

# webMethods Product Suite 10.0

## 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 10.0 of the webMethods Product Suite provides significant enhancements in every functional area of the suite.

This is an Innovation Release. Innovation releases have a much shorter support cycle than standard releases. To learn more, please visit <http://empower.softwareag.com/innovationrelease/>.

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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 supports mapping as a first-class citizen. The new mapping service allows developers to build all of the mapping logic including links, assigning values, and inserting data transformation logic in a single, re-usable entity.
- 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 lightweight mechanisms, often an HTTP resource API. Software AG is now offering a light weight container called the Microservices container to host these small services. The Microservices container is fully compatible with the Integration Server and can host all services developed on the Integration Server.
- Microservices container provides out-of-the-box support for dynamic lookup of service endpoints using the Consul service registry.
- Integration Server with Service Development now provides the ability to get and set HTTP request and response headers easily. Integration Server supports the HTTP PATCH method, which is used for partial updates.
- In conjunction with Service Development, Integration Server provides the ability to specify the HTTP methods supported per service. This flexibility is needed to create robust REST APIs. Integration Server now provides a flexible way to define resource URLs for REST APIs.

- The REST Resource Configuration feature provides options to configure, edit, and delete REST resources for a selected service.
- Software AG Designer now adds Java nature to local service development projects for use when using the Unit Test Framework in local service development.
- webMethods ActiveTransfer now allows you to specify file transfer access rights such as upload, download, and delete for My webMethods (MWS) roles and groups.
- Support for HTTP based outbound transfers is now available in webMethods Active Transfer, which enables upload and download of files with third party HTTP servers.
- webMethods Active Transfer supports SMB protocol that enables file transfers with remote
- Software AG Digital Event Services (DES) is the new mechanism for event-based integration between Software AG products. This release adds out-of-the-box support for digital events for products such as MashZone NextGen Business Analytics and webMethods Event Persistence. As part of this integration, events can be sent easily from publishing products as digital events using native tools for the products. Subscribing products can listen to these digital events as native events, and can visualize them or take actions based on business logic and rules.
- webMethods Application Platform now allows Application Platform service developers to use an exact set of public APIs, included in the design-time SDK of the Application Platform.
- The Integration Service Wizard is enhanced to support the creation of Application Platform Java Service Skeletons, based on the Integration Server specifications (Integration Server service interface definitions).
- The Data Steward UI in OneData has been enhanced to provide a consolidated hierarchy management view when working with leveled (non-recursive) object hierarchies.
- Terracotta is now available as an additional option for metadata caching when clustering is enabled for OneData.

## **API Management**

webMethods API Gateway is a solution that combines webMethods Enterprise Gateway and webMethods Mediator capabilities in a single product. API Gateway offers the same capabilities within a simplified architecture and removes the dependency on CentraSite for policy definition. Also, for all the functions, API Gateway provides a new, dedicated, web-based user interface to perform API-related tasks, from creating an API, defining a policy, to publishing the API to API Portal.

webMethods API Management enables the deployment and management of APIs for external and internal use. API Management includes design-time developer tools for discovering, learning about, testing and registering for access to APIs, as well as runtime security and policy management to ensure proper and secure access to runtime services.

The key features include:

- API Gateway now supports all OAuth grants: authorization code grant, implicit code grant and client credentials (formerly available in Mediator).
- API Gateway now offers XML Threat protection and JSON Threat protection policies.
- API Portal provides API users the ability to generate and download a client SDK for REST APIs.
- API Gateway now features a scoping mechanism that allows users to decide which resource or operations of an API are exposed to API users.

- API definition and configuration screens now allow REST enablement of SOAP APIs.
- API Gateway introduces support for Websockets and allows for defining WebSocket APIs.
- API Portal analytics dashboards have been restructured and enhanced. The dashboards now include a global dashboard, API audit log, user audit log, runtime dashboard, and an API trends dashboard.

## **webMethods Agile Process**

webMethods Agile Process Platform is a unified offering designed to create business applications that are based on orchestrated, managed, and monitored end-to-end business processes or workflows. The offering improves process, speed, visibility, consistency, and agility, while reducing costs and driving standardization across all critical components of effective business operations.

