webMethods Product Suite 9.0 SP1

Release Notes

Software AG is proud to announce the most comprehensive product suite for leveraging the four forces of cloud integration, mobile application development, social collaboration, and "big data." This release of the webMethods product suite delivers real-time data to users at the point of decision, integrated with fully digital, enterprise-wide business processes. The suite includes the market's first in-memory–enabled Enterprise Service Bus, which lets webMethods product suite users take advantage of the suite's significant performance improvements when integrating time-sensitive cloud and mobile applications.

Release Highlights

Cloud-to-Any Integration

webMethods CloudStreams is Software AG's first cloud integration offering, allowing on-premise applications to be easily integrated with software as a service (SaaS) applications, such as Salesforce.com, with governance and monitoring capabilities. CloudStreams provides the ability to do the following:

- Create and govern connections between any combination of SaaS and on-premise applications.

- Integrate SaaS applications in days rather than months.

- Gain insight into usage.

- Comply with SaaS vendor contracts and industry policies.

Powering the Mobile Landscape

The new webMethods Mobile Suite provides a high level of security and covers the entire life cycle of an enterprise's mobile applications.

webMethods Enterprise Gateway is the fastest way to establish a secure infrastructure as enterprise resources are provisioned to new mobile apps. Enterprise Gateway offers the following features:

- Securing and managing the connectivity between mobile apps and internal enterprise resources

- Allowing only authorized users, apps, and devices on networks

- Preventing malicious threats

webMethods Mobile Designer facilitates the development and deployment of apps on any mobile device. Mobile Designer provides the ability to do the following:

- Create native device applications more easily with enhanced HTML 5 support.

- Send push notifications to Android and iOS devices.

- Program faster using new easily accessible libraries, direct support for SQLite, and new native UI components.

- Easily detect when a device has been switched between portrait and landscape modes.

- Use more mobile cameras and interact more easily with a device's photo library.

Social Collaboration

The new webMethods InfoStreams offering brings real-time information and event streams to the right stakeholders—instantly and independently of location or preferred device—so those stakeholders can collaborate, capitalize on, and respond to events as they happen.

InfoStreams was built from the ground up as a mobile app using an event-driven architecture. InfoStreams can interact with virtually any event type to deliver real-time events directly to an organization's people and processes on iOS and Android devices.

Big Data

Software AG is delivering the first milestone of its in-memory data management platform. Focusing on real-time operational intelligence, the Software AG "big data" offerings provide the ability to manage and access data on any scale, analyze data in real time, and extract mission-critical information on the fly.

The market-leading Enterprise Service Bus, which integrates any technology, helps do the following:

- Process massive XML documents in-memory with Terracotta BigMemory integration.

- Cache service results off-heap using Terracotta BigMemory, thereby improving Integration Server scalability and performance.

In addition, Terracotta caching in OneData provides immediate access to large master data sets.

Along with this, webMethods 9.0 SP1 now supports Nirvana, the next generation of universal messaging. As a single platform, Nirvana provides the following:

- Active-active clustering

- Seamless integration of web, mobile, enterprise, and embedded clients

- Ultra-low latency

Central Management and Control

webMethods Command Central centralizes the control of webMethods implementations for on-premise and public and private clouds, improving consistency and reducing risk. Command Central provides the ability to do the following:

- Gain visibility and control of the entire webMethods landscape.

- Perform lifecycle operations such as start, stop, and resume on managed components such as webMethods Integration Server, Broker Server, and My webMethods Server.

- Configure environments from a single interface.

- Compare configurations, version levels, and fix levels across the webMethods landscape.

Contents

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

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

CentraSite ActiveSOA

Automated Asset Promotion

CentraSite includes a policy action to automate asset promotion to subsequent stages. The policy action, called "promote assets," is available in the Change Time Action category. This policy action provides the ability to do the following:

- Automatically promote "assets on lifecycle" transitions.

- Manually push assets to different stages through on-trigger policies.

Configurable Export/Import

Enhanced asset promotion capabilities provide the ability to preview assets before the assets are exported or imported. Export and import operations can be customized further with advanced configuration options.

Improved WSDL Handling

File system paths of imported WSDLs have been shortened. In addition, upon download of WSDLs with referenced XSD imports, the relative paths are dynamically rewritten as absolute paths to enable the use of the WSDL in development environments.

The download documents facility has been improved to provide a flat structure of the downloaded artifacts.

Policy Engine Enhancements

The policy engine now supports information (Info) and Warning levels as outcomes of policy action execution in addition to Success or Failure.

Improved Handling of Import and Virtualization for Asset Types with Required Attributes

The importer handles required attributes on asset types gracefully by pointing users to the asset details before saving the new object.

System Management Hub Removal and Command Central Adoption

The System Management Hub has been removed from CentraSite. Basic support for managing CentraSite is now provided through webMethods Command Central. In addition, command-line tools, such as inoadmin, are provided for all operational tasks, including configuration, monitoring, and administration. The CentraSite Registry/Repository (CRR) is now installed as a Windows service.

Apache Removal

Apache is removed from CentraSite as an infrastructure component. The CentraSite application server tier now communicates directly with the CentraSite Registry/Repository tier.

CentraSite Business User Interface

CentraSite has an entirely new web user interface, called the Business user interface, that is dedicated to business-oriented and occasional users. The Business user interface is accessed with the /BusinessUI URL and features the following:

- Configurable welcome page with graphical and textual information portlets

- Simple keyword search function that remains visible throughout the interface

- Advanced search and browse capabilities with continuous refinement of search criteria

- Simplified asset detail previews

webMethods Mediator Integration Improvements

The following improvements have been made in the integration of CentraSite and webMethods Mediator:

- CentraSite can now look up virtual services that leverage webMethods Integration Server services for custom request and response transformation. CentraSite handles errors resulting from those services based on metadata published by Integration Server. In addition, Mediator verifies the existence of those services when the services are deployed to Mediator.

- Traffic optimization includes a new run-time policy action for traffic management. This policy action provides the ability to actively manage the number of incoming requests to back-end services.

- For security tokens that have already been processed, virtual services can now be configured to forward those tokens to the native service for further validation and logging.

- CentraSite has improved version interoperability with Mediator. A newer version of CentraSite now supports an older version of Mediator. This change enables upgrades to be performed using a phased approach.

ApplinX Integration Enhancements

The data model for ApplinX has been extended.

Command Central Integration

A webMethods Platform Manager plug-in for managing CentraSite through webMethods Command Central is now available.

Asset Type Management Improvements

A command-line client can remove attributes of asset types that are used by instances.

Simplified Security Architecture

The security architecture of CentraSite has been simplified, and authentication on the database back end has been removed. CentraSite CAST and CRR now operate in a secured, trusted relationship.

My webMethods Server

Enforcement of Password Complexity

My webMethods Server supports the enforcement of stronger password requirements for users in the system directory service. A new interface enables My webMethods Server users to create their own Java class implementation to handle custom password complexity logic.

Ability to Lock Out Accounts

My webMethods Server can lock out accounts after failed login attempts. When several failed attempts to log in occur within a short time, the account can be locked out for a period of time. Limiting the number of failed login attempts in this way reduces the risk of brute force password attacks.

SHA-2 and 3DES Support

My webMethods Server uses a new encryption scheme that meets government security requirements. The server has been upgraded to SHA-2 cryptographic hash functions from SHA-1 and to 3DES from 2DES.

NTLMv2 Support

My webMethods Server supports NTLMv2.

Composite Application Framework UI Enhancement

Composite Application Framework more accurately specifies the position of pop-up panels and modal dialogs, making the design of user interfaces more efficient.

Software AG Designer

Enhanced Servers View in Designer

A new server type, Software AG Runtime, has been added to the Servers view in Designer. With this addition, Designer provides the ability to connect to a Software AG Runtime instance from the Servers view, edit its configuration parameters, and publish assets to the Software AG Runtime server from the context menu.

Speed Button Toolbar

The speed button toolbar makes modeling more efficient. When the mouse pointer is positioned over an existing step on the design canvas, the resulting speed button toolbar provides the ability to select the next object to add to the canvas.

Software AG Installer

Faster Download of Product Files when Using HTTPS

The Software AG Installer now downloads product files faster when the products are installed using HTTPS.

Resume Interrupted Download

As the Software AG Installer wizard progresses, the installer stores some of the files it requires in a temporary directory. If the installer is canceled and later restarted on the same machine, the installer uses the stored files rather than downloading them from the installer server again, to improve performance. After a successful installation, the installer deletes the stored files.

Updated Installer to Use Java 7

The Software AG Installer now installs Java 7. When the installer jar file is used to install on UNIX and Mac systems, and on Windows systems in certain situations, JRE 1.5 can no longer be used. Instead, a JRE 1.6 or higher that is supported by your products must be used to run the installer and uninstaller. For information on supported JREs for each operating system, see the system requirements for your products.

View Very Large Installation Images Using Archive Tools

Installation images larger than 3.5 GB (Zip64 format) can be viewed with tools such as 7-Zip and WinRAR.

Store Proxy Settings in Installation Scripts

The Software AG Installer now stores proxy settings in installation scripts. The stored settings can be overridden using command-line options when the command to install from a script is executed.

Improved Look and Feel

A new task bar across the top of Software AG Installer panels shows the main steps in the installation process and their progress—for example, choosing the products to install, or configuring those products. In addition, on the product selection tree, buttons have been replaced by icons to collapse and expand the tree, and to select all or clear all selections on the tree, for a cleaner look and feel.

Improved User Experience in Console Mode

In console mode, the Software AG Installer provides the ability to toggle to see product release numbers in addition to product sizes, as well as jump directly to a product in the product selection tree.

Support for Safari and Chrome Browsers on UNIX

The Software AG Installer supports Safari and Chrome browsers on UNIX operating systems when displaying websites from links in the installer (for example, the Software AG documentation website from the link on the Welcome panel).

Double-Click to Start Installer for Apple Mac

The Software AG Installer can now be started on an Apple Mac system by double-clicking the DMG file.

Installation of New Products

Terracotta, Nirvana, InfoStreams, Command Central, and Platform Manager can be installed and uninstalled using the Software AG Installer and the Software AG Uninstaller, respectively.

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webMethods ApplinX

Webpage Integration

Webpage integration provides the ability to simulate web browser activity and either expose this activity as standard web services or integrate it with other ApplinX procedures.

Web browser activity is simulated within ApplinX by recording and entering or capturing relevant web content using web browser-based tools. The web content is automatically produced by a new type of procedure, the Web Procedure. A Web Procedure can be used to integrate the user interface of webpages within ApplinX, taking advantage of the flexible and dynamic capabilities incorporated within the ApplinX procedure infrastructure. Web Procedures can be exposed as services in the same way that existing ApplinX procedures, such as Path and Flow procedures, are exposed.

Support for IPv6

For ApplinX components that use IP addresses, ApplinX supports IPv6 addresses as well as IPv4 addresses.

ApplinX License

The license mechanism in ApplinX has been enriched and now displays how many licenses an organization has for each solution. The license mechanism can also retrieve data regarding the use of the different license types, such as the number of connections currently being used per license type.

.NET Framework 4 Support

ApplinX .NET frameworks are available in Microsoft .NET Framework 4 on both 32-bit and 64-bit operating systems.

webMethods Broker

Interoperability of Import/Export Tools

The webMethods Broker import/export tools are interoperable. Broker provides the ability to export Broker metadata using command-line tools and import Broker metadata using the My webMethods Server user interface, or vice versa. webMethods Deployer, command-line tools, and My webMethods Server speak the same Asset Definition Language and enable interoperability across tools.

IPv6 Support

Broker supports native IPv6 connectivity. Broker Server or Broker clients can now be run on any hosts that support IPv6.

Easier Authentication from My webMethods Server to Multiple Broker Servers

Viewing details of Brokers belonging to multiple Broker Servers is now seamless. Broker no longer requires authentication credentials to be entered each time the view is switched from one Broker to another Broker. Users need to enter their authentication credentials only once for the connected Broker Servers; authentication credentials are stored permanently per user on My webMethods Server.

Administering and Managing Broker Using webMethods Command Central

Broker Server can be configured and managed through webMethods Command Central.

Parallel Channels for Broker-to-Broker Communication

webMethods Broker performance improves on a high-bandwidth and high-latency network when parallel channels are configured.

Parallel channel messaging is available on UNIX and Windows systems and supports basic authentication. (SSL is supported only on UNIX systems.) For details about configuring parallel channel messaging, see *Administering webMethods Broker*.

Dynamic Retry Queue

The retry queue size limitation has been removed. Previously, Broker supported a small retry queue length, which was not always sufficient for holding published documents, particularly when transactions were used. Now, the initial retry queue size is larger and it can dynamically increase.

webMethods Business Events

Deployer Extension Support

webMethods Deployer can be used to deploy event types to the Event Type Store via webMethods Platform Manager. Event types and all continuous query assets can now also be included in Deployer checkpoints and rollback operations.

User-Defined Operators and Aggregates

User-defined operators and user-defined aggregate functions are powerful features that allow Business Events users to enhance the functionality of the event engine. These features provide the ability to process event streams in ways that cannot be accomplished using event query language (EQL) alone. Example projects, such as the implementation of the median aggregation, are included in this release.

Continuous Query Modeler

The Continuous Query Modeler is a graphical design-time tool that provides the ability to compose continuous queries without knowing EQL. When a query is specified using the Continuous Query Modeler, the query can be composed graphically using simple drag-and-drop techniques.

