GET-based data retrieval service APIs. With this capability, OneData now supports JSON as a payload format for both data loading and data retrieval through REST APIs.

### **Data Quality Enhancements**

- The data quality module now features improved address cleansing capability with the upgrade to the latest address datasets associated with webMethods Locate.

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## **webMethods Content Adapters**

### **New Version of Integration Server Content Adapters**

A new and enhanced version of the Integration Server Content Adapters has been released, including:

- webMethods Adapter 10.1 for Documentum
- webMethods Adapter 10.1 for FileNet
- webMethods Adapter 10.1 for SharePoint

- webMethods Adapter 10.1 for Alfresco
- webMethods Adapter 10.1 for CMIS (CMIS = Content Management Interoperability Services)

All adapters now provide an *update document* functionality. Sharepoint, Documentum, and Alfresco adapters support notifications.

### **Deprecation of FileNet 3.0 support**

Support of FileNet 3.0 is deprecated in webMethods Adapter for FileNet.

### **New version of WebReader for Content Adapters**

Rendering of Microsoft office documents has been improved on Windows operating systems.

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## **webMethods Optimize for Infrastructure**

### **Monitor Long-Running Threads**

Optimize for Infrastructure now has a KPI and a rule for monitoring long-running threads. This reduces the risk of costly outages due to services that are running longer than expected.

### **JMX Monitoring**

Leverage Java Management Extensions (JMX) to monitor applications, system objects, and devices with the JMX monitoring capability. Create KPIs, rules and alerts to understand behavior and trends in system-level metrics for Java applications that implement JMX.

### **Prebuilt JVM-Based KPIs using JMX**

It is now possible to leverage the JMX agent to analyze key information related to the performance of Integration Server and Infrastructure Data Collector. The following can be monitored:

- CPU usage
- JVM statistics
- Garbage collection activity

### **Template-Based Configuration in Command Central**

A new template which is preconfigured with all Optimize for Infrastructure default values is available for Command Central-based installations. You can easily edit and customize this YAML file for individual installations.

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## **webMethods Optimize for Process**

### **E-mail Alert Configuration for User Groups**

Users now have more flexibility in configuring e-mail alerts about rule violations. E-mail alerts can be configured to display not only the e-mail of the addressee, but the e-mail addresses of the other users who receive the same notification. In that way the users can coordinate the response to the alert.

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## **Digital Event Persistence**

### **Renaming webMethods Event Persistence to Digital Event Persistence**

webMethods Event Persistence (EVP) has been renamed to webMethods Digital Event Persistence (DEP) to reflect its focus on supporting Digital Event Services (DES) events and on providing a persistence framework for the Digital Business Platform.

### **JDBC Driver**

A new JDBC-compliant driver that provides a query API is available. With the driver, users can leverage standard JDBC queries to easily connect to the event persistence store and retrieve events.

### **DES Support**

Digital Event Persistence supports persisting 'any' and 'map' fields in DES events. In addition, the @timestamp annotation in DES event type definitions has been removed and is replaced by a 'Time' data type. There is no migration needed for DEP configurations or previously persisted data.

### **Securing Connections to Elasticsearch via SSL**

Digital Event Persistence now supports certificates for user ID and password when connecting to Elasticsearch over SSL.

### **Easier Default Configuration**

Digital Event Persistence offers a pre-configured service that connects to a local installation of webMethods Event Data Store for easier demonstrations and development. The service is not part of a DES service group by default and must be added manually.

### **Command Central Templates**

Digital Event Persistence supports installation and configuration using Command Central templates.

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## webMethods EntireX

### More Options to Interpret Fixed-Length COBOL Arrays in Variable Manner

You can now choose from more options for interpreting fixed-length COBOL arrays in a variable manner. In addition to the existing approach, you can use the contents of a COBOL data item to calculate the current number of array elements. This COBOL data item can contain the message length, array length or the number of array elements directly.