The key features include:

- The ability to leverage the Agile Apps forms metadata and generate a working OpenCAF project with gadgets that you can customize and deploy to the Business Console as a gadget.
- An Agile Apps case can now call a classic BPM process. It is enhanced to provide a list of start documents to initiate the BPM process and a map that you can use to map the case document to the process start document.
- Agile Apps now has a mass view print feature that allows you to print multiple record details of the object as per a document template.
- Agile Apps allows you to digitally sign emails and confirm the authenticity of the sender. Digital signature is available only for on-premise customers.
- You can now import AgileApps forms into Business Console, and Rules Management console is available as a customizable gadget in Business console.
- AgileApps is now certified with MySQL v5.7 Enterprise Edition and supports clustering for on-premises installation.
- You can now use Integration Server REST API descriptors to generate user interfaces (UI) for Business Console gadgets using the drag and drop feature in the Software AG Designer UI Development perspective.
- In the context of a process instance in Business Console, all the decision tables used in this process instance are now displayed in a list. When you click a particular decision table in the list, the decision table is displayed directly in Business Console.
- You can now edit the description, missing value strategy, and processing mode of a decision tree in the Rules Management Console and also view the save status of a decision tree.
- Task Engine now supports an out-of-the-box HPTSRA implementation for task searches in Business Console.
- My webMethods Server has improved handling of transient errors when connecting to an LDAP server.
- My webMethods Server can be configured to send push notifications to Business Console users on mobile devices when a task has been assigned or delegated to a user.

## 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:

- When monitoring UM queues, Optimize can report and alert on the age of messages in the queue, enabling users to detect whether a message has been in the queue for more than a specified amount of time.
- Optimize allows users to monitor DES server in the same way as they monitor event routing.
- Optimize for Infrastructure (the Infrastructure Data Collector) can now be configured via Command Central.
- Command Central enables automation and centralization of configurations, provides a common representation of configuration and simpler navigation, making it possible to compare configurations, and enables easier management of large installations.
- When a user modifies the root context URL of MWS, all Optimize portlets recognize the new root context.
- Optimize (the Analytic Engine and the Web Service Data Collector) can now be configured through Command Central.

## Suite Enhancements

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

The key features include:

- The logs of Platform Manager are streamlined and simplified. The new correlation ID enables you to easily follow the operations in the log and is helpful when tracing the Composite Templates workflow.
- Command Central ensures Integration Server and My webMethods Server instance creation with the latest fixes – when a new instance is created through Command Central web user interface, the user is prompted to apply the latest fixes.
- Command Central can set Java system properties in the Tanuki wrapper configuration as part of a composite template and the Command Central web user interface can be used to view and modify the system properties in the Tanuki wrapper.
- Command Central provides a common LDAP configuration validator that connects to the specified server and checks the LDAP settings against it.
- Command Central can now be used to browse individual messages in durable subscribers in a Universal Messaging server instance, including messages waiting to be received by Integration Server triggers.
- Command Central can now be used to configure realm ACLs for Universal Messaging, allowing you to control which users can perform what actions at the realm level.
- In order to ease the migration of Broker territories and gateways, there is a new utility that can read the gateway configuration from webMethods Broker and automatically establish the same remote joins in Universal Messaging.

- When you install products from Software AG Command Central Bootstrappers using the Software Download Center, Software AG Update Manager is automatically installed in managed installations.
- The footprint of the standalone installation of Software AG Update Manager is drastically reduced and therefore the installation time is significantly 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

### Reporting Enhancements

CentraSite has a variety of predefined reports. You can now execute predefined runtime reports against the CentraSite Registry Repository (CRR) as the source of data or against an external JDBC-compliant Oracle database. You can also execute custom runtime reports against an external JDBC-compliant database such as DB2, Microsoft SQL Server, Oracle and Sybase.

### API Portal Publish Enhancement

CentraSite supports versioning of APIs. When versioning an API, the access tokens associated to the old version of the API are cloned and associated to the new version of the API. Each cloned access token has its own expiration time within the API.

You can now publish the versioned APIs to API Portal. When publishing the old version of the API to API Portal, CentraSite automatically associates and publishes the new version of the API to API Portal.

### UDDI Federation

The UDDI-based federation that provides the functionality to federate data between two UDDI v3 compliant registries is removed from the product. There is no replacement for the UDDI federation.

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## MashZone NextGen Business Analytics

### New Data Sources

MashZone NextGen introduces two new data sources for JSON files and Digital Event Services (DES). These data sources can be leveraged to build dashboards based on JSON sources and DES events.

### Visualizations Enhancements

Following are the visualization enhancements introduced in 10.0:

- New Dashboard centric landing page has replaced the 'Presto' hub.
- Ability to create a responsive Dashboard has been introduced in MashZone 10.0. Dashboards built in this mode fluidly responds to changes in browser size.
- Other enhancements:

- Ability to open a dashboard on a specific tab and setting a default tab for a dashboard
- New positioning options for chart legends
- Additional threshold coloring options
- Ability to specify different styles per widget within the same dashboard
- Custom Widget tutorial is now available on TechCommunity - <http://techcommunity.softwareag.com/pwiki/-/wiki/Main/Creating%20a%20simple%20custom%20widget>

## Other Changes

The URL for MashZone Business Analytics has changed from machine name: *8080/presto* to *8080/mashzone*

## Presto Deprecation

- Starting with MashZone NextGen Business Analytics 10.0, the following Presto features have been hidden in the user interface:
  - Wires
  - App Editor
  - Mashables
  - Mashups
  - Mashboards
  - App Depot
- The EMMML editor is now hidden and has been renamed Mashup Editor.