Connecting to the Event Bus via NERV

By default, Event Server connects to the Event Bus using means provided by Integration Server, based on JMS triggers and Integration Server services. Now, NERV can be used as an alternate infrastructure, which provides great flexibility with respect to conversion from or to other input/output message formats and protocols.

Option to Use Nirvana as an Event Bus

Using Nirvana as an event bus provides the ability to meet high throughput demands with low latency.

Use of Java Client API in HA Setup

The Java client API can be used in high availability mode as the event producer.

Improved License Checking

In previous releases, license checks occurred during Event Server startup. License checks are now also conducted nightly, and a warning message is issued 30 days before the license expires.

webMethods Business Rules

Rule Verification

webMethods Business Rules provides rule verification for the detection of gaps, overlaps, syntax errors, and missing values in decision entities. Rule verification can be configured to run on demand or automatically.

Rule Engine Optimization

The rule engine in Business Rules has been significantly optimized, resulting in much-improved performance and scalability.

webMethods CloudStreams

webMethods CloudStreams is a new product offering from Software AG. webMethods CloudStreams is a "software as a service" (SaaS) integration product that supports the development and governance of integration flows between SaaS and on-premise applications.

Cloud Connector Service Development Support

CloudStreams supports the authoring and development of cloud connector services. A cloud connector service is a special type of flow service that is used to integrate an on-premise application with a SaaS application. The Software AG Designer Service Development plug-in provides a metadata-driven wizard for defining and developing cloud connector services.

SOAP Connector Framework Support

CloudStreams provides support for a SOAP connector framework. The SOAP connector framework makes it easy to create connectors for SOAP-based SaaS API providers. These connectors are lightweight and can be configured using a Provider XML file.

REST Connector Framework Support

CloudStreams provides support for a REST connector framework. The REST connector framework makes it easy to create connectors for REST-based SaaS API providers. These connectors are lightweight and can be configured using a Provider XML file.

Connection Pooling Support

CloudStreams provides support for connecting to various SaaS providers using a connection pool. A connection pool is a collection of connections with the same set of attributes. CloudStreams dynamically manages connections and connection pools based on configuration settings that are specified for the connection.

CloudStreams maintains connection pools in memory. Connection pools improve performance by enabling cloud connector services to reuse open connections instead of opening new connections. All cloud connector services use connection pooling.

Secure Storage of Credentials Support

CloudStreams stores SaaS API credentials in a secure encrypted file.

Authentication Using HTTP Basic and OAuth Token Support

CloudStreams provides support for authenticating to SaaS APIs using OAuth and HTTP basic tokens.

CloudStreams Designer Plug-In Support

CloudStreams provides the ability to define virtual services and policies using a Designer-based plug-in. Virtual services and policies are defined and then deployed to the CloudStreams server.

Cloud Service Governance Support

CloudStreams supports the ability to govern the flow of transactions between on-premise and cloud applications. As transactions are crossing organizational, application, and network boundaries, it is critical to keep track of who is consuming or sending transactions to SaaS applications, when these transactions are sent, and how many were sent. CloudStreams provides the ability to monitor and audit transactions and enforce service-level agreements.

Virtual Services Support

CloudStreams supports the creation of virtual services for providing cloud service governance. CloudStreams provides the ability to define two types of virtual services: virtual services and connector virtual services. The connector virtual service is a specialized form of virtual service for use with the cloud connector service for governing transactions moving from on-premise to SaaS applications.

Run-Time Policy Enforcement

CloudStreams enforces run-time governance by enforcing run-time policies. Policies are authored in the Designer-based CloudStreams development plug-in, but they are enforced in CloudStreams. Run-time policies range from security policies, such as authentication and authorization, to policies involving schema validation, auditing, performance, and scalability. CloudStreams supports security at both the transport and message levels, including authentication, authorization, digital encryption, and digital signatures.

Smart Policy Provisioning Support

CloudStreams supports Smart Policy Provisioning, which is the method of applying a single policy to many services based on a dynamic criterion. This enhancement allows for reuse of policies and enhances manageability of policies as SOA adoption increases.

Salesforce SOAP Connector Support

CloudStreams provides an out-of-the-box Salesforce Partner WSDL connector. This connector is based on the CloudStreams SOAP connector framework.

Service-Level Agreement Support

CloudStreams supports service-level monitoring for virtual services. Service-Level Agreement (SLA) policies can be defined and then enforced in CloudStreams in real time. CloudStreams sends notifications of SLA violations using a variety of methods.

SLA rules can include metrics such as average response time, fault count, total request count, and success count. Flexible time intervals can be configured in the SLA policy for CloudStreams to use when evaluating SLA rules.

Analytics

CloudStreams provides a dashboard that provides the ability to view and analyze run-time usage, performance, error, SLA, and other types of service metrics for CloudStreams connectors, connector services, and consumers. This dashboard is powered by a MashApp called CloudStreams Analytics. The MashApp can be used in conjunction with Software AG ARIS MashZone.

Salesforce Bulk REST Connector Support

CloudStreams provides an out-of-the-box Salesforce Bulk REST API connector. This connector is based on the CloudStreams REST connector framework.

Salesforce Streaming API Support

CloudStreams provides out-of-the-box support for the Salesforce Streaming API. Using a configuration-driven approach, CloudStreams can create subscriptions to Salesforce Push topics. Upon receipt of Salesforce streaming messages, CloudStreams can route these messages to a variety of destinations by calling a webMethods flow service.

OAuth-Based Authentication Support

CloudStreams provides administrative screens to configure OAuth aliases. CloudStreams cloud connections can use these aliases to authenticate with SaaS providers.

Getting Messages from Streaming Providers

CloudStreams provides support for a streaming framework based on two libraries: Apache HTTP and Comet. This streaming framework enables CloudStreams to connect to any streaming provider (for example, Twitter streaming that supports these libraries).

Cloud Connector Eclipse Plug-In Support

CloudStreams supports the development of custom SOAP connectors using an out-of-the-box Eclipse plug-in. The plug-in provides a click-and-configure interface that developers can use to define a custom SOAP connector that works with CloudStreams.

webMethods Command Central

webMethods Command Central is an integrated suite management tool that provides a unified web user interface and a command-line interface for common management tasks in the webMethods suite. Command Central is a one-stop interface for:

- **Landscape management.** Start or stop servers and monitor basic key performance indicators (KPIs) from a central location.

- **Central configuration.** Configure similar items across multiple products using a consistent model, and compare servers to see differences between configurations.

- **Fix or service pack management.** View existing fix levels across servers.

- **Automation.** Use a command-line interface to automate common operational tasks.

Inventory of Installed Products

Command Central enables users of the following version 9.0 SP1 products to gain visibility across their entire landscape and to view and manage these products:

- CentraSite

- EntireX

- My webMethods Server

- webMethods Broker

- webMethods Command Central

- webMethods Integration Server

- webMethods Platform Manager

Platform Manager

webMethods Platform Manager is a new lightweight agent that is included by default in all webMethods installations. Platform Manager runs in the background and is used by Command Central and other products to remotely monitor, manage, and control the webMethods products within an installation.

When connecting to an installation that Command Central manages, users only need to connect to Platform Manager; Platform Manager then lists all of the other products installed in the same directory tree. From there, users can browse the products, versions, and fix levels and see basic monitoring data for the host operating system.

Monitoring and Managing Running Instances

Command Central provides the ability to view dynamic status information that indicates whether each individual product instance is running, paused, or unresponsive.

- For each running instance, Command Central displays the status of the instance, any alerts that have been issued but not yet recognized, and the host for the core run-time application. Lifecycle actions such as stop, pause, and restart can also be initiated.

- For a selected run-time instance, Command Central displays basic KPIs, if available, that indicate the health of the application. The display name and authentication that Command Central uses to connect to the application can be changed.

- The instance's overview page displays the application engines, adapters, and other components that have been installed and made available in that run-time instance.

Environments

The Command Central landscape can be organized into groups of installations called environments. Selecting an environment filters the installations and instances to focus only on applications in that environment.

By default, the ALL environment displays all installations that have been defined. However, a custom environment can also be created.

Configuration

Command Central offers the ability to perform basic configuration, such as port settings, licenses, and (on My webMethods Server) emails for supported products. OSGi profiles of components can also be configured. This capability is available in the details view of each instance.

Comparison of Configurations and Fix Levels

One of the most requested features in Command Central is the ability to compare fix levels and configurations between installed products. In this release, Command Central supports the comparison of configuration settings of installed products, product versions, and fixes applied to the products. Comparison results are displayed in a grid format with non-matching rows marked with a warning symbol.

Automation

Command Central has been designed to provide access to virtually all capabilities using two different interfaces: a web-based user interface and a command-line interface. By leveraging the command-line interface, it is possible to automate certain tasks. For example, a command-line script can be created to shut down a number of servers in sequence. After each server shutdown command is issued, another command can validate that the server is down prior to continuing. Custom configurations can be applied to multiple servers by a script or service. KPIs can be monitored using a script that directs output to a CSV format file, enabling easy translation to spreadsheet format.

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webMethods Communicate

Improved Process Handling of Unexpected Call Hang Up

A party that is involved in a webMethods Communicate call can hang up the call any time—not only when the process flow expects the call to end. This feature demonstrates how to handle this issue in processes.

Write CDR for Incoming SMS

An incoming SMS now creates a Call Detail Record in CSV format. The CDR can be used for billing and statistic-gathering purposes.

Improved AcquireUser Service

The AcquireUser service has been extended with an additional input parameter that passes a calling number to the telephone of the acquired user. This change enables the following:

- Passing the primary calling number

- Passing the called number to indicate which queue is involved

- Customizing, changing, or suppressing the calling number that is presented to the telephone of the acquired user

Two additional priority parameters have been added to the AcquireUser service: absolute priority and relative priority. These two parameters can be used to define more granular call distribution to enable additional use cases.

Get User Status

An additional service, getUserStatus, has been implemented to retrieve detailed current status information about a user.

Communicate Server Support for Windows Server 2008 64-bit

The Communicate Server supports Windows Server 2008 Standard and Enterprise Edition R2 64-bit.

Support for the following operating systems has been removed:

- Windows Server 2003 Standard and Enterprise Edition 32-bit

- Windows Server 2008 Standard and Enterprise Edition R1 32-bit

"Barge in" for DTMF Recognition

A "barge in" function has been implemented for DTMF recognition during announcements. A caller can now directly interrupt longer announcements by pressing the requested keys on the telephone without waiting until the announcement has finished. The announcement immediately stops and the selected action starts. This enhancement gives callers immediate feedback about their selection and dramatically speeds up the menu selection process for experienced users.

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webMethods Content Service Platform

CSP Enterprise Manager

In the CSP Enterprise Manager, a sophisticated web-based graphical user interface facilitates configuration of the Content Service Platform system. This interface can be used to configure the following:

- Content structure

- Content type

- Index definition

- Object definition

- User, group, and role management

CSP Web Reader

The CSP Web Reader uses server-side rendering to improve the way in which documents are displayed. The Web Reader integrates fully with the Task user interface and works from any client application. In addition, the Web Reader provides the ability to:

- Set annotations, bookmarks, and document view properties.

- Hide paragraphs based on user rights.

CSP Web Client

The CSP Web Client provides functionality similar to the CSP Windows Client in a web browser.

CSP SharePoint User Interface

In the CSP SharePoint user interface, Microsoft SharePoint users can handle webMethods user tasks and access Content Service Platform content directly from SharePoint.

CSP Functions as Integration Server Services

Integration Server Services enable the use of Content Functionality and Document Automation from webMethods Integration Server.

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webMethods Deployer

Checkpoint and Rollback Support for Repository-Based Projects

webMethods Deployer provides the ability to create checkpoints and to roll back deployment to this checkpoint for Software AG Designer, webMethods Broker, Integration Server, Trading Networks, Event Server, and event-driven architecture (EDA) assets.

Deletion Set Support for Repository-Based Projects

Deployer provides the ability to create deletion sets for repository-based projects for Software AG Designer, webMethods Broker, Integration Server, Trading Networks, Event Server, and EDA assets.

Export to Project Automator Facility

Deployer supports the export of whole projects for both runtime-based and repository-based deployment scenarios. The project is exported in an XML file, which Project Automator can then use to automate the project.

Backward Compatibility

Runtime-based deployment projects can deploy assets from version 7.1 SP3 and later releases of webMethods runtimes. To accommodate the deployment of assets from earlier releases, source and target servers can be created for specific versions of Deployer. Projects can include only sources and targets of the same version. The runtime assets for Broker, Integration Server, Trading Networks, and My webMethods Server for version 8.0 can be deployed to servers of either version 8.0 or 8.2.

Use of Handles Instead of Passwords in Project Automator

Password handles can be created for use by Project Automator to encrypt and decrypt passwords.

Additional Deployable Assets

EDA assets have been added to the list of deployable asset types.

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webMethods Enterprise Gateway

The Reverse HTTP Gateway feature of webMethods Integration Server has been renamed to webMethods Enterprise Gateway. webMethods Enterprise Gateway provides the necessary DMZ-level infrastructure needed by mobile applications to securely access back-end services hosted on webMethods Integration Server. In addition, webMethods Enterprise Gateway continues to support B2B integration use cases over the Internet.

The following paragraphs describe the highlights of Enterprise Gateway. For more information, see *webMethods Integration Server Administrator's Guide*.