### New COBOL Converter Interface Type

A new interface type COBOL Converter has been introduced in the IDL Extractor for COBOL. This interface type is used together with the COBOL Converter connection type of the EntireX Adapter to convert Integration Server data structures from/to a byte array representing COBOL binary data.

### IBM Enterprise COBOL for z/OS Support

You can compile your EntireX RPC client and server components with IBM Enterprise COBOL for z/OS V6.1. Versions 4.2 and 5.1 are also supported as before.

### IBM i (AS/400) COBOL Extraction

COBOL computational data items, extracted for AS/400, are mapped to IDL type P (packed decimal) instead of IDL type I (integer).

### Zero AS/400 Footprint

You now connect to your AS/400 COBOL programs directly from the EntireX Adapter for Integration Server without any AS/400 footprint. For this you can use both simple and fast COBOL mapping, as well as sophisticated COBOL mappings of EntireX for more advanced use cases.

### Command Central Enhancements

- You can install EntireX using Command Central.
- You can use template-based provisioning.
- You can create, start, stop, delete and configure multiple EntireX RPC servers.

### CVM/SVM Handling

Client-side mapping files (CVM) are now default in the EntireX Workbench. As server-side mapping files (SVM) will be dropped in a future version, we strongly recommend using client-side mapping files. These are easier to use and do not require any deployment on your server. Support for CVM files for platforms z/VSE and BS2000 will be introduced in a future version.



## Alternative Mapping of IDL Data Types to Integration Server Data Types

IDL data types can now be mapped to non-string Integration Server data types. The main use case is to support JSON document types in Integration Server. See Integration Server Data Types to IDL Mapping in the EntireX Adapter documentation and Mapping IDL Data Types to IS Data Types in the Integration Server Wrapper documentation.

## Automatic Character Conversion

EntireX Broker has a reworked mechanism for character conversion. Incorrect configurations (e.g. RPC communication without character conversion configured) are detected. In these cases the configuration defined in the broker attribute file is not used and a warning message is written to the broker's log file. Adapt your broker attribute file to avoid the message.

For details, see the Release Notes in the EntireX product documentation.

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## ARIS Process Performance Manager

### New Variant Dimension

A new dimension type *Variant* allows filtering of process flows, which are structurally identical or similar. This helps the business analyst to identify process flow patterns which are very common. The new variants filter control shows the probability of the found pattern. The variant filter can be used in conjunction with all existing analytical capabilities.

### Enhanced Function Flow Diagram

PPM provides a widget for MashZone NextGen to visualize process structure in a dashboard. This function flow widget supports now the visualization of PPM function measures.

### MashZone NextGen/Aware Integration

A new widget, which can be added to MashZone NextGen or is part of ARIS Aware allows the jump from a dashboard into PPM user interface for further drill-down analysis. Single sign-on is supported.

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## Software AG Designer

Software AG Designer and all its plug-ins are supported with Eclipse version 4.6.3

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## webMethods Service Development

### Support for Swagger-First REST API provider

In conjunction with Integration Server, Service Development supports mapping as a service. This new mapping service allows you to build the entire mapping logic such as links, assigning values, inserting data transformation logic, in a single, re-usable entity.

## **Support for REST v2 Resource**

webMethods Designer provides the ability to define the REST v2 resource. The REST V2 resource allows a developer to define operations with flexible resource URLs. A developer can define a resource URL irrespective of the folder structure within the package that contains the REST resource to invoke.

## **Support Microservices Container with Local Service Development**

Designer local service development now supports Microservices container.

## **Support Team Foundation Server (TFS) v14 Plug-In with Local Service Development**

Designer local service development supports Team Foundation Server (TFS) v14 plug-in.

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## **Unit Test Framework**

Unit Test Framework offers the following new and enhanced capabilities:

- In Software AG Designer, the configuration of Integration Server and Unit Test Framework is now combined in one Preferences page.
  - With this release, Unit Test Framework provides the ability to create unit tests from the run/debug view of WmTestSuite plug-in Software AG Designer.
  - Unit Test Framework now provides the ability to add automation of build deployment and execution of Jenkins tasks from WmTestSuite plug-in.
- 

## **webMethods Universal Messaging**

### **New and Enhanced Command Central Capabilities**

Command Central offers the following new and enhanced capabilities:

- Configure Universal Messaging zones and security groups.
- Support for enhanced port configuration options.
- Configure round-robin JMS Connection Factories using Command Central, allowing messages to be distributed evenly across multiple Universal Messaging realms or clusters.