These features can be manually enabled, if required. For details, refer the product documentation.

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## MashZone NextGen Visual Analytics

MashZone NextGen Visual Analytics 10.0 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. Visual Analytics allows operations analysts, maintenance specialists, researchers, developers, and data scientists to do their job more effectively.

## New Capabilities

- Visualization enhancements:
  - Analysis thumbnails
  - Partitioning and pattern highlighting

- Zoom
  - User interface (UI) based auto deployment tweaking
  - Trend lines for historical and streaming data
  - Basic time manipulation of streaming data sources
  - Improved performance and scalability for historical data
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## **My webMethods Server**

### **High Performance Task Search Reference Architecture**

Task Engine now supports an out-of-the-box HPTSRA implementation for task searches in Business Console.

### **Improved Handling of Transient Errors**

- My webMethods Server needs to maintain static connectivity between an application and an LDAP server. When the connection to the LDAP server is lost, My webMethods Server makes a fixed number of reconnection attempts. The number of reconnection attempts to LDAP is now configurable.
- My webMethods Server provides settings for auto reconnect and minimum pool connections.

### **Support for push notifications**

You can configure My webMethods Server to send push notifications to Business Console users on mobile devices. You can send notifications when a task has been assigned or delegated to a user.

### **Other Supported Features**

- Removal of the internal database JMS provider. My webMethods Server now uses Universal Messaging as a JMS provider.
  - Changing the password as a My webMethods user requires specifying your current password on the My Profile page.
  - Ability to run in Mobile Business Console any Business Console appspace provided for a user (based on the user's credentials) and flagged for mobile devices
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## **Software AG Command Central**

### **Simplified Platform Manager Logging**

The logs of Platform Manager 10.0 are streamlined and simplified. The new correlation ID enables you to follow operations in the log with ease and is especially helpful when tracing the Composite Templates workflow.

## **Integration Server/My webMethods Server Instance Creation with the Latest Fixes**

When a new product instance is created through the Command Central web user interface, you are prompted to apply the latest fixes available in the installation on this particular instance.

## **LDAP Configuration Validation**

Command Central provides a common LDAP configuration validator. The validator connects to the specified server and checks the LDAP settings against it. The validation is currently applied for the Command Central LDAP configuration.

## **Java System Properties Configuration in Tanuki Wrapper**

- Command Central can set Java system properties in the Tanuki wrapper configuration as part of a composite template.
- You can use the Command Central web user interface to view and modify the system properties in the Tanuki wrapper.

## **FIX ID Display in Command Central Web User Interface**

You can view the Fix ID for fixes at the following sections of Command Central Web User Interface:

- master, mirror and image repositories
- product and fixes installation wizard
- installed fixes inventory

## **Command Central Adoption**

Beginning with release 10.0, you can configure Optimize from Command Central.

## **Cross-Site-Request-Forgery Prevention**

The Command Central web user interface is now protected against cross-site-request-forgery attacks.

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# **Software AG Digital Event Services**

Software AG Digital Event Services (DES) is the new mechanism for event-based integration between Software AG products. The 10.0 release adds out-of-the-box support for digital events for more products. As part of this integration, events can be sent easily from publishing products as digital events using native tools for the products. Subscribing products can listen for these digital events as native events, and can visualize them or take actions based on business logic and rules.

## **New Capabilities**

- Adoption by MashZone NextGen Business Analytics

- Adoption by webMethods Event Persistence
  - Monitoring API and integration in webMethods Optimize for Infrastructure
  - A new **any** field type
  - Performance improvements and extended support for reliable communication
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## webMethods API Gateway

### Unified Gateway

WebMethods API Gateway is a solution that combines webMethods Enterprise Gateway and webMethods Mediator capabilities in a single product. API Gateway offers the same capabilities within a simplified architecture and removes the dependency on CentraSite for policy definition. Also, for all the functions, API Gateway provides a new, dedicated, web-based user interface to perform API-related tasks, from creating an API, defining a policy, to publishing the API to API Portal.

All the current Mediator and Enterprise Gateway capabilities are available in the API Gateway, except for OData support, JMS support and the following event destinations for events generated by API Gateway: CentraSite, Console Log, Audit log, SNMP, Elasticsearch, EDA/ERF.

### API Protection and Security

API Gateway now supports all OAuth grants: authorization code grant, implicit code grant and client credentials (available in Mediator before)

APIs Gateway now offers XML Threat protection and JSON Threat protection policies.

Inbound and outbound web service security (WSS) has been enhanced to:

- Perform outbound routing with WSS without coding.
- Specify custom token assertions for inbound WSS policy.

API Gateway now has capability to perform XML schema validation.