Protection from Back-End Infrastructure Denial of Service Attacks

Enterprise Gateway provides support for Denial of Service policies. The Denial of Service policy limits the rate of transactions that pass through the gateway for a given client IP address. When the limit is reached, Enterprise Gateway can either temporarily block the client IP address for a specified interval or block the IP address permanently. A maximum concurrency level can also be set for the entire gateway to prevent a single user from monopolizing Enterprise Gateway resources.

Flexible Authoring of Rules

Enterprise Gateway supports the flexible authoring of gateway rules. Gateway rules are attached to services using predefined criteria that are part of the rule definition. Enterprise Gateway provides the ability to apply rules to one or more services and easily change the rules by changing the criteria.

Message Size Limit Rule Support

Enterprise Gateway provides the ability to configure a message size limit rule that blocks messages flowing through the gateway based on the size of the message.

Cross-Origin Resource Sharing Support

Cross-origin resource sharing (CORS) is a mechanism that enables a webpage to make XMLHttpRequests to another domain. Such cross-domain requests are forbidden by web browsers as a result of the same origin security policy. Enterprise Gateway provides the ability to configure trusted domains; with this feature, mobile web applications downloaded from trusted domains can make requests by way of Enterprise Gateway to resources that Integration Server hosts.

Accessing Services Using OAuth 2.0 Tokens

Enterprise Gateway provides the ability to specify an OAuth authorization rule for services based on predefined criteria. This rule allows only service requests that have an OAuth token, but it does not check the validity of the token because the authorization server is inside the DMZ.

Authorizing the Mobile Application Versions

Enterprise Gateway supports the definition of an authorization rule for checking the mobile application version and mobile platform combination. This rule can deny access to mobile devices that are running an older version of the mobile application.

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webMethods EntireX

IPv6 Support

EntireX can now run on any machine that supports IPv6. EntireX can also run in a mixed mode environment consisting of IPv6 and IPv4 machines.

Cluster Support

EntireX is commonly run with simple synchronous scenarios. These scenarios can be run within a clustered environment, such as Sysplex, that exploits IP virtualization (for example, VIPA). Cookbook-style documentation provides assistance for setting up a clustered environment quickly.

Enhanced Speed for Integration Server Inbound Scenarios

The webMethods EntireX Adapter now supports multiple listeners. This speeds up webMethods Integration Server inbound scenarios (for example, where a COBOL program needs to call into Integration Server).

SSL Support for Direct RPC

Previous releases of EntireX Adapter supported Direct RPC but lacked support for SSL-secured communication. Direct RPC integration scenarios can now be secured with SSL, which provides the ability to follow security policies in place within an organization.

Cookbook-Style Documentation for COBOL Scenarios

A new cookbook-style approach to documentation provides step-by-step details for developing COBOL scenarios.

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webMethods Integration Server

JSON Content Support

Integration Server can send and receive JSON content over REST or flow services. The JSON content handler is engaged when Integration Server receives a request with content type "application/json". Integration Server provides out-of-the-box public services to convert a JSON string to an IData document and vice versa. In addition, document types can be defined based on a JSON document.

WS-RM Content Support

Integration Server supports the web services reliable messaging (WS-RM) protocol. WSD providers and consumers hosted by Integration Server can talk using this protocol. A standard WS-RM policy can be defined and attached to a WSD provider or consumer, thereby enabling the provider or consumer to communicate and send messages in a reliable manner using WS-RM.

Global Variables Support

Integration Server provides support for defining global variables. Global variables can be used in flow services, thereby increasing the flexibility and ease of use of flow service development. Global variables can be maintained in a single place using the Integration Server administration user interface.

Metadata Publishing to CentraSite Enhanced Support

Integration Server provides the following enhanced support for CentraSite metadata:

- Publishing of Integration Server REST resources to CentraSite

- Scheduled publishing of Integration Server packages to CentraSite

- Publishing of JMS aliases and Broker connection metadata to CentraSite

Service Result Caching Using Terracotta Ehcache Support

In previous versions, Integration Server provided the ability to cache flow service results using a file-based cache. The service result caching mechanism has been updated to make use of the built-in Terracotta Ehcache, and large amounts of data can now be cached locally. Using Terracotta BigMemory improves Integration Server scalability and performance by caching data off-heap.

Large XML Files Using Ehcache XML Parser Support

Integration Server provides support for parsing one or more large XML files using an enhanced Ehcache-based XML parser that prevents out-of-memory errors that one typically gets while parsing a large file using a normal XML parser. This enhancement allows Integration Server to keep the parsed objects off-heap using a combination of Terracotta Ehcache and BigMemory. Integration Server can now parse a large XML file, keep the parsed file in memory, and traverse from one node to another and back, without affecting server performance.

WSD Refresh Support

Integration Server has a new option to refresh consumer and provider WSDs. The refresh WSD feature updates the WSD using the recent changes made to the underlying WSDL referenced by the "OriginURI" attribute for the specific WSD. Integration Server supports storing the WSDLs in the file system or in CentraSite.

Event-Driven Architecture Setup Enhanced Support

Integration Server can send and receive events from the built-in webMethods event bus.

Accessing IData Variables Support

Integration Server allows Java developers to access IData variables by exposing them as a HashMap variable. This enhancement provides the ability to get and set IData attributes. This support also increases overall productivity and ease of development.

webMethods Command Central Support

Integration Server instances can be configured and managed through webMethods Command Central.

Quiesce Mode Support

Integration Server can now be put into quiesce mode. In quiesce mode, in-flight services continue to run to their completion but no new requests are accepted. While Integration Server is in quiesce mode, administrators can make changes to the server's configuration and apply fixes and service packs without affecting production traffic. After the changes are made, administrators can bring Integration Server out of quiesce mode and resume normal operation with a single click.

Checkpoint and Rollback Using webMethods Deployer

Integration Server supports the ability to implement a two-phase deployment using webMethods Deployer to deploy code to Integration Server, and then commit or roll back the changes based on the results of deployment to other parts of the infrastructure.

Tanuki Java Service Wrapper Support

Integration Server uses the Tanuki Java service wrapper to start and stop the server in a consistent manner on all platforms. Integration Server can easily start as an application or as a daemon process using a single startup script.

SFTP Client Support

Integration Server can connect to SFTP servers using the SFTP protocol for transferring files by way of a secure channel. Integration Server provides support for SFTP clients that can authenticate to SFTP servers using HTTP basic and certificate-based credentials.

IPv6 Support

Integration Server supports native IPv6 connectivity—that is, Integration Server can run on any machine that supports IPv6. The server can also run in a mixed mode environment consisting of IPv6 and IPv4 machines.

Cross-Origin Resource Sharing Support

Cross-Origin Resource Sharing (CORS) is a mechanism that enables a webpage to make XMLHttpRequests to another domain. Such cross-domain requests are forbidden by web browsers as a result of the same origin security policy. Integration Server provides the ability to configure trusted domains so that webpages downloaded from such trusted domains can make requests to resources that the server hosts.

OAuth 2.0 Provider Support

Integration Server supports a built-in OAuth 2.0 provider for registering clients, defining scopes, and associating scopes with clients. The OAuth provider supports the Authorization code and implicit grant type.

OAuth Tokens while Calling Third-Party Services Support

Integration Server provides utility flow services that generate and send OAuth 1.0 and 2.0 tokens while calling third-party services protected by the OAuth security scheme.

FTP Authentication Using a Proxy

Integration Server provides support for FTP connection authentication over a proxy while transferring files to an FTP server.

Cross-Site Request Forgery Protection Support

Cross-Site Request Forgery (CSRF) is an attack that forces an end user to execute unwanted actions on a web application in which the user is currently authenticated. Integration Server offers CSRF protection for Integration Server administrative screens. CSRF protection can be extended to custom Dynamic Server Pages hosted in Integration Server.

Session-Based Authentication Support

Integration Server now supports the use of the session ID to invoke a stateful service. Integration Server can use the session ID to identify a client making subsequent calls to the service using the same session ID.

Subversion 1.7 Support

Integration Server now supports Subversion 1.7.

Coherence-Based Clustering Support Removal

Integration Server no longer supports the option for Coherence-based clustering. Terracotta-based clustering is the default and is the only option supported for clustering purposes.

BPEL Support Removal

Integration Server has removed support for BPEL based on the Active EndPoints BPEL engine.

webMethods Developer Removal

In 8.2 SP1, Software AG announced the deprecation of webMethods Developer. webMethods Developer is not offered in the 9.0 SP1 release. Software AG Designer should be used for all Integration Server development.

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webMethods Mediator

Integration Server Metadata Usage

Virtual services can leverage webMethods Integration Server services for custom request and response transformation or error handling. Mediator provides the ability to look up these virtual services in CentraSite based on metadata that Integration Server publishes. In addition, Mediator verifies the existence of those services when the services are deployed to Mediator.

Run-time Traffic Optimization

Mediator includes a new run-time policy action for traffic management to actively manage the number of incoming requests to back-end services.

Forwarding Processed Security Tokens

For security tokens that have already been processed, virtual services can now be configured to forward those tokens to the native service for further validation and logging.

Compatibility with Previous Versions

Mixed versions of CentraSite and Mediator can now interoperate (for example, a newer version of CentraSite now supports an older version of Mediator). This compatibility enhancement provides the ability to perform upgrades using a phased approach.

Improved HTTP Error Code Handling

Previously, when Mediator received 4xx error codes from the native services, Mediator replied with HTTP 500 error codes to the client. Now, Mediator sends the proper 4xx error codes to the client if configured according to the documentation.

SAML Bearer Token Support

Mediator now supports SAML bearer tokens. The SAML assertion run-time policy provides the ability to choose between the holder of the key and bearer token support. If the bearer method is used, Mediator will not expect the request to be signed.

Non-preemptive Authentication in Mediator

The HTTP Basic Authentication run-time policy in CentraSite has been enhanced. A new parameter called "Authenticate Credentials" has been added to the "Require HTTP Basic Authentication" action. If this parameter is enabled, Mediator will authenticate against Integration Server users. If not enabled, only the presence of a basic authentication header is validated. In addition, if no policy is present, Mediator has been enhanced to provide proxy authentication challenges between the client and the native server.

Support for NTLM Authentication

The authentication schemes between Mediator and the native services have been extended to support NTLM in addition to basic authentication. This support is only available on Microsoft Windows platforms. NTLM is supported by passing through credentials from the incoming request, using specified credentials, or in a transparent mode.

Improvements to WS-Addressing Handling

Previously, Mediator removed WSA headers passed to it unless the WSA header was added during the Request Processing step by invoking a webMethods Integration Server service.

When a WSA header is present in the request sent by the client to the virtual service, Mediator responds in the following ways:

- Mediator does not remove/modify WSA request headers from client requests.

- Mediator does not remove/modify WSA headers that come as part of the responses.

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webMethods Mobile Designer

Phoney Web View

webMethods Mobile Designer supports the creation of native mobile applications that have rich web content—that is, web views—embedded within them.

Font Size Options for Native User Interface Objects

Mobile Designer now provides the ability to customize and change the font sizes of text in various Native User Interface objects.

Native User Interface Design Sample Application

Mobile Designer includes a new Expense Tracker sample that better showcases the Native User Interface design methodology.

webMethods Nirvana Messaging

Priority Messaging

Nirvana includes support for priority messaging, where higher priority messages are processed before lower priority messages in the client and server queues. For example, if a client queue contains five messages with priorities 0-4, and another message with priority 9 is added to the queue, the next message pulled from the queue is the message with priority 9. This functionality is also used within the client APIs, such that the client APIs also attempt to deliver messages to the client applications based on their priority.

Shared Durable Subscription

Nirvana introduces the concept of shared durable subscriptions. Durable subscriptions are topic based, which means all events on a topic are delivered to all consumers; however, only one active consumer is typically permitted to bind itself to a durable subscription name. Multiple active subscribers, such as a cluster of Integration Servers, can now bind to a subscription name, and each message is delivered to only one of these consumers.

Security Groups

Security groups have been introduced in Nirvana. Security groups provide the ability to create groups of users and then assign permissions to those groups for Nirvana resources, such as realm ACLs and channel or queue ACLs. Using security groups reduces resource usage and simplifies the setup required by applications that use Nirvana to create their user permissions.

For example, if a user requires access to the realm and 100 channels, the user must typically add a realm ACL entry and 100 separate ACL entries, one per channel, using the administration API. Using security groups, applications can instead add a security group or groups to the realm API, as well as the 100 channels, and simply make one administration API call to add a user to the security group. Membership of the security groups then implies permission on all resources authorized for the security group.

Installation Using Software AG Installer

Nirvana can be installed using the Software AG Installer, which greatly simplifies the installation and initial configuration of Nirvana in combination with other webMethods products. This enhancement brings Nirvana in line with the proven Software AG installation framework.

Software AG License Key

Nirvana uses the standard Software AG license key for authorizing the use of the product. A license key can be provided during installation or added later. If a license key is not provided during installation, a trial license key is installed that allows unrestricted use of Nirvana for 90 days. Existing Nirvana customers can request a license key by email from keymaster@softwareag.com.

webMethods OneData

SQL Server Support Added to OneData Repository

SQL Server can now be used as a webMethods OneData repository. Some limitations exist in this release; these limitations are listed at the end of this section.

Data Governance Dashboard

OneData includes a preview of the dashboard functionality. The dashboard can be used for Workflow data showing aggregated information about items going through the OneData workflow pipeline.