These capabilities can be accessed using the Command Central web user interface, command-line interface, REST API, and composite templates.

For more information, see the Universal Messaging Administration Guide.

### **New And Updated Functionality in The Client API For C#**

**Shared durable subscriptions now supported in client API for C# :**

The client API for C# now supports shared durable subscriptions. The client API for C# functionality used in previous product releases for creating named objects and named objects with priority has now been deprecated.

The new API provides different public methods for interaction. For operations like creating, retrieving, deleting or unbinding a durable, the `nDurableManager` must be used. Every channel has a durable manager associated with it.

For information on how to use the new functionality, refer to the topic *Using Durable Objects* in the C# section of the Developer Guide. See also the section Named Objects, Shared Named Objects and Serial Named Objects in the Concepts guide.

### **Serial durable subscriptions now supported in client API for C#**

The client API for C# now supports serial durable subscriptions.

With a serial durable subscription, multiple subscribers can hold a subscription to the same named object and all the subscribers will process events in a serial manner.

For information about the new functionality, refer to the topic *Using Durable Objects* in the C# section of the Developer Guide. See also the section Named Objects, Shared Named Objects and Serial Named Objects in the Concepts guide.

### **New public interface for committing and rolling back events**

A new public interface has been added for committing and rolling back events. The methods are defined for the `nDurable` instance and the usage of the old API, e.g. calling `ack()` or `rollback()` on the received event's `nConsumeEvent` object, is not recommended since it does not fully support individual acknowledging and rolling back. To be able to apply these operations on a single event and not only on consecutive event IDs is a significant importance for the shared types.

### **Basic Authentication now supported in C# client API**

It is now possible to use SASL (e.g. plain text) authentication for the client API for C#. Previously, this functionality was only available using the client API for Java.

For details, refer to the section Basic Authentication in the C# section of the Developer Guide.

### **Serial Durable Subscriptions Now Supported In Client API for Java And As An Extension to The API For JMS**

The client API for Java now supports serial durable subscriptions. The same functionality has been added as an extension to the Universal Messaging API for JMS.

With a serial durable subscription, multiple subscribers can hold a subscription to the same named object, and all the subscribers will process events in a serial manner.

For information about the new functionality, refer to the topic *Durable channel consumers and named objects* in the Java section of the Developer Guide. Also refer the Named Objects, Shared Named Objects and Serial Named Objects in the Concepts guide.

### **Periodic Logging of The Realm Server Status**

The logging feature has been extended to allow the status of the realm server to be reported in the server log at regular intervals. The status includes metrics such as the amount of memory currently in use for active events, the amount of disk space in use, CPU load, and number of active connections, total bytes sent and received.

For details, see the section *Periodic Logging of Server Status* in the *Concepts guide*.

## Changed Handling of Missing Operator In Filter Expression

In v10.0 it was permissible to omit a logical operator between two selector clauses in a filter expression. In such cases, the omitted operator was treated implicitly as an AND operator. For example, instead of the correct form:

```
(Item1 = 'ABC') AND (Item2 in ('Invoicing', 'Pending'))
```

it was possible to state:

```
(Item1 = 'ABC') (Item2 in ('Invoicing', 'Pending'))
```

In 10.1, omitting the logical operator will be flagged as an error. Therefore, when you upgrade to 10.1, ensure that you modify your filter expressions accordingly.

## Pause Publishing

The new pause publishing feature allows all client publishing to the server to be paused, across channels, queues and data groups. This pause will not affect the administration API, inter-cluster communication or joins.