SAML policies now support:

- SAML Inbound:
  - Bearer
  - Holder of Key Symmetric
  - Holder of Key Asymmetric
- SAML Outbound:
  - Sender Vouches (Bearer)
  - Holder of Key Symmetric
  - The SAML token is fetched in all the scenarios using custom WSS User name and Kerberos credentials.
  - An option to define a custom issuer policy.
- Kerberos:
  - Inbound, Outbound, Delegation

- Host-based and User-based SPN

## API Scoping

API Gateway now features a scoping mechanism that allows:

- Deciding which resource or operations of an API are exposed to API users.
- Defining and enforcing policies on API resource and method level.
- Grouping resources and operations into logical groups called scopes and then defining and enforcing policies on these scopes.

## Policies

API providers can now define Global Policies, which are logical groups of policies that are dynamically enforced on API conforming to global policy filter criteria. These filter criteria allows selecting API Type, HTTP method (for REST APIs only), and specifying a text-based filter for API Name, API description, and API version.

API Gateway features a concept of Policy Templates, which are pre-defined configurations of one or more policies. Such templates simplify the process of applying a policy to multiple APIs that require complex configuration.

API Gateway can cache API responses. This policy is configured for each API independently. It allows you to specify criteria that have to be met for results to be cached. These criteria include HTTP header values and query parameter values. API Providers can also set up a time-to-live to cache results and maximum payload size to be cached. This policy can be a part of global policies and policy templates.

## API Definition and Configuration

API definition and configuration screens now allow REST enablement of SOAP APIs. API Providers can define a REST resource structure and map it to existing SOAP operations. API Providers can also configure and map input parameters between the REST and SOAP APIs and provide request or response schema definitions with samples.

API Versioning function allows creating versions of existing APIs. Multiple versions may exist at the same time. Additionally each API and each version might have a maturity status defined according to pre-defined but configurable list of states.

API publish and re-publish function has been enhanced to allow selecting the available API endpoints that have to be published or re-published to the available API Portal communities selected.

API Gateway provides capability of updating an existing API by importing a file or from URL similar to functions available for creating an API.

API Gateway now automatically generates API specifications and makes them available in API Details page. For REST APIs, Swagger and RAML descriptors are generated. For SOAP APIs, WSDL is generated.

API Providers can select the APIs for a bulk export, which creates an archive file that includes API and policies definitions, and, optionally, applications associated with the selected APIs. This archive file can be imported to another instance of API Gateway.

API Policies tab is revamped to provide greater visibility into available and applied policies and support the new concepts of global policies, policy templates and scopes.

## Protocol Support

This version of API Gateway introduces support for Websocket and allows for defining Websocket APIs.

The functionalities supported are:

- WS protocol support
  - API Key protection for connection establishment
  - Client message transformation through webMethods Integration Server service invocation
  - Server message transformation through webMethods Integration Server service invocation
  - Log invocation of both Client and Server messages: API Gateway destination
  - Throttling: Concurrent connection establishment restriction
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## webMethods AgileApps

### Mass View Print

The mass view print feature allows you to print multiple record details of the object as per a document template.

### Digital Signature

The digital signature feature allows you to digitally sign the email and confirms the authenticity of the sender. Digital signature is available only for on-premises customers.

### Error Notification Framework for Forms

Error messages appear at the mandatory fields when the information is missing.

### Task Ownership Settings

When the record owner is changed, changes in the ownership of open tasks or incomplete tasks can be assigned to the new record owner.

### MySQL v5.7 Enterprise Edition and Clustering Certification

AgileApps is now certified with MySQL v5.7 Enterprise Edition and supports Clustering for on-premises installation.

### Improved Job Scheduling

The scheduling of scheduled jobs has been enhanced so that the job type is equally prioritized such that long running jobs do not stall or delay short running jobs.

## Tomcat8 and Microsoft Edge Browser Certification

Tomcat 8 is now certified with the AgileApps Cloud platform. AgileApps Cloud platform now supports Microsoft Edge. But, the process modeling functionality is not supported on Microsoft Edge.

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## webMethods Agile Process

### Access to the Agile Apps user interface in Designer to extend and customize it:

You can leverage the Agile Apps forms metadata and generate a working OpenCAF project with gadgets that you can customize and deploy to the Business Console as a gadget.

### Supported Features:

- An Agile Apps case can now call a classic BPM process and provides the following:
    - a list of start documents to initiate the BPM process
    - a map that you use to map the case document to the process start document
    - update of the case status with the correct process execution status
  - Renamed **tasks** to **activities** and **processes** to **workflows** in Agile Apps.
  - Robust error handling of communication between case and process.
  - Support for client-side queueing in Agile Apps.
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## webMethods API Portal

### API Documentation

API Portal allows API users to generate and download a client SDK for REST APIs. The following languages are supported for generating client SDK: Akka-Scala, Android, ASP.NET5, Async-Scala, Clojure, Cwiki, C#, Csharpdotnet2, C++ Rest, Dart, Flash, Python-Flask, Go, Go-Server, Groovy, Haskell, Java, Jaxrs, Jaxrs-Cxf, Jaxrs-Resteasy, Jaxrs-Spec, Inflector, Javascript, Javascript-Closure-Angular, JMeter, Lumen, Nancyfx, Nodejs-Server, Objective C, Perl, Php, Python, Qt5cpp, Ruby, Scala, Scalatra, Silex-Php, Sinatra, Rails5, Slim, Spring, Dynamic-Html, Html, Html2, Swagger, Swagger-Yaml, Swift, Tizen, Typescript-Angular2, Typescript-Angular, Typescript-Node, Typescript-Fetch.