Mobile Access to OneData

The OneData user interface supports the Safari web browser on the Apple iPad.

Automatic Cleanup of OneData Temp Folder

Administrators can schedule automatic removal of folders and files created within the OneData temp folder to avoid out-of-space issues in the file system.

Security Enhancements

OneData is protected against Cross-Frame Scripting (XFS) security vulnerabilities.

The Data Validation Python Script defined in System Properties has been enhanced to handle additional attack vectors.

REST API Improvements

Insert calls now return an automatically generated ID on the inserted record.

Read web services can now query data in the Work Area and Release Area.

Data Quality Performance Improvements

The Data Quality matching process has been optimized for improved performance.

Logs created by the Data Quality process have been enhanced to include additional information for manual data quality actions. This information is also available in data audits.

The multi-table gold model is now also available for data quality projects implemented using Trillium.

Workflow Enhancements

Workflow is now supported in Nova mode.

The Workflow API has been enhanced to allow easier integration with external workflow engines. A new event has been added to Workflow to make it possible to call an external workflow when a new item has been queued.

Terracotta for In-Memory Processing

It is now possible to use Terracotta technology to cache the data accessed using the OneData REST API.

Deep Links

Deep links to OneData objects now support filtering. The deep link URL can contain filtering parameters.

Row Filter

OneData supports the setup of a data-driven workflow rule at the role level in addition to the user level.

OneData Anywhere

OneData Anywhere now allows the opening of multiple tabs for different objects in one window.

Javadoc for Public API Functions in DQ and Associated Packages

The OneData public API functions in DQ are now documented in Javadoc form and are available in the OneData directory of the webMethods documentation directory.

Features Not Available in 9.0 SP1 with Repository on SQL Server

- MDR and metamaps
- Discussion forums
- Change requests
- Interactive hooks
- Advanced functions in Data Manager, including Save Filter, Child Filter, Summary Report, Deep Link Filter, Rules Engine, Advanced Filter, Linkages, Show Data Hierarchy, Show Model, Workflow Rule Model, HM, and SR/NR
- Advanced data types, including BLOB/CLOB, Optional Database Sequence, and Contiguous Sequence
- Advanced object types, including remote snapshot, remote object, complex views, system object extensions, time-bound objects, and archive snapshots
- Job types, including the purge log job, data notification job, published reports job, and conceptual object export job in deployment
- Data object definition, including Usage tab and Check Constraint
- Workflow/Data email notifications
- Workflow Dashboard
- System reports
- Application level search
- Metadata Transfer and Compare Metadata functions

- Project creation

- Personalization

- DML log

- Customer MDM template (data model)

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webMethods Optimize for B2B

Problem Report Duration

Duration is now displayed in the problem report to indicate how long the rule has been out of compliance.

Live Purge Utility

The live purge utility, which was formerly available only by download from the Software AG Communities website, can now be installed with the Software AG Installer as part of a typical Optimize installation. The live purge stand-alone tool can be used to create a script to schedule the purge. For more information, see *Administering webMethods Optimize*.

KPI Instance Cleanup

Unwanted key performance indicator (KPI) instances can be removed from the Analytics overview, thereby providing the ability to focus on the important KPI instances.

Guaranteed Delivery

Enhancements were made to provide maximum event delivery integrity and to minimize the chance of losing event data as a result of system down time and software or hardware failure.

Removal of Out-of-the-Box Reports

Optimize no longer ships with out-of-the-box reports.

Removal of Prediction Engine from Optimize Architecture

The prediction engine has been removed from Optimize. Optimize can still be used to predict unusual behavior and then send an alert to avoid a costly outage.

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webMethods Optimize for Infrastructure

Removal of Out-of-the-Box Reports

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Removal of Prediction Engine from Optimize Architecture

The prediction engine has been removed from Optimize. Optimize can still be used to predict unusual behavior and then send an alert to avoid a costly outage.

Duration Included on Problem Report

Duration is now displayed on the problem report to indicate how long the rule has been out of compliance.

Live Purge Utility Included in the Optimize Installation

The live purge utility, which was formerly available only by download from the Software AG Communities website, can now be installed with the Software AG Installer as part of a typical Optimize installation. The live purge stand-alone tool can be used to create a script to schedule the purge. For more information, see *Administering webMethods Optimize*.

KPI Instance Cleanup

Unwanted key performance indicator (KPI) instances can be removed from the Analytics overview, thereby providing the ability to focus on the important KPI instances. For example, in Optimize for Infrastructure, it is possible to remove KPI instances related to monitoring a server that was taken offline permanently.

Guaranteed Delivery

Enhancements were made to provide maximum event delivery integrity and to minimize the chance of losing event data resulting from system down time and software or hardware failure.

Integration Server Not Required for Retrieving Optimize Data from MashZone

webMethods Integration Server is no longer required for retrieving Optimize data from MashZone. Optimize data can now be accessed using web services from MashZone directly. A My webMethods Server option provides the ability to create the query to go to MashZone using Integration Server or to go directly to Optimize.

Monitor My webMethods Server

KPIs have been added to monitor the health of My webMethods Server.

Monitor IPv6 Assets

webMethods assets that use the IPv6 communication protocol can be monitored.

Removal of Coherence

Optimize Analytic Engine clustering can now be leveraged using a Terracotta Server Array (TSA). Optimize no longer uses Coherence to support clustering. For Analytic Engine clustering, an appropriate TSA must be installed and configured. For information about installing and configuring a TSA, refer to *Installing webMethods Products* and *Getting Started with webMethods and Terracotta*. For information about configuring Optimize to support Analytic Engine clustering, see *Configuring BAM*.

webMethods Optimize for Process

Removal of Root Cause for Process

The Root Cause for Process feature was removed because its use was limited.

Removal of Out-of-the-Box Reports

Optimize no longer ships with out-of-the-box reports.

Removal of Prediction Engine from Optimize Architecture

The prediction engine has been removed from Optimize. Optimize can still be used to predict unusual behavior and then send an alert to avoid a costly outage.

Duration Included on Problem Report

Duration is now displayed on the problem report to indicate how long the rule has been out of compliance.

Live Purge Utility Included in the Optimize Installation

The live purge utility, which was formerly available only by download from the Software AG Communities website, can now be installed with the Software AG Installer as part of a typical Optimize installation. The live purge stand-alone tool can be used to create a script to schedule the purge. For more information, see *Administering webMethods Optimize*.

KPI Instance Cleanup

Unwanted key performance indicator (KPI) instances can be removed from the Analytics overview, thereby providing the ability to focus on the important KPI instances. For example, in Optimize for Process, if the monitoring of a specific process is no longer of interest, the related KPI instances can be removed.

Guaranteed Delivery

Enhancements were made to provide maximum event delivery integrity and to minimize the chance of losing event data resulting from system down time and software or hardware failure.

EDA Subscription

The Optimize Analytic Engine is capable of consuming event-driven architecture (EDA) events. Users can subscribe to specific event types and use the business data of the received events to construct event maps and KPIs.

Integration Server Not Required for Retrieving Optimize Data from MashZone

webMethods Integration Server is no longer required for retrieving Optimize data from MashZone. Optimize data can now be accessed using web services from MashZone directly. A My webMethods Server option provides the ability to create the query to go to MashZone using Integration Server or to go directly to Optimize.

Process Analytics User Experience Improvements

The Process Analytics pages have been simplified to improve usability and increase process health visibility. Key metrics, including volume, cycle time, and rule violations for the current and previous time periods, are prominently displayed. A drill-down feature provides the ability to get to actionable data.

Removal of Coherence

Optimize Analytic Engine clustering can now be leveraged using a Terracotta Server Array (TSA). Optimize no longer uses Coherence to support clustering. For Analytic Engine clustering, an appropriate TSA must be installed and configured. For information about installing and configuring a TSA, refer to *Installing webMethods Products* and *Getting Started with webMethods and Terracotta*. For information about configuring Optimize to support Analytic Engine clustering, see *Configuring BAM*.

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webMethods Process Engine

Process Development Perspective Enhancements in Software AG Designer

Overall enhancements have been made in the Process Development perspective of Software AG Designer, including general usability improvements. These improvements include support for speed buttons, dragging and dropping documents into events/messages, resizing objects within the canvas, editing and resizing labels, and changing the step types and boundary events of an implementation from the context menu.

Subprocess Handling

Subprocess handling in Process Engine has been enhanced. When a subprocess is added to a process model, the subprocess is added as a BPMN subprocess. BPMN subprocesses implement the BPMN 2.0 notation and support a number of BPMN behaviors that were not available in previous releases. Necessary database schema changes were made to support this functionality. Although support for the webMethods subprocess behavior used in the previous Process Engine release will be retained, that webMethods subprocess type is deprecated and support will be withdrawn in a future release.

Process Debugging

Process Engine debug handling has been enhanced. The debugger, which was rewritten to be based on Process Engine, now supports breakpoints and Eclipse-like step in, step out, and step over functions. Developers familiar with the Eclipse platform and debugging can expect the same debugging behavior as with any other asset within Eclipse.

EDA Support

Process Engine now supports event-driven architecture (EDA). Events can be used to initiate process actions such as start, stop, and suspend. Process Engine can now emit events intrinsically for instance and step tracking.

Diagnostic Logging

New diagnostic logging capabilities have been added to Process Engine. Logging can be enabled per process instance, and log details can be obtained for that specific instance in a separate log file.

webMethods Service Development

Performance Improvements

Overall enhancements have been made in the communication between Software AG Designer and Integration Server to improve the performance of Designer plug-ins. For webMethods Service Development in particular, Designer now makes fewer back-end calls when building and editing services.

IPv6 Support

webMethods Service Development supports native IPv6 connectivity. This support means that the Service Development functionality of Software AG Designer can run on any machine that supports IPv6. Service Development can also run in a mixed mode environment consisting of IPv6 and IPv4 machines.

webMethods Task Engine

Form Flow Enhancements

A task can be added to a business process as a user task activity, also referred to as a user task. Each user task represents a discrete human activity within the process.

In advanced processes, it might be desirable to create a series of user tasks, where each user task step represents one activity in a larger, overall procedure. When a series of tasks are connected in this way, a task workflow, also referred to as a form flow, is created. A task workflow provides the ability to break up a complicated procedure into a series of simpler user task steps. Task orchestration is done by the process model rather than inside a single task that could become overly complex and difficult to deploy, maintain, use, and understand.

A form flow operation provides the ability to use the more sophisticated logic of the process model to determine which task to start and which task interface to display to the user next. As the task workflow progresses, the individual tasks open automatically; the user does not have to manually open each individual task.

Open Presentation Layer Support

In addition to using Composite Application Framework (CAF) to build task-based user interface applications, Open Presentation Layer (OPL) can now be used. If developers are trained in and proficient with a user interface technology other than CAF, a task application can now be built in that technology, using the desired IDE and the OPL RESTful APIs to access the Task Engine.

Task Search Criteria for Migration

In previous versions, it was not possible to select subsets of tasks for migration, and all tasks had to be migrated at the same time. Task Engine now searches for and migrates a set of tasks based on specified criteria, which provides the ability to implement an incremental migration strategy.

Side-by-Side Task Migration Improvements

Migrating a large number of tasks from one system to another can take a long time. In addition, it is possible that some tasks may fail to migrate. Improvements were made to increase the task migration rate. In addition, the task IDs for any tasks that fail to migrate are exported to a file after the migration is complete.

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webMethods Trading Networks

Trading Networks supports several capabilities to automate some of the activities associated with onboarding new partners.

Manage Partner Onboarding Campaigns

Trading Networks provides support for onboarding campaigns that includes the ability to configure onboarding questionnaire templates used to solicit partner responses. Trading Networks provides out-of-the-box templates for the most commonly used document and protocol standards with the ability to further customize or create entirely new questionnaires.

Manage Onboarding Email Invitations

Trading Networks supports the ability to upload basic partner contact information that will be used to send emails inviting prospective partners to respond to the onboarding questionnaire. Reminder emails can be generated at preset intervals and targeted to tardy respondents to improve response rates.

Partner Self-Provisioning

Trading Networks provides support for partners to respond to onboarding campaigns through a self-service portal.

Partner Promotion

Trading Networks provides the ability to approve or reject partners based on their responses to the onboarding campaign. Approved partners are promoted along with the generation of partner profiles and trading partner agreements (TPAs) based on the information submitted.

Removal of Trading Networks Console

Trading Networks Console was deprecated in 8.2 and is no longer offered in the 9.0 SP1 release. All administration, configuration, and monitoring activities related to Trading Networks must be performed through the My webMethods user interface.

Documentation

Significant changes to product documentation sets or to individual documents are described in the readmes for each product.

Upgrading webMethods Products Guide

The *Upgrading webMethods Products* guide has been restructured. In past releases, the guide had one chapter for each upgrade path that included all tasks for that path. In this release, the guide has an introduction for all upgrade paths, followed by chapters that explain pre-upgrade and upgrade tasks for overinstall upgrade paths, followed by similar chapters for side-by-side upgrade paths. The tasks apply to all overinstall or side-by-side upgrade paths unless specifically noted as belonging to only certain releases.

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webMethods Product Suite 9.5 SP1

Release Notes

Release 9.5 SP1 of the webMethods product suite is another significant step in combining cloud, mobile, and social technologies with automated business processes and the agility needed to fully power your digital enterprise.