The feature is activated by setting the server configuration property `PauseServerPublishing` to true. Then, clients trying to publish or commit will receive `nPublishPausedException`. Exception handlers from prior to the current product version will handle this as `nSessionPausedException`, which the new `nPublishPausedException` extends.

Information about this feature is available in the section *Pause Publishing* section in the Concepts guide.

If client applications using APIs from previous product versions are used to publish events to a v10.1 server, the following changes will be observed:

Old API (prior to 10.1)	Behavior when publishing to a v10.1 server
Native API for Java	If a client API from a previous product version is used to connect to a 10.1 server, Java native clients will receive <code>nBaseClientException</code> instead of <code>nPublishPausedException</code> .
API for JMS	The behavior here is the same as for 10.1, with the difference that the root <code>JMSEException</code> will be <code>nBaseClientException</code> instead of <code>nPublishPausedException</code> .
API for C++/C#	The APIs for C++ and C# will throw <code>nUnexpectedResponseException</code> when publishing is paused.

## Updates for MQTT

### Configuration Properties for MQTT

A new set of realm configuration properties for MQTT has been added.

For the list of MQTT configuration properties see the *Realm Configuration* section in the Enterprise Manager section of the Administration Guide.

### Support for clustered channels

MQTT support for clustered channels has been added.

### General improvements

Non-functional aspects such as performance, availability and scalability have been improved.

## **Configuring Universal Messaging For Use with IBM Websphere**

The Universal Messaging installation contains a product-specific generic resource adapter for JMS. Universal Messaging can be configured to work with IBM WebSphere via this adapter.

For details, see the *Resource Adapter for JMS* section in the Developer Guide

## **Microsoft Edge is a Supported Web Browser for Javascript Communication Drivers**

The list of web browsers that are supported for the JavaScript communication drivers has been extended to include Microsoft Edge for several of the drivers.

For details, see the *Communication Drivers* section in the Developer Guide.

## **Corrected DLL Names in the Product Documentation**

Some sections of the documentation referred to the DLL files *Nirvana DotNet.dll* and *Nirvana Silverlight.dll* by the wrong names *Universal Messaging DotNet.dll* and *Universal Messaging Silverlight.dll* respectively. These have been corrected.

These DLLs are mentioned in the C# and VBA sections of the Developer Guide.

## **New Java System Property *Nirvana.sasl.client.enablePrehash***

The new Java system property *Nirvana.sasl.client.enablePrehash* specifies whether to prehash the supplied password when using the CRAM-MD5 or Digest-MD5 mechanisms.

For details, see the *Client-side Authentication* section in the Java section of the Developer Guide.

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## **webMethods Update Manager**

Software AG Update Manager has been removed from the Software AG Installer and is now available for download from the Software Download Center on Software AG Empower. For Windows system, Software AG provides a wizard for installing the Update Manager.

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## **Documentation**

### **New Design for Documentation Portal**

Software AG's product documentation portal has been redesigned to give you an improved user experience of finding, reading and downloading the information you need. The portal is intuitive, and a link to a tutorial video is provided in case of doubt.

### **Renamed webMethods CAF and OpenCAF Development Help**

webMethods CAF and OpenCAF Development Help has been renamed to webMethods CAF and OpenUI Development Help.

## Deprecated Web Applications Developer's Guide

The Web Applications Developer's Guide is no longer available. This guide explained how to use the WmTomcat package to incorporate web applications into the Integration Server environment. As of Integration Server 10.1, the WmTomcat package has been removed from the product.

## Upgrade

### Migrate Passwords, JSW Customizations, and JAAS Configurations for Integration Server

The Integration Server migration utility now offers options to migrate passwords, JAAS configurations, and JSW customizations (including `#include` directives and comments).

### Specify New Names for Migrated Instances in Silent Mode

The Integration Server migration utility now lets you specify new names for migrated instances on the migration utility command when migrating silently.

### Migrate `#include` Directives and Comments for Software AG Runtime, My webMethods Server, and Infrastructure Data Collector

The Software AG Runtime, My webMethods Server and Infrastructure Data Collector now migrate Java Service Wrapper `#include` directives and comments.

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