API resource listing on API details page is aligned with resource display of API Gateway.

API Gallery now shows if an API is versioned and the API details page allows easy switching between versions. Multiple versions of the same API can exist at the same time in API Portal but access request can be done only for the most recent version.

### API Portal Analytics

API Portal analytics dashboards have been restructured and enhanced and, now include:

- Global dashboard: for general API Portal usage statistics
- API audit log: for API-related Portal activity numbers
- User audit log: for user-related Portal activity numbers
- Runtime dashboard: for runtime statistics of APIs
- API trends dashboard: for runtime trend statistics of APIs
- Consumer dashboard: for statistics related to APIs consumed by API Portal user

### **API Portal Customization**

API Portal customization now allows adding an arbitrary page and linking it to the top menu on the home page.

### **API Portal Integration**

API Portal user interface now allows specifying the API Provider when API is imported directly to the Portal.

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## **webMethods Application Platform**

### **Application Platform SDK**

webMethods Application Platform now allows Application Platform service developers to use an exact set of public APIs, included in the design-time SDK of the Application Platform.

### **Document-Type-First Design Pattern**

webMethods Application Platform supports the creation of Java POJOs from Integration Server document types, and reuse of document type POJOs in Application Platform Java Services.

### **Application Platform Java Service Skeleton from Integration Server Specification**

The Integration Service Wizard is enhanced to support the creation of Application Platform Java Service Skeletons, based on Integration Server specifications (Integration Server service interface definitions).

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## **webMethods ActiveTransfer Server**

### **Role-Based Access**

webMethods ActiveTransfer now allows you to specify file transfer access rights such as upload, download, and delete for My webMethods (MWS) roles and groups. If My webMethods Server is configured to use the roles and groups from an external system (for example, LDAP), ActiveTransfer offers the ability to use the My webMethods Server roles or groups as well. In addition, you can define general server settings such as throttling, encryption, decryption, acceleration, and login threshold directly at the role or group level.

## **SMB Protocol Support**

ActiveTransfer now supports Server Message Block (SMB) protocol. This protocol allows ActiveTransfer to read, create, and update files on a network file share or a remote server that supports SMB. You can use the SMB protocol while defining a virtual folder or an event action.

## **HTTP(S) Support for Outbound Transfers**

ActiveTransfer now provides the ability to connect with third-party HTTP(S) servers to either upload or download files. For large file transfers, ActiveTransfer also supports streaming (chunking) of file data to remote servers and the ability to resume file transfers from the point of interruption.

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# **webMethods ApplinX**

## **Better Transition from Development to Test and Production Environments**

A new option is provided in the Import Entities wizard. You can now import an application without its connection information sets.

## **Enhanced Search Options in Software AG Designer**

In the earlier ApplinX versions, you could search for entity names and referring entities, but it was not possible to search inside the entities themselves. Starting 10.0, you can search for the following components of each entity: screens and screen groups; session data and date structure; path and flow procedures.

## **Support of Visual Studio Version 2012 and 2015**

ApplinX now supports Visual Studio versions 2012 and 2015. For now, Visual Studio versions 2008 and 2010 supported, but support for these older versions will be dropped from next release.

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# **webMethods BPMS**

## **Business Console**

The following capabilities are introduced in Business Console:

- Import AgileApps forms into the Business Console gadgets.
- Use Integration Server REST API descriptors to generate user interface (UI) for the Business Console gadgets using the drag and drop feature in the Software AG Designer UI Development perspective.
- Access AppSpaces as a standalone application using the <http://localhost:8585/appspaces> URL.
- Mobile Business Console features include:

- Access AppSpaces that are enabled with mobile view using Mobile Business Console.
- Send offline updates to tasks.
- Trigger Mobile Task notifications when a task is accepted or delegated.
- View AgileApps cases using Mobile Business Console.

## **Process Engine**

- MySQL support for Process Engine
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## **webMethods Broker**

webMethods Broker 9.6 is tested and supported with webMethods 10.0.

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## **webMethods Business Rules**

### **Display of Business Rules Decision Tables in Business Console**

In the context of a process instance in Business Console, all the Decision Tables used in this process instance are now displayed in a list. When you click a particular Decision Table in the list, the Decision Table is displayed directly in Business Console.