Release Highlights

Application Integration

- **Elastic ESB.** For the first time, customers can dynamically scale their implementations into private and public clouds. This provides the ability to handle peak demands and quickly add new capacity without down time or manual intervention.

- **Robust API platform.** Business capabilities or unique data can be exposed securely via APIs for innovative cloud, web, and mobile applications.

Business Process Management

- **Social BPM.** The webMethods BPMS solution now provides guidance tools to help users manage, delegate, and complete tasks more effectively and efficiently. With Social BPM, tasks can be tagged so that expert resources can be identified and work can be routed to the best expert available.

- **Mobile BPM.** In-progress processes can be monitored remotely using a pre-built mobile business process monitoring application. Aggregated views of process instances give instant insight into stalled or failed processes, providing the ability to graphically visualize the failure step to identify and respond to problems in real time.

In addition, webMethods product suite 9.5 SP1 provides many enhancements across the suite, including the following:

- Updates to the model-to-execute functionality and methodology help automate the alignment of business process analysis with automated system- and task-based business processes.

- Stage and milestone support enhancements provide the ability to obtain high-level visibility into an organization's process status and separate the signal from the noise. With this visibility, business executives and process owners can quickly understand whether SLAs have been reached or breached across the key milestones that constitute their business process.

- Upgrade enhancements improve the user experience and the overall effort involved in migrating from prior webMethods product releases.

Contents

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

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

CentraSite ActiveSOA

API Key Management and Enforcement

CentraSite now provides the ability to generate API keys for caller identification. Service providers can choose whether to enable API key checks for a given API and whether to require approvals.

CentraSite also provides automatic consumer onboarding. If a guest user accesses an API key-enabled service, that user is asked to provide account details. If the user is not yet registered, an approval workflow is triggered and the user is onboarded.

Graphical Charts for Service and API Run-time Data

Run-time data retrieved from webMethods Mediator or other policy enforcement points can now be visualized in the Business user interface by way of the following functions:

- **Events profile.** The new events profile shows run-time policy events in a graphical and detailed view.

- **Performance profile.** The new performance profile shows run-time performance metrics in a graphical and detailed view.

Asset Type Management Enhancements

Enhancements have been made in the way asset types are modified. Required attributes can now be added to type definitions even if instances already exist. A default value must be provided for these new attributes.

Business User Interface Extensions

- **Asset permissions action.** A new user interface action was introduced to improve the way in which asset permissions are managed. This action enables users to assign and view asset permissions in a manner that is similar to the permissions profile in the CentraSite Control user interface.

- **Report activity.** In addition to providing reports on asset instances, CentraSite now provides the ability to generate asset-independent reports through a new activity in the Business user interface.

Organization, User, and Group Management in the Business User Interface

The Business user interface now offers the ability to create and manage organizations, groups, and users.

Service and API Virtualization in the Business User Interface

The Business user interface now offers the ability to virtualize services, configure per-service run-time policies, and publish and unpublish to or from run-time targets.

The virtualization capability is provided as a preview feature in this release.

My webMethods Server

Full-Page Refresh Performance Enhancement

Enhancements have been made to the default refresh behavior for My webMethods pages. These enhancements improve the load time for pages in My webMethods.

User Calendar Support for Microsoft Exchange 2010

User calendars can now connect to Microsoft Exchange 2010.

Jetty Upgrade to Version 8

My webMethods Server now uses Jetty 8.

Standards Updates

My webMethods Server now supports JSF 2.1 and Servlet 3.0. These changes were implemented for future enhancements to Composite Application Framework (CAF) and do not affect any present CAF development.

Software AG Designer

Eclipse Version Upgrade

Software AG Designer is now based on Eclipse version 4.3. The plug-ins that Software AG provides are developed and tested for that Eclipse version.

Installation Performance Enhancement

Significant performance improvements were made to the installation of Designer and its plug-ins using the Software AG Installer.

Software AG Installer

Improved Marking on Product Selection Tree for Products with Issues

If the Software AG Installer is stopped, or if the installer exits during the product configuration stage, any product that has not been completely configured now appears with the words "Incomplete Configuration" in red in the product selection tree of the installer and the uninstaller. In addition, red text in the description box informs users to uninstall and reinstall such products.

Products that have other issues (for example, products that cannot be installed because requirements are not met, or cannot be overinstalled) are marked in red in the product selection tree in the installer. Red text in the description box provides a more detailed explanation.

New Shading for Nodes in Product Selection Tree

Previously, users had to expand the product selection tree to determine whether a component was already installed in the target directory. Indicators such as grey arrows or grey shading on the top level nodes now indicate that components listed under those nodes are installed.

Improved Filtering for Product Releases

The release selection panel now includes an additional filter for product line, to narrow the release choices.

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webMethods ActiveTransfer Server

Asset Deployment Support

webMethods ActiveTransfer Server provides APIs to support the export and import of assets between test, development, and production environments. The assets that can be exported and imported include ActiveTransfer ports, server preferences, user templates, user configuration, virtual file system definitions and configuration settings, partner mapping, post-processing and scheduled events, and ActiveTransfer Gateway instances.

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webMethods ApplinX

Extended Browser Support

webMethods ApplinX now supports the following browsers:

- Internet Explorer 10.x

- Firefox version 21 and later

- Google Chrome version 29

Extended Application Server Support

webMethods ApplinX now supports the Tomcat version 7 application server.

Internet Information Services Support

ApplinX applications can now be deployed and run under IIS version 7.5 or 8.

webMethods BPMS

Mobile Enablement

webMethods Monitor now offers a mobile app that enables you to access real-time information about the status of executed business processes on your mobile device. The mobile app also provides access to information about process models uploaded to webMethods Integration Server and webMethods Process Engine. This app, called webMethods Mobile Monitor, is available for download in the Apple App Store and Google Play.

Usability Improvements

Enhanced views are now available in Monitor for improved monitoring and administration of process models and instances in Process Engine.

JMS Support

- An e-form can now trigger a process with a JMS message.

- webMethods Universal Messaging is now the default JMS provider for Process Engine.

- Process debugging for processes can now be started by either JMS messages or event-driven architecture events.

Stages and Milestones

Process models and instances now support internal milestones and stages that can be defined at design time. Milestones and stages can be tracked with respect to their completion or non-completion in a running process instance.

Event-Driven Architecture Enhancement

Emission of process and process step EDA events is enhanced, with many new predefined EDA event types.

Archiving Enhancements

- Database partitioning can be used on Oracle databases as an alternative to using stored procedures to archive and delete process audit data. Database partitioning is an option that greatly decreases the time required to archive and delete data.

- Processes can now be archived by process model name (one or multiple process model names can be specified).

User Calendar Support for Microsoft Exchange 2010

User calendars can now connect to Microsoft Exchange 2010.

webMethods Broker

Storage Relocation

webMethods Broker now supports the relocation of storage files from an old data directory to a new data directory, as well as the relocation of storage files that are outside the data directory within the same operating system. Broker provides this support by way of the "server_config relocate" command-line utility. For details about this utility, see *Administering webMethods Broker*.

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webMethods Business Rules

Sequential Processing

webMethods Business Rules supports sequential rule processing, where the order of rules in a decision table determines the order of execution. Sequential processing is suited for applications in which users want to control the order of rule execution and for applications where a large volume of data has to be evaluated in a limited amount of time.

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webMethods CloudStreams

Eclipse Plug-in to Create Custom REST Connectors

webMethods CloudStreams supports the development of custom REST connectors using an out-of-the-box Eclipse plug-in. By way of a click-and-configure interface, the plug-in enables developers to define custom REST connectors that can be used with CloudStreams.

Improved Usability of Salesforce Connector

The following usability enhancements have been made to the Salesforce SOAP connector:

- **Prefilled input variables for cloud connector services.** Many input variables are automatically filled by the cloud connector framework based on the selection of a business object and fields created by the developer. In this release, the Designer Service Development plug-in has been updated to clearly identify the fields that have prefilled values. The plug-in also provides a way for developers to see the prefilled value.

- **Display of mandatory and optional fields while creating cloud connector services.** The cloud connector wizard now shows the mandatory and optional fields for the selected operation.

- **Display of fields that can be created, updated, or queried while creating cloud connector services.** In Salesforce, only certain fields are available when performing certain operations. For example, some fields cannot be updated in Salesforce when calling an update function. The cloud connector wizard now displays the correct set of fields that are applicable for each Salesforce operation.

Free, Community-Based Connectors

A dedicated CloudStreams developer community area is now available on the Software AG developer community website. This new developer community enables CloudStreams customers, partners, and Software AG field personnel to share connectors and other artifacts with other members of the community. The following connectors are now available to the community:

- Amazon SQS

- Amazon S3

- Amazon EC2

- StrikeIron

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webMethods Command Central

Template-Based Provisioning

webMethods Command Central templates provide the ability to clone or copy parts of an Integration Server installation. A template, which contains information about products, fixes, and configuration for a selected Integration Server, can be fully or partially applied to another server to replicate parts of the source Integration Server. For example:

- A template can be applied to an "empty" server (with only Platform Manager running) to install the same products and fixes and apply the same configuration as on the instance from which the template was saved.

- A template that contains only fix information can be used to easily and remotely install the same set of fixes to a set of target Integration Servers.

Template-based provisioning is accessible using an easily-scriptable command line interface (CLI).

Enhanced Configuration Support

Command Central now includes the following additional configuration categories, which can be managed through the Command Central CLI and API:

- Database pools

- Database functional aliases

- JNDI aliases

- JMS aliases

- Email server

- Extended server settings

These items are also included in templates as part of template-based provisioning. In addition, they can be compared across run-time instances.

License Reporting

Command Central provides the ability to generate an easy-to-read report showing the use of Software AG license keys across the webMethods landscape. The report lists the servers on which each license key is used. This list provides a simple way to monitor an organization's use of webMethods software to ensure that an organization is not exceeding its licensed allowance.

Reports are in PDF format and can be triggered at any time using the easily-scriptable CLI.

Universal Messaging Support

Command Central now supports the management and configuration of webMethods Universal Messaging. The following operations can be performed from Command Central:

- Monitor the run-time status (running, stopped, unresponsive, failed) of Universal Messaging realms.

- Monitor basic KPIs of Universal Messaging realms, including memory usage, fanout backlog, and task backlog.

- Start, stop, and restart Universal Messaging realms.

- Configure ports (interfaces) and license keys of Universal Messaging realms.

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webMethods Deployer

Deployment of Universal Messaging Assets

webMethods Deployer now supports the repository-based deployment of webMethods Universal Messaging assets. The following asset types are supported:

- Realm ACLs

- Security groups

- Realm schedules

- Realm configuration

- Channels

- Channel joins

- Queues

- Interfaces (ports)

- Data groups

- Clusters

Wildcards in Project Automator Deployment Set Definitions

When defining a deployment set using Project Automator, it is now possible to use wildcards in various fields in the Composite and Component definitions in order to include multiple items that match a given name pattern. Examples include the following:

<Composite displayName="DeployTestAssets" name="Deploy*" srcAlias="RepoSource" type="MWS"/>

<Component compositeName="*" componentType="*" displayName="" name="DocumentType:APITest2::*" srcAlias="RepoSource" type="Broker"/>

This technique can also be used to add all composites in a repository to the deployment set with a single line.

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webMethods EntireX

The main purpose of this release is compatibility with the webMethods product suite 9.5 SP1. In addition to those compatibility enhancements, webMethods EntireX includes a number of other changes and enhancements.

EntireX Adapter Enhancements

The EntireX Adapter includes the following enhancements:

- CICS ECI connections can now set a mirror transaction dynamically.

- IMS Connect connections can now change the maximum segment length.

- Adapter connections without metadata can now be created and enabled from the adapter web interface. This enables these connections to be used dynamically.

- Listeners now detect and inhibit some illegal parameter combinations for reliable RPC and conversational RPC messages.

- Null value suppression has been added to adapter listeners.

For more details about these enhancements, see *webMethods EntireX Adapter 9.5 SP1 Release Notes*.

Eclipse 4.3 Support in EntireX Designer

The EntireX Designer (also known as the EntireX Workbench) now supports Eclipse 4.3.

Internationalization Enhancements

The ICU conversion has been simplified, and enhancements have been made to further improve performance. Moreover, an on-error-trace is now available to speed up diagnosis in case the conversion result does not match the expected behavior.

Increased Platform Support

EntireX is now supported on the following additional platforms:

- z/OS 2.1
- AIX Power 6.1 (64-bit)

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webMethods Integration Server

Support for Transport Layer Security Versions 1.1 and 1.2

webMethods Integration Server now supports TLS versions 1.1 and 1.2. With this release, Integration Server administrators can set up an HTTPS port using TLS version 1.0, TLS version 1.1, or TLS version 1.2. TLS version 1.2 support requires the use of Java 1.7 libraries.

WS-RM Persistent Storage Module Support

Integration Server uses the Apache Sandesha2 module for providing support for WS-RM. The Sandesha2 module provides an out-of-the-box, in-memory storage for messages delivered using WS-RM. Messages in the in-memory store cannot survive Integration Server restarts; in this release, Integration Server now supports a persistent storage module that stores messages that can survive Integration Server restarts.

Digest Authentication Using WS-Security Policy for Provider and Consumer WSDs

Integration Server supports the ability to authenticate service consumers that access an Integration Server–hosted web service using digest authentication credentials passed in web service headers. Integration Server can also send digest authentication credentials while calling third-party web services.

Continuous and Reliable Operations following Database Outages

Integration Server can now automatically refresh database connection pools following database outages. This enables Integration Server to provide continuous and reliable operations even if the database goes down and then comes back up again.

OAuth Enhancements

Integration Server provides the following enhancements to the OAuth infrastructure:

- Support for auditing of OAuth authentication and authorization
- Support for defining an OAuth scope that involves services that are not hosted by Integration Server

Enhanced Support for Administering and Managing Integration Server Using Command Central

Administrators can now use the Command Central command line interface, Command Central templates, and the Compare Configurations page to centrally configure and manage the following additional Integration Server configuration types:

- Port configuration
- JMS configuration
- Extended server settings
- Database configuration
- JNDI configuration

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webMethods MashZone

Rebranding of MashZone from ARIS to webMethods

MashZone has been rebranded from ARIS to webMethods as follows:

- Logos and product names have been changed in splash screens and title bars, and in the title pages of the documentation.
- The Start menu entry has been moved from "ARIS" to the "Software AG" structure.

Full MashZone Installation Using Software AG Installer

In order to provide a better installation experience for Business Analytics customers, webMethods MashZone is now fully integrated into the Software AG Installer.

There are two items in the installer tree:

- MashZone
- Infrastructure / PPM and MashZone Infrastructure (automatically selected when needed)

NERV Adoption

MashZone now uses NERV instead of the EDA Orchestrator.

Load Balancing Support

The following enhancements were made to MashZone to support load balancing:

- Preferred routing for clients
- Common file access from the master instance

Increased Line Limit to 100,000 Rows

For calculation purposes on the server side, the MashZone line limit has increased from 10,000 rows to 100,000 rows.

On the visualization side, the 10,000-line limit remains for displaying data. Exceeding this limit will lead to a warning.

Additional restrictions apply to file sizes of import files.

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webMethods Mediator

Custom Content Type Support

In addition to standard content types, such as application/xml or application/json, webMethods Mediator now supports the definition and mapping of custom content types for REST services.

OAuth 2.0 Support

Virtual services deployed to Mediator can now be configured to use OAuth 2.0 for authentication purposes. Mediator supports the following modes:

- Propagation of an OAuth 2.0 token contained in the incoming request to the backend service

- Use of a specified OAuth 2.0 token when communicating with the backend service

Improved JavaScript Object Notation Support

In previous releases, JSON messages were converted to XML, which introduced certain restrictions. Mediator now leaves the JSON messages unchanged.

API Key Enforcement

Mediator can now leverage API keys to identify consumers of virtual services.

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webMethods Mobile Designer

iOS 7 Support

webMethods Mobile Designer supports the new version of Xcode for iOS 7. Additionally, the Mobile Designer native user interface (NativeUI) library now includes support for the iOS 7 look-and-feel. Support for the iOS 6 look-and-feel is still available when a project is built using an iOS SDK version earlier than iOS 7.

New iOS 7 Phoney Skin

Mobile Designer now includes a platform-specific Phoney skin that simulates the iOS 7 look-and-feel.

Support for JSR 75: FileConnection and Personal Information Management

Mobile Designer supports managing contacts using the JSR 75: FileConnection and Personal Information Management (FC-PIM) API for Phoney and for the Android, BlackBerry, iOS, Windows Phone 8, and Windows 32-bit target platforms.

Additional Enhancements since 9.0 SP1

Additional enhancements have been made to Mobile Designer since 9.0 SP1. For details, see *webMethods Mobile Designer 9.0 SP2 Release Notes*.

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webMethods OneData

Limitations Removed for SQL Server Support to OneData Repository

In 9.0 SP1, limited support was introduced for SQL Server to be used as a webMethods OneData repository. In 9.5 SP1, the following limitations are removed:

- Discussion forums

- Change requests

- Interactive hooks, with the exception of Process Flow hooks

- Advanced functions in Data Manager (Save Filter, Child Filter, and Advanced Filter)

- Advanced object types (remote object and complex views)

- Job types (published reports job)

- Workflow email notifications

- Metadata Transfer and Compare Metadata functions

The following limitations remain in this release:

- MDR and metamaps

- Advanced functions in Data Manager (Summary Report, Deep Link Filter, Rules Engine, Linkages, Show Data Hierarchy, Show Model, Workflow Rule Model, HM, and SR/NR)

- Advanced data types (BLOB/CLOB, Optional Database Sequence, and Contiguous Sequence)

- Advanced object types (remote snapshot, system object extensions, time-bound objects, and archive snapshots)

- Job types (purge log job, data notification job, and conceptual object export job in deployment)

- Data object definition (Usage tab and Check Constraint)

- Data email notifications

- Workflow Dashboard

- System reports

- Application level search

- Project creation

- Personalization

- DML log

- Customer MDM template (data model)

- Process Flow hooks

- Workflow Hook mapping

Internationalization Enhancements

Parts of the OneData user interface are now localizable, and OneData provides the ability to choose a preferred locale on the Preferences screen. Localization is possible for the following functions:

- Login, Change Password, and Forgot Password screens

- Home Page and Main Menu options

- All menu options in the Personalize menu, including Favorites and Preferences

- Data Manager, except for the following:

  - Submenu options of the Delivery option

  - Import

  - Submenu options of the View option

  - Data Hierarchy view

  - Hook commands available as a submenu within an object

  - The following actions in Self-recursive and Network-recursive conceptual objects: all Data Manager actions on the secondary axis, the Search and Replace operation, the Definition tab, the Advanced definition tab, and the Add Entry operation in reference popups shown in the SR/NR filter and on the Add Relationship screen

  - Workflow (Nova mode only), except for the Summary report, the Workflow Rule Model view, and Workflow API messages

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webMethods Optimize for B2B

Event Enablement

webMethods Optimize for B2B can emit events for collected statistics and for measurement results. These events can be consumed by anyone listening on the event bus.

Added Attributes in Event Maps

Optimize for B2B supports the addition of new attributes for Event maps. This feature does not affect historical data.

webMethods Optimize for Infrastructure

Additional KPIs

webMethods Optimize for Infrastructure provides the following new KPIs to monitor the health of assets:

- Universal Messaging
- JMS trigger
- Broker throughput

webMethods Optimize for Process

Event Enablement

webMethods Optimize for Process can emit events for collected statistics and for measurement results. These events can be consumed by anyone listening on the event bus.

Added Attributes in Event Maps

Optimize for Process supports the addition of new attributes for Event maps. This feature does not affect historical data.

webMethods Process Performance Manager

Rebranding from ARIS to webMethods

Process Performance Manager has been rebranded from ARIS to webMethods as follows:

- Logos and product names have been changed in splash screens and title bars, and in the title pages of the documentation.
- The Start menu entry has been moved from "ARIS" to the "Software AG" structure.

Full Installation Using Software AG Installer

In order to provide a better installation experience for Business Analytics customers, webMethods Process Performance Manager is now fully integrated into the Software AG Installer.

There are three items in the installer tree:

- Process Performance Manager
- Process Performance Manager Analysis GUI
- Infrastructure / PPM and MashZone Infrastructure (automatically selected when needed)

Installer for Analysis User Interface

The Process Performance Manager analysis user interface is typically operated as an applet, which is downloaded from the server, and no client-side installation is required. An installer was also available in Process Performance Manager version 5.1 to install the analysis user interface as a standalone application. This installer was not present in version 9 but has been restored in this release. When the analysis user interface is installed and started as a standalone version, the standalone version checks the server for updates and automatically installs the updates.

Installation of the standalone application is an alternative for organizations that prohibit the use of applets or are not yet using Java 7 plug-ins in their browsers.

Improved Handling of Large Process Instances during Import

Process Performance Manager is sometimes configured to merge process instances. This configuration will, over time, produce very large EPCs consisting of thousands or tens of thousands of objects. During each import, these process instances are touched again, leading to long processing times for a particular instance. Increased processing times result in a "virtual" system outage, where the system freezes for multiple hours while processing this data.

In most cases, the merging of process instances was not intentional. To avoid accidental merging of large process instances, a limit for the number of EPCs can be specified in a settings file. If this number is exceeded, the import task will stop with a warning so that large process instances can be deleted. In addition, the number of EPCs in a process can be shown as a measure in Process Performance Manager.

Transformation of EDA Data Types into Process Performance Manager Data Types

Event-driven architecture events contain dates and durations in specific formats (SAGDateTime and MillisecondDurationType). Process Performance Manager now understands events that use these formats.

Merges of Attributes at the Step Level

When re-creating a process instance from multiple events, Process Performance Manager formerly replaced attributes when consolidating steps. Process Performance Manager can now optionally merge attributes instead of replacing them.

Master/Sub-server Scenario Support

In version 5.1, Process Performance Manager supported a scenario with one master and multiple sub-server machines as a scaling mechanism for process analytics. Due to the cloud infrastructure and changes with the ARIS provisioning, this scenario was not supported in version 9.0. This functionality has been restored in 9.5 SP1.

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webMethods Service Development

Double Scrolling

The webMethods Designer Service Development plug-in supports double scrolling, which allows developers to see different parts of the input and output documents. This feature improves usability during complex mapping scenarios that involve large input and output parameters.

Single Service Results Panel

The Service Development plug-in now includes a single service results panel. This panel displays service execution results for all services that have executed in the current Designer session.

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webMethods Trading Networks

Overlapping Partner Certificates

webMethods Trading Networks provides support for up to two active certificate sets each (referred to as the primary and secondary certificate sets) for sign/verify, encrypt/decrypt, and SSL certificate types. Trading Networks can automatically switch between primary and secondary certificates, for example when the primary certificate expires, without interrupting the processing of documents.

Integration Server Keystore Support

Trading Networks supports storing private keys and public certificates associated with Enterprise profiles in keystore files on Integration Server. This support enables Trading Networks customers to use the same certificate format used in other webMethods products.

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webMethods Universal Messaging (formerly Nirvana)

Command Central Support

webMethods Universal Messaging can now be managed and monitored using webMethods Command Central. Users can perform actions such as starting or stopping Universal Messaging realms, monitoring status and KPIs, and configuring ports and license keys of Universal Messaging realms. For details, see the *webMethods Command Central* section in these release notes.

Deployer Support

Universal Messaging assets can now be deployed using webMethods Deployer. Universal Messaging assets can be exported using Enterprise Manager and checked into a version control system. From there, users can create builds and deploy assets selectively using Deployer. Supported asset types are as follows:

- Realm ACLs
- Security groups
- Realm schedules
- Realm configuration
- Channels
- Channel joins
- Queues

- Interfaces (ports)
- Data groups
- Clusters

Optimize for Infrastructure Support

Universal Messaging can now be monitored using webMethods Optimize for Infrastructure. Fifty-two KPIs are available that span realms, queues, channels, and data groups—all of which can be tracked over time for trending and alerting using advanced analytic capabilities in Optimize.

Single Message Acknowledgement and Redelivery Count

Universal Messaging now supports acknowledgement of individual messages and redelivery counts both on shared durable topics and on queues. This support improves performance of multi-threaded processing and duplicate detection, as is typically used with webMethods Integration Server triggers.

Multicast Channel Delivery

Universal Messaging now supports multicast delivery on non-filtered channels. This support allows the high-performance fanout of messages to a large number of interested clients, which is accomplished through the use of broadcast network protocols rather than point-to-point delivery to individual subscribers.

Broader C++ Platform Support

Universal Messaging C++ clients now support a wider range of platforms. These platforms include the following:

- Windows 32- and 64-bit
- Linux 32- and 64-bit
- Mac OS

Persistent Storage Performance Improvements

The performance of Universal Messaging persistent document stores has been improved for mixed and reliable channels.

Shared Memory Performance Improvements

The shared-memory transport capability of Universal Messaging—for low-latency messaging within a single machine—has been improved, further reducing end-to-end latency.

Documentation

Significant changes to product documentation sets or to individual documents are described in the readmes for each product.

webMethods Broker

webMethods Messaging Programmer's Guide is renamed as *webMethods Broker Messaging Programmer's Guide*.

webMethods Command Central

Command Central Help is a new help set that you access from the Command Central web user interface.

webMethods Product Suite 9.6

Release Notes

Release 9.6 of the webMethods product suite is another significant step in combining cloud, mobile, and social technologies with automated business processes and the agility needed to fully power your digital enterprise.

Release Highlights

Application Integration

The webMethods suite provides many application integration enhancements in cloud integration, template-based provisioning, B2B and file transfer capabilities, mobile support for enterprise applications, and advanced API management. Some highlights are as follows:

- Multiple instances of webMethods Integration Server can now be configured within the same installation, eliminating the need to install Integration Server multiple times.

- webMethods Command Central configuration and large-scale installation tasks are made easier through the use of templates that can be created from existing installations and applied to other installations.

- The Command Central Cloud Factory provides a unified way of launching and managing a mixture of public cloud and private cloud instances.

- The processing of transactions in webMethods Trading Networks has become faster through the use of asset caching.

- Most of an organization's JNDI assets and JMS assets, such as JMS queues and topics, can now seamlessly be moved from webMethods Broker to webMethods Universal Messaging using a new command line migration utility.

- A new feature of webMethods Enterprise Gateway, called webMethods Mobile Support, provides a mobile data synchronization framework for developers to create offline mobile applications that can access distributed data managed by backend ERP applications. Mobile Support provides built-in support for synchronization logic, thereby allowing developers to focus on developing the business logic.