### **Enhancements in the Rules Management Console**

You can now edit the description, missing value strategy, and processing mode of a Decision Tree in the Rules Management Console.

While editing, the Rules Management Console now displays the save status of a Decision Tree.

### **Enhancements in Designer**

Designer allows you to edit the in effect dates of Decision Tables.

### **Enhancements of the Business Rules Public REST API**

The Public REST API now respects functional and access privileges defined in the My webMethods Server.

Additionally, a new service to get the decision tables is also available.

### **Enhancements to Design Time Auditing**

Design time auditing events can now be routed to Event Persistence with Command Central.

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## webMethods Integration Server

### Support for Mapping Service

In conjunction with Service Development, Integration Server supports mapping as a first-class citizen. The new mapping service allows developers to build all of the mapping logic including links, assigning values, inserting data transformation logic, in a single, re-usable entity.

### Support for HTTP Patch Verb for REST Resources

Integration Server offers support for HTTP PATCH method, which is used for partial updates. In Service Development, a developer can specify PATCH support when defining REST resources, Integration Server also supports the PATCH methods in the *pub.client:http* service as well as with CORS (Cross Origin Resource Sharing) requests.

### Support for Defining Custom REST Resource URLs

Integration Server provides a flexible way to define resource URLs for REST APIs. The new capability allows a developer to define a URL format for the service that does not adhere to the folder structure within the package. Additionally, you can define multiple REST resources for a single service with the HTTP methods of your choice.

### Enhanced Support for Retrieving and Setting HTTP Headers

In conjunction with Service Development, Integration Server provides the ability to get and set HTTP request and response headers easily. This is accomplished by introducing variables for HTTP request and response headers that reference built-in document types provided by Integration Server. Integration Server affords unique handling to these variables to allow easy retrieval of HTTP request heads and simplified creation of HTTP response headers.

### Enhancement to Configure Allowed HTTP Methods per Service

In conjunction with Service Development, Integration Server provides the ability to specify the HTTP methods supported per service. This flexibility is needed to create robust REST APIs.

### Support for Session Caching with JMS Transactions

Integration Server supports session caching on transacted JMS connections with Universal Messaging 10.0 and WebSphere MQ 7.5.

### Certification for WebSphere Application Server 8.5 as a JMS provider

Integration Server is now certified to work with WebSphere Application Server 8.5 as a JMS provider.

### Security Enhancement for Securing Session IDs in Logs

Session IDs in the session and server logs can now be secured by making the ID. When you enable the option for securing Session IDs, Integration Server uses the asterisk (\*) character to

mask the Session ID strings in the logs. Therefore, no user accessing the log entries can view the actual Session IDs.

### **Support for Reconfiguring JDBC pools in Offline Mode**

In conjunction with Command Central, Integration Server makes it possible for administrators to change the configuration of JDBC pools when Integration Server is offline.

### **Enhancements for Setting Web Service Endpoints in WSDL Documents**

In conjunction with Service Development, Integration Server provides the ability to set a default provider alias. This allows the soap address in a WSDL for a provider web service descriptor to reflect a load balancer URL. This is particularly useful when multiple Integration Servers are behind a load balancer.

### **Improvement for Managing File-Based Audit Logs**

For file-based audit logs, Integration Server provides the ability to specify the size at which Integration Server rotates the log file and to limit the number of log files kept by Integration Server

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## **webMethods OneData**

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

The user interface is enhanced to provide a new consolidated hierarchy view when working with leveled (non-recursive) object hierarchies. This configurable view allows users to navigate the hierarchy using a tree-like list while viewing the full hierarchy data in the data grid. The hierarchy data is also rendered in hierarchy.

Additionally, the user interface now includes an improved application-wide search to:

- Allow users to set a higher weightage for the description column than other columns so that the relevant search from the description column show up at the top of the results in both the autocomplete suggestions and the search results in the display grid.
- Display the reason for any particular search result.

### **Application Infrastructure Improvements**

The following improvements are introduced to the OneData infrastructure:

- Cross-site scripting (XSS) protection covers the hooks module.
- OneData specifies necessary backward compatibility settings for the metadata, work area, and release area database schemas out-of-the-box. These settings enable the use of the default database drivers at all times.
- Terracotta is now available as an additional option for metadata caching when clustering is enabled for OneData.
- Single sign-on is now possible using Security Assertion Markup Language (SAML).

## Data Interchange Enhancements

Data interchange now includes the following enhancements:

- REST APIs provide more filtering options when reading data from OneData. The additional filter operators now supported are: =, !=, <, <=, >, >=, LIKE, NOT\_LIKE/NOT LIKE, IN, NOT\_IN / NOT IN, IS\_NULL/IS NULL, IS\_NOT\_NULL/IS NOT NULL.
- Explicit interchange mapping for data load using REST APIs supports JSON as payload format.
- OneData can generate a Swagger-compliant file listing and specification of the REST APIs available on top of user-created objects in OneData.