- webMethods OneData includes several enhancements to improve the quality of data, including new engines that can be used in Cleanser and Matcher projects. In addition, OneData integrates webMethods Locate to provide an address verification and geocoding solution in Cleanser and Matcher projects.

- API key management functionalities in CentraSite ActiveSOA have been extended to provide consumers with direct and convenient access to API keys they own, from their user preferences in the CentraSite Business user interface.

Business Process Management

The Business Process Management portfolio has been enhanced to improve productivity and cost savings. These enhancements provide better visibility of processes and tasks, enhanced escalation management via push notifications for violations of critical tasks, easy creation of BPM mobile applications, and full integration with backend systems. Mobilizing BPM processes provides the ability to generate higher business value and improves customer experience.

BPM highlights in this release include the following:

- Stage and milestone dashboards available in webMethods Optimize for Process will allow users to set goals and milestones for a process and track these via email alerts for SLA violations and process and stage exceptions.

- With the introduction of webMethods Mobile Task Integration, developers can quickly create applications based on existing business processes and tasks, with minimal code, and build most of their mobile task projects out of the box. Developers can then distribute and monitor their Mobile Task Inbox applications using the webMethods Mobile Administrator push notification API.

- Significant performance improvements have been made in webMethods Monitor query results through the use of caching techniques and retrieval of data for task charts.

- Several enhancements have been made to webMethods Business Rules that improve the development and management of rules. For example, Business Rules now provide the ability to manipulate rules with a set of predefined functions that perform simple or complex functionality for a decision table condition, a decision table assignment result, or an event rule assignment result with minimal effort.

Mobile Suite

In this release, Software AG is pleased to introduce webMethods Mobile Development, a new mobile suite component. Mobile Development is a new Software AG Designer plug-in that provides tools and features that developers can use to develop mobile applications more quickly and reliably. Mobile Development also easily integrates with webMethods Mobile Administrator so that the corresponding Mobile Administrator instance can be used to build, test, and deploy projects.

Cross-Suite Enhancements

webMethods product suite 9.6 provides several enhancements across the suite. Some highlights include the following:

- Enhancements were made to the upgrade process that improve the user experience and the overall effort involved in migrating from prior webMethods product releases. Almost all of the products in the suite have adopted this migration framework.

- The Software AG Installer now supports Windows 8.x operating systems.

- webMethods products now support Oracle Database 12c for webMethods database schemas.

- webMethods product suite 9.6 products are supported on Windows Server 2012 R2 and Windows 8.1.

Contents

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

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

CentraSite ActiveSOA

Role Management in the Business User Interface

The ability to manage roles has been added to the organization management screen in the Business user interface. Administrators can now create custom roles, add permissions to these roles, and assign the roles to users and groups.

Reclaiming Disk Space in the CentraSite Database

A new command, "inoadmin reorganize," is provided to defragment and reorganize the database files, thereby reducing the size of the database files when data is purged.

Advanced API Key Management

API key management functionality has been extended. Consumers can now manage their API keys through their user preferences, as well as renew and revoke API keys. API providers can revoke API keys from the profiles of the API asset.

In addition, notifications can be configured to inform consumers about upcoming expirations of their API keys. Using the access token section in the user preferences, consumers can now simply renew an API key that has expired or is about to expire soon, without having to request an entirely new API key. This allows existing applications that rely on these keys to remain unchanged.

API Virtualization in the Business User Interface

By way of the new Virtualize action, the Business user interface now offers the ability to virtualize APIs. This functionality contains all aspects of proxy API configuration and runtime policy action configuration that were previously available only in CentraSite Control. Virtualization rules configured in this release will be scoped to the proxy API on which the virtualization has been performed.

OAuth2 Policy Enforcement

CentraSite now provides a configurable approval workflow for APIs that are to be protected by OAuth2. The API provider can configure whether approvals are required and which notification templates are to be used. Users consuming APIs that are protected by OAuth2 can manage their OAuth2 client credential information through their user preferences in the Business user interface.

Software AG Designer

Mac OS Support

Software AG Designer's common plug-in and the webMethods Mobile Development plug-in are now supported on Mac OS.

Improvements in Startup and Installation Time

Reduction of bundle conflicts and improved consistency in Eclipse 4.3 bundle usage have improved Designer's overall startup and installation time.

Software AG Installer

Logging Levels Stored in Scripts

When a product is installed from a script, the logging level selected when the script was created is used by default.

Support for Windows 8.x

The Software AG Installer now supports Windows 8.x operating systems.

Support for Relative Paths in Installation Scripts

The Installer now uses a different self-extractor mode when launching, so relative paths can now be used in installation scripts for Windows when using the exe file.

Java 7 Requirement

The Software AG Installer and Uninstaller are now compiled with Java 7.

- On Windows, the Oracle Java 7 JRE is bundled inside the exe file used to start the installer.
- On Mac OS X, the Oracle Java 7 JRE is bundled inside the DMG file.
- On UNIX, a Java 7 JRE or JDK must be installed to use the installer.

For more information, see *Using the Software AG Installer*.

Software AG Software Download Center (SDC) Outage Notification

When the SDC is down for maintenance, the Software AG Installer now displays a message that indicates the outage when the installer tries to connect to the SDC.

Prevention of Unsupported Overinstalls

The Installer now prevents users from installing older releases of Software AG products over newer releases. The installer also prevents users from overinstalling products that do not support overinstallation.

Software AG MashZone

Integration with the ARIS Product Line

Integration with the ARIS product line was removed in the previous release of Software AG MashZone. In release 9.6, a new data source called "ARIS table" has been added to MashZone to facilitate consuming data from ARIS Business Server.

Continued Map Support in MashZone

In previous versions of MashZone, there was a dependency on Google Maps to provide mapping capabilities. In response to reports that Google will be retiring this capability in 2014, a new mapping capability based on OpenScales and Bing Maps has been added to MashZone. All customers using maps in their dashboards are advised to upgrade to this release to ensure ongoing availability of their maps.

Mobile Support

iOS 7 is now supported for mobile use of MashZone.

Portuguese Language Support

MashZone is now available in Portuguese.

Software AG Process Performance Manager

Improved Handling of Percentiles

Percentiles can now be calculated at the instance level.

Improved Handling of Event Data

Each type of Event data can now be configured individually in Software AG Process Performance Manager. In addition, the overall configuration process has been simplified.

webMethods ActiveTransfer Gateway

High Availability Support

webMethods ActiveTransfer supports high availability of ActiveTransfer Servers serving as gateways and internal servers, both in the DMZ and behind the firewall. When an internal ActiveTransfer Server becomes unavailable, client requests are automatically redirected to another ActiveTransfer Server that is connected to the same ActiveTransfer Gateway, without interrupting the file transfer between the client and the ActiveTransfer Server.

webMethods ActiveTransfer Server

High Availability Support

webMethods ActiveTransfer supports high availability of ActiveTransfer Server. When an ActiveTransfer Server becomes unavailable, client requests are automatically redirected to another ActiveTransfer Server that is connected to the same ActiveTransfer Gateway, without interrupting the file transfer between the client and the ActiveTransfer Server.

Improved Logging

The ActiveTransfer Server log page has been enhanced for easy access to the log entries, thereby improving an administrator's experience when searching for information in the server logs. By default, the server log screen now presents a scrolling update (last 1,000 lines) of the server log, with options to edit the number of lines displayed. The log can also be enabled to scroll up when new information is appended to it. In addition, a flexible search option is provided to quickly get to a particular section within a log. The filter option can be used to display or hide the log entries that meet the filter criteria.

Conditional Execution of Post-processing and Scheduled Actions

ActiveTransfer Server provides a new action called "Jump" to switch from a sequential execution of actions to a conditional execution. The Jump action enables post-processing and scheduled events to skip one or more actions and execute a designated action in the event. A Jump action can be executed conditionally based on a variety of file and transfer parameters, including file name, file size, transfer speed, and transfer time window. A Jump action can also be unconditional and can be applied on all files participating in the event.

Excluding Files from Certain Actions

ActiveTransfer Server provides a new action called "Exclude" that, when configured prior to another action or set of actions, excludes files from those subsequent actions based on a source filter.

Additional Transfer Settings for Outbound FTP(S) Transfers

ActiveTransfer Server, when acting as a client for outbound transfers, provides several settings to connect to external servers through FTP, FTPS, and FTPES protocols. The new configuration settings include ASCII/Binary mode, Active/Passive mode, Simple mode (used primarily for connections to AS/400 systems), and the Convert Line Endings option to change the line endings in the file for file transfer in ASCII mode.

Usability Enhancements

ActiveTransfer Server includes the following enhancements to improve usability related to setup of virtual folders and configuration of events:

- Administrators can test connections with target remote servers and fine-tune any changes necessary in virtual folder definitions before the folders are made available for file transfers.

- Administrators can browse all virtual folders when using any of those folders in File operation tasks in post-processing and scheduled events. This avoids the need to toggle back and forth between the Virtual Folder Management and Event Management screens.

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webMethods ApplinX

Blocking Access to URLs in an ApplinX Web Application

A new security feature provides the ability to block access to each URL in an ApplinX web application. This is achieved with a property file that contains the URLs of the web application pages and the access permissions for each URL. The following access roles are available:

- **Unauthenticated.** This role identifies users who did not pass the authentication process and who have the minimal access permission.

- **User.** This role identifies users who have regular permissions.

- **Admin.** This role identifies users who have the highest permissions.

For more information, see *Blocking Access to URLs in an ApplinX Web Application* in *Appendix B: Security in ApplinX* in the *ApplinX User Guide*.

Improved Natural Data Transfer (NDT) Functionality

The following improvements have been made to the Natural Data Transfer functionality:

- The old Visual Basic implementation has been replaced by a modern .NET implementation.

- Product usability has been enhanced by supporting more customer use cases in the context of NDT.

webMethods BPMS

Process Architecture Improvements

Improvements were made to the webMethods Process Engine architecture, including process archiving, database partitioning, EDA enablement, and JMS adoption.

Monitor Process Diagram and Query Enhancements

Process diagrams for version 9.6 are displayed with Google Web Toolkit (GWT). Process models from earlier versions are still displayed with Adobe Flash; these models can be upgraded to version 9.6, after which they are displayed with GWT.

In addition, the performance of webMethods Monitor query results has been improved through the use of caching techniques.

Task Engine

Performance improvements were made in the retrieval of data for task charts.

Mobile Task Integration

The following enhancements were made with respect to handling mobile tasks:

- **Mobile task integration.** webMethods Task Engine and Task Development now enable mobile task applications to be created from existing task applications that have been published to My webMethods Server/Task Engine. Users can access the task inboxes for these mobile task applications from their iOS or Android mobile device, and can view and interact with tasks assigned to them, search for tasks, and accept and complete tasks. Note that webMethods Mobile Task Integration is an add-on to the BPMS bundle and is licensed separately.

- **New Mobile Task Project Wizard.** The New Mobile Task Project Wizard provides the ability to create a Mobile Designer project from existing task types.

- **Support for multiple task types in one project.** This feature enables the creation of a separate mobile task application project for each task type or a single mobile task application project that can handle multiple task types.

- **Support for operation while disconnected.** If mobile device connectivity is interrupted by poor or intermittent signal strength after a user logs on, the user can still work on tasks while disconnected. When connectivity is restored, the tasks are synchronized with the server.

webMethods Broker

Migration Utility

webMethods Broker offers a new command line utility to migrate JNDI assets and JMS assets, such as JMS queues and topics, from Broker to webMethods Universal Messaging. This migration utility provides the ability to move most of an organization's assets automatically.

Improvements for Default Settings

The default values for settings such as cache, storage file size, parallel channels, and file settings have been adjusted to reflect customers' current common settings.

Monitor Authentication

Broker Monitor now connects to Broker Server only after Broker Server authenticates the requesting Broker Monitor, thus providing additional security for Broker Server.

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webMethods Business Rules

Rules Management Console Improvements

The following improvements were made with respect to rule management:

- The Rules Management Console now supports the use of the My webMethods Server principal picker. Decision tables now support My webMethods Server users and groups, enabling easier use of business rules for task assignment scenarios.

- The Decision Table Editor in the Rules Management Console provides a filter control to limit the displayed decision table rows. Rows can be filtered for My webMethods Server users, groups, and roles as well as any string value.

- The Rules Management Console now supports locking of individual decision tables and event rules. Users can lock or unlock decision entities to prevent their changes from being overwritten by other Rules Management Console users.

webMethods Rules Development Improvements

webMethods Rules Development now provides a set of predefined string and numeric functions that provide the ability to perform simple or complex functions for a decision table condition, a decision table assignment result, or an event rule assignment result. A function can require input parameters that can be manually entered or mapped to existing parameter elements.

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webMethods CloudStreams

Usability Enhancements

The following usability enhancements were added to this release of webMethods CloudStreams:

- The CloudStreams framework no longer displays prefilled input variables in cloud connector services by default. These variables can be viewed if desired by pressing a toggle switch.

- The CloudStreams framework now hides generated document type packages because users do not use these packages directly. Hiding these packages also helps reduce clutter in the Software AG Designer Service Development plug-in views.

- CloudStreams provides a new group view for listing connectors in the administration screens. This view groups all connectors for a particular provider in one place, even if the connectors were built by a different set of developers. For example, some connectors (for the same provider) could be provided by Software AG, whereas others could be custom-built by the end-user developer. This reduces clutter and enables the administrator to quickly find connectors.