## Data Quality Enhancements

The following improvements are introduced to Data Quality processing:

- Users can now compose a data quality project can for cleansing without the need to specify matchers as well.
- OneData installation now includes a Swagger-compliant file listing and specification of the public OneData REST APIs.

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# webMethods Optimize for Infrastructure

## Stale Message Detection on Universal Messaging Queues

When monitoring UM queues, Optimize can report on and alert on the age of messages in the queue, enabling users to detect whether a message has been in a queue for more than a specified amount of time.

## Monitor DES Server

Monitor DES server in the same way we are able to monitor event routing today. Following components are supported.

- DES Server
- DES Event type Info
- DES In memory Queue
- DES On disk Queue
- DES IP Service
- DES UM Service
- DES Subscriber

## Command Central Configuration

Optimize for Infrastructure (the Infrastructure Data Collector) can now be configured via Command Central. Available configurations include:

- Endpoints

- JNDI
- Collector Settings
- Adabas SOA Gateway Settings
- Apama Settings
- Complete Settings
- Digital Event Services Settings
- ETS Settings
- EntireX Settings
- Event Routing Framework Settings
- Integration Server Settings
- Mashzone NexGen Settings
- My webMethods Server Settings
- Presto Settings
- Terracotta Settings
- Universal Messaging Server Settings
- Universal Messaging Cluster Settings
- webMethods Broker Settings

Command Central enables automation and centralization of configurations, provides a common representation of configuration and simpler navigation, making it possible to compare configurations, and enables easier management of large installations.

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## **webMethods Optimize for Process**

### **MWS Root Context Change Support**

When a user modifies the root context URL of MWS, all Optimize portlets recognize the new root context.

### **User Accessibility**

To comply with 508 accessibility guidelines, Optimize provides you descriptive frame titles. This allows third party screen readers to understand the content of the page.

### **Command Central Configuration**

Optimize (the Analytic Engine and the Web Service Data Collector) can now be configured through Command Central. Available configurations include:

- Clustering
- Databases
- Email

- Endpoints
- Functional Aliases
- JNDI
- Logging
- Properties

Command Central enables automation and centralization of configurations, provides a common representation of configuration and simpler navigation, making it possible to compare configurations, and enables easier management of large installations.

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## **webMethods Process Performance Manager**

### **Improved User Interface**

A new custom widget visualizes function flows in MashZone NextGen Business Analytics dashboards. This custom widget also allows an interactive filtering of less relevant paths (such as, based on the process/transition frequency) in the function flow. In addition, single sign-on for PPM data sources in the embedded MashZone NextGen Business Analytics dashboards is available.

A transport is now available that provides an easy way to include the necessary configuration of the "function follows" relation, which is required for the function flow in running systems. In the course of providing the function flow, the organizational analysis has been renamed to interaction analysis.

The process visualization in PPM is improved by introducing a modernized color scheme. In addition, the visualization emphasizes stronger the actual process flow.

### **Close Integration with ARIS Aware**

In ARIS Aware, the function flow widget and PPM as a data source is natively supported. This allows you to create integrated dashboards providing process performance information (such as Key Performance Indicators and actual sequences of process executions) from PPM in relation to modeled-to-be processes in ARIS. In ARIS Aware, single sign-on for PPM data sources in the embedded dashboards is available.

### **Renaming of Process Types**

Process types can now be renamed without impacting existing favorites.

### **Ad-hoc Reports**

Based on charts and analyses placed in clipboard, ad-hoc reports can be created.

### **Support for BLOB Data Type**

In Oracle 12, BLOB, in contrast to LONG RAW, can be used to store binary data.

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## webMethods Service Development

### Mapping as a Service

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.

### Rest Resource Configuration

The REST Resource Configuration feature provides you with options to configure, edit, and delete REST resources for a selected service.

### Support for Java Nature for Local Service Development Projects

webMethods Designer now adds Java nature to local service development projects. This is necessary when using Unit Test Framework in local service development.

### Support Subversion 1.9 with Local Service Development

webMethods Designer local service development now supports subversion 1.9.

### ForEach Debugging

Designer now allows you to debug a ForEach mapping.

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## webMethods Universal Messaging

### Browsing durable subscribers using Command Central

Command Central can now be used to browse individual messages in durable subscribers in a Universal Messaging server instance, including messages waiting to be received by Integration Server triggers. You can view the size of individual messages and some properties of each message. You can also view the payload of string messages. All or individual messages can be deleted from the durable subscriber (for some durable subscriber types).

### New and Enhanced Command Central Capabilities

Command Central can now be used to configure realm ACLs for Universal Messaging, allowing you to control which users can perform what actions at the realm level. You can also use Command Central to configure Java system properties for Universal Messaging. For Universal Messaging clusters, Command Central now displays whether each running instance is a master or slave in the cluster.

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

## Migration of webMethods Broker Gateway Configurations

For webMethods Broker users who have configured territories and gateways and have large numbers of document types (topics) configured in the gateway connections, migrating these to equivalent remote joins in Universal Messaging previously involved a lot of manual effort. Now, you can use a new utility that can read the gateway configuration from webMethods Broker and automatically establish the same remote joins in Universal Messaging.

## Bypassing Low-Memory Throttling

A client session can request to bypass the existing server-side low-memory throttling. This is intended to allow administrators or administrative services to continue to be able to connect in order to resolve the low-memory situation.

## Storing JNDI Assets

Users who wish to use a JNDI provider for binding JNDI assets such as Connection Factories and Destinations can now store their Universal Messaging JNDI assets in a JNDI provider of their choice. This capability is only available through the respective API.

## Cluster Side-By-Side Upgrades to New Machines

You can now use a migration utility to migrate cluster configurations to machines that are on different hosts from the original cluster.

## Shared Durables Re-Architected

The implementation of shared durables is re-written to improve efficiency. The new implementation performs tracking of durable objects in-place on the channel, rather than relying on additional internal stores. This approach saves memory and reduces the complexity of the solution, improving robustness. A new API has been developed to manage durable objects through the Universal Messaging native API. The Universal Messaging JMS library has also been updated to utilize the new durable implementation.

## Simplified Configuration in Enterprise Manager

Enterprise Manager hides a number of configuration settings behind an **Advanced** button. These hidden settings are ones that are rarely recommended to be modified.

## New API Usage Tools

Tools are provided that allow management of data groups and illustrate how to use publish and subscribe.

## Improved Out-of-the-box Configuration

The default configuration for new installations has been reviewed and tested to ensure Universal Messaging is robust.

## Named Object IDs

Named objects IDs are now a concatenation of the client ID and the durable subscriber ID. Previously Universal Messaging just used the durable subscriber ID provided by the client.

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# webMethods Update Manager

## Installation Changes

Software AG Update Manager 10.0 will not be delivered through the Software AG Installer. You can install it through a standalone download from the Software Download Center. It is accessible by all customers with a valid SDC credentials.

### Changes for 10.0:

- When you install products from Software AG Command Central Bootstrappers using the Software Download Center, Software AG Update Manager is automatically installed in managed installations.
  - The footprint of the standalone installation of Software AG Update Manager is drastically reduced and hence, the installation time is significantly reduced.
  - Software AG Update Manager 9.8 no longer works with the webMethods Suite 10.0 and higher. If you have an existing Software AG Update Manager that you installed before April 2015, and you are upgrading to a version between 9.8 and 9.12, you should uninstall the existing Software AG Update Manager 8.2.
  - The default installation path is different than the Software AG suite installation path.
  - Software AG Update Manager will no longer share a Java runtime with the Software AG suite, even if installed inside the same folder as it has its own JRE.
  - Software AG Update Manager 10.0 is self-updating whereby the SUM infrastructure components – Java runtime, SUMLauncher, and OSGI are updated automatically.
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## Documentation

### CentraSite

Beginning with version 10.0, the old CentraSite documentation set has been replaced with the following PDF deliverables on the Documentation website:

- CentraSite Administrator's Guide - This guide describes the various configurations required for the proper functioning of CentraSite and the administration-level tasks that you can perform in the CentraSite environment.
- CentraSite User's Guide - This guide describes how to use CentraSite once it is installed and configured in your environment. It describes various CentraSite features and how these features can be used.

CentraSite Developer's Guide - This guide describes how you can use programming interfaces to access and modify the CentraSite Registry Repository. Additionally, it describes how you can customize the CentraSite graphical user interfaces to suit the requirements or standards of your organization.

## Upgrade

### **Automation of More Steps for Active Transfer**

In previous releases, ActiveTransfer upgrade required you to perform manual steps to copy keystore files and update keystore file paths. In this release, this step is automated on the Integration Server migration utility.

### **Decrease in API Portal Fix Sizes**

The size of API Portal fixes have been reduced by more than half, improving the speed with which you can install fixes during an upgrade.

### **Command Central Support for Application Platform Upgrade/Migration**

You can now upgrade/migrate Application Platform from Command Central.

### **Automation of Digital Event Services Migration**

You can now upgrade/migrate Optimize infrastructure Data Collector from Command Central.

### **Command Central support for Optimize Infrastructure Data Collector Upgrade/Migration**

You can now upgrade/migrate Optimize infrastructure Data Collector from Command Central.

### **Automation, Test, and Documentation of Universal Messaging Cluster Upgrade Process**

Previously, significant manual intervention was necessary to get a migrated Universal Messaging cluster running, especially if the new cluster is on different machines than the old cluster, and the migration steps were not documented. With this release, Universal Messaging cluster migrated has been automated, tested, and documented (see *Upgrading Software AG Products*).

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