- CloudStreams provides support for enhanced governance policies that can log messages to the local server log.

- The CloudStreams framework provides enhanced usability while accessing the query operation for a particular SaaS API (for example, a Salesforce partner SOAP API query operation). The framework automatically generates the query string based on the business object and fields that the user selects while defining the cloud connector service.

Out-of-the-Box Connectors

CloudStreams now provides connectivity to ServiceNow and NetSuite.

Automatic OAuth Token Refresh Capability

Expired OAuth access tokens in configured OAuth aliases can now be refreshed automatically. A refresh token and the refresh token URL, used in the automatic refresh process, can be specified as part of the OAuth alias configuration.

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webMethods Command Central

Template-Based Provisioning User Interface

webMethods Command Central provides capabilities for creating templates from existing installations and then applying the templates to other installations. Such templates help ease the execution of large-scale installation or configuration tasks. Templates can now be saved and applied directly from the Installations pages in the Command Central web user interface, making template use even easier.

Repository Management

Repository management in Command Central allows the definition of one or more repositories that act as a source for installation files when installing webMethods products or fixes. A Master repository provides a connection to the Software AG software and fix download locations, whereas Image repositories allow central storage of image files created using Installer or Update Manager.

These repositories can be used as part of template-based provisioning.

Integration Server Configuration

Command Central now allows the configuration of additional Integration Server settings through the command line tools, REST API, and web user interface. The following configurations are available:

- Ports
- License keys
- JNDI aliases
- JMS aliases
- webMethods Messaging aliases
- Extended settings
- JDBC pools and functional aliases
- Keystores
- Truststores
- Resources
- Email settings
- Log settings
- Global variables

Log File Viewing

Command Central now provides central remote access to log files for various products. Log files can be viewed directly in the web browser, with the assistance of filtering and highlighting to help find specific text strings. Additionally, single or multiple log files can be downloaded as plain text or compressed ZIP files for faster download of large files.

License Report User Interface

Command Central now provides a user interface for easy generation of and access to license reports. These reports show, at a glance, which license keys are used on which servers throughout the defined landscape. This information is helpful in managing an organization's compliance with its license agreement.

Instance Creation

Command Central now provides the ability to create additional instances of select webMethods products using command line tools and the REST API. Each new instance has its own configuration and can be separately started, stopped, or monitored while sharing a common set of product files and fixes.

Cloud Factory API

Command Central now provides command line and REST API functions for managing cloud-based virtual machine instances. Account configuration allows central setup of multiple accounts on VMware and/or Amazon EC2. Using a single API with those accounts, instances can be launched, started, stopped, and deleted across both platforms.

webMethods Composite Application Framework

JavaServer Faces 2.2 Support

webMethods Composite Application Framework now contains introductory components for developing portlet and web applications in a JSF 2.x environment. Also included is a JSF 2.x tag library for CAF controls, with related documentation. For more information about working with the limited JSF 2.x functionality in this version of CAF, see *webMethods CAF Development Help* and the *CAF Tag Library Reference.*

Hot Deployment of Jar Files to the Deploy Folder

To simplify development and deployment activities, My webMethods Server supports hot deployment of jar files directly to the *Software AG directory*\MWS\server*instance_name*\deploy folder. The jar files can also be installed using the My webMethods Server Install Administration portlet or deployed from Software AG Designer.

Validation and Code Completion Assistance

XSD schemas are now provided for xmlImport files. The XML editor uses these schemas to provide validation and code completion assistance when developers are editing the files.

JSR 303 Bean Validation

A developer can now annotate a Java model with validation constraints using standard JSR 303 JavaBean annotations instead of attaching validators to the controls that are bound to that model.

Package Export Enhancements

When packages are exported from a WAR file or a Utility jar project, the generated Java package names are now made unique so they do not conflict with other components.

webMethods EDA Enablement

EDA Enablement

MAPI events, historically used to push process data into webMethods Optimize, now also emit EDA events.

Programmatic Creation of Event Types Outside of Software AG Designer

In previous releases, event types could only be created using functionality available in Software AG Designer. The Event Type Store API has been extended to allow clients such as webMethods Optimize and webMethods BPM to create event types on the fly and deploy those event types to their local Event Type Store.

Guaranteed Delivery

Events are no longer lost following system failures.

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webMethods Enterprise Gateway

Support for Mobile Data Synchronization Framework

webMethods Enterprise Gateway now provides support for a mobile data synchronization framework by way of the new webMethods Mobile Support feature. With this feature, developers can quickly author offline mobile applications that retrieve data from a backend database when the mobile network is online, store that data on the device database, and enable mobile device users to work with the stored application data even when the network is offline. Later, when the mobile network is back online, mobile device users can upload the data changes back to the backend database and retrieve any changes made in the backend database while the device was offline.

Mobile Support provides the following the capabilities:

- Bidirectional synchronization of data between multiple mobile devices and backend databases

- Automatic conflict detection and resolution based on configuration in Mobile Support mobile sync components

- Incremental download and upload of data

Mobile Data Synchronization Client Library

By way of the Mobile Support feature, Enterprise Gateway provides a mobile data synchronization client library. When used in conjunction with webMethods Mobile Designer, the Mobile Support Client library allows users to quickly create offline mobile applications by leveraging the mobile data synchronization framework.

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webMethods EntireX

The main purpose of this release is to enhance webMethods EntireX support under z/VSE. This release also ensures compatibility with version 9.6 of the webMethods product suite and includes multiple fixes, changes, and enhancements. For more details about these enhancements, see *webMethods EntireX 9.6 Release Notes*.

Enhanced z/VSE Support

EntireX support for z/VSE has been thoroughly reworked and is now at a level comparable to other EntireX platforms, such as z/OS. This also means that the Application Monitoring feature of webMethods Optimize for Infrastructure can now also be used with EntireX and Natural components running under z/VSE.

Improved Handling of Project Export/Import in EntireX Workbench

Improvements have been made in the export and import of projects in the EntireX Workbench (also known as the EntireX Designer).

During the archival of an EntireX project, when either the export feature of Eclipse or the check-in feature of a revision control system such as Subversion or CVS are used, an external properties file can be used to store the properties of IDL files. These properties are restored from this external file when the project is imported or checked out.

CICS RPC Server with Enhanced Impersonation

A value of YES is now supported for the IMPS configuration parameter. The CICS RPC Server then uses the RPC user ID and password supplied by the RPC client for authentication and impersonation of the client. This means that the RPC Server validates the password.

Improved Handling of Security Messages under z/OS

The EntireX broker attribute PRODUCT provides the ability to specify the name of the installed security product (ACF2, RACF, or TOP-SECRET). This attribute is used to analyze security system–specific errors. This feature was available in earlier versions but was not documented.

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webMethods Integration Server

Multi-instance Integration Server

webMethods Integration Server now provides the ability to configure multiple instances within the same installation, which means that multiple Integration Servers can be run without having to install the product multiple times. Each instance can have its own set of custom packages and can be separately started, stopped, and configured.

Support for Ehcache Search API

Integration Server provides a public search service for searching custom caches configured on the server. The public search service offers the ability to issue complex search queries against caches with pre-built indexes.

Improved Support for Handling Daylight Saving Time Changes

The Integration Server scheduler has been enhanced to provide improved support for handling daylight saving time changes. With the new enhancements, the Integration Server scheduler will continue to do seamless executions of scheduled jobs across these time changes.

Flexible Access Control Mechanism for Manipulation of Files

Integration Server file manipulation services (pub.file:*) allow manipulation of files on disk. The built-in access control mechanism allows administrators to control which files and directories can be accessed using these services. This mechanism now allows the use of wildcards, thus providing more flexibility when defining file and directory naming schemes.

Authentication with Third-Party HTTP Server using Digest Password

Integration Server is able to authenticate with third-party HTTP servers using a digest password for HTTP authentication.

Multiple Conditions and Joins for webMethods Messaging Triggers

Integration Server triggers now support multiple conditions and joins when these triggers are used with webMethods Universal Messaging.

Client-Side Queue Support when Publishing to Universal Messaging

When messages are published to Universal Messaging using the pub.publish:publish service, client-side queueing (CSQ) can now be used to provide extra resilience during failures or temporary outages of the Universal Messaging server or network.

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webMethods Mediator

Transport-Level SSL Certificates for Consumer Identification

webMethods Mediator now provides the ability to leverage pure transport-level certificates for identifying consumers.

Finer-Grained Analytics and EDA Enablement of Mediator

Mediator has been enhanced to collect metrics and events with additional details, such as operations, resources, and endpoints. In addition, Mediator now leverages the EDA infrastructure to publish these events. A new log destination for EDA has been added to the run-time policies. A listener for events and metrics has been added to allow storage to a relational database configured in webMethods Integration Server.

OAuth2 Policy Enforcement

Mediator can now enforce the use of OAuth2 for virtual services through run-time policies configured in CentraSite.

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webMethods Mobile Administrator

Windows Phone 8 and Windows RT Enhancements

The following enhancements were made to webMethods Mobile Administrator for Windows 8 and Windows RT support:

- The Mobile Administrator Build Node now supports building Windows Phone 8 and Windows RT applications using either webMethods Mobile Designer app projects or native Windows Phone 8/Windows RT SDK app projects.

- Mobile Administrator now provides an App Store for Windows Phone 8 applications through the mobile web site and a native App Store client application for Windows Phone 8.

- Mobile Administrator now collects and analyzes crash logs from Windows Phone 8 applications and makes them available to the app developer.

Mac Build Node Upgrade

The Mobile Administrator Build Node for Mac OS X now supports running on Mac OS X 10.9 (Mavericks).

Android MDM Support

Android Mobile Device Management (MDM) now supports basic commands to lock a device, wipe/erase a device, install an application, and remove an application.

Start Build Jobs Using Commit Triggers

Mobile Administrator can be configured to automatically launch new build jobs from a build configuration once changes in the underlying source code repository have been detected.

Automated Testing Support

Mobile Administrator now supports automated testing of mobile applications. The tests can be developed using the native test frameworks of the iOS, Android, and Windows Phone 8 SDKs and are executed as part of a Mobile Administrator build job.

Terms of Service Support

The native App Store clients for iOS, Android, and Windows Phone 8 now support displaying and accepting a site's Terms of Service.

App Comments and Ratings

Mobile Administrator now lets users add comments and star ratings to applications through the web interface or native App Store clients. Mobile Administrator also displays comments and ratings from other users.

Customizable App Version Stages

Mobile Administrator now enables site managers to define custom app version stages, for example "Beta" or "Stable," and assign each app version to a stage.

Improved Build Job Dispatching

In previous releases, Mobile Administrator offered the ability to dispatch build jobs depending on build nodes. This capability is now more reliable. In addition, users can now determine why a build job has been dispatched, or not dispatched, to a certain build node.

Smart Category Support

Mobile Administrator now supports smart application categories, providing the ability to define filter strings to match application attributes.

Build/Test Developer Notifications

Mobile Administrator lets developers configure email notifications for successful or failed build jobs.

LDAP Integration

Mobile Administrator now supports linking to an LDAP service for user authentication and user/group management.

Push Notification API

Mobile Administrator now provides an API to send push notifications to mobile applications on iOS and Android through Apple Push Notification Service (APNS) or Google Cloud Messaging (GCM).

Import/Export of Applications

Mobile Administrator now supports importing and exporting single applications or groups of applications for backup and transfer purposes.

Site Configuration Assistant

A site configuration assistant is available to help administrators perform necessary additional setup steps after creating a new or an additional Mobile Administrator domain.

Direct Installer and Virtual Installer

Mobile Administrator can be installed on an existing Linux host using the direct installer script. Virtual installer supports the creation from scratch of a virtual machine running Mobile Administrator on any host operating system.

Application Binary Re-signing

Mobile Administrator now supports re-signing of mobile application binaries for iOS .ipa binaries, Android .apk binaries, and Windows Phone 8 .xap binaries.

Activity Stream to View Platform Changes

The Mobile Administrator web user interface contains a stream of significant user activities to make the discovery of new content easier for all users.

webMethods Mobile Designer

Gesture Support

webMethods Mobile Designer now provides basic left/right gesture support to transition from one view to another.

Push Notifications

Mobile Designer now includes support for push notifications for BlackBerry and Windows Phone platforms by way of the MIDP javax.microedition.io.PushRegistry class.

NativeUI Demo Created Using webMethods Mobile Development

Mobile Designer provides a second version of the NativeUI demo, named _NativeUIDemoX_. This version of the sample was created using webMethods Mobile Development and illustrates the capabilities of Mobile Development.

The _NativeUIDemoX_ sample project includes the information for the model, as well as business logic in the user space. Before this sample project can be used, the project must first be imported into Software AG Designer. Then, the Mobile Development "Generate Source Code" command must be issued to generate logic for the model and API. For more information about generating sources, see *webMethods Mobile Development Help*.

iOS 64-bit Device Support

Mobile Designer now includes support for 64-bit iOS devices and simulators.

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webMethods Mobile Development

webMethods Mobile Development is a new Software AG Designer plug-in. Mobile Development provides tools and features that developers can use to develop mobile applications. Mobile Development uses the principles of model view controller (MVC) architecture, which separates the user interface from the business logic and data.

Mobile Development Perspective

Mobile Development provides a dedicated perspective for mobile application development. This perspective is integrated into the rest of Software AG Designer, providing a seamless IDE experience for a mobile developer.

New Mobile Development Project Wizard

Mobile Development has a wizard that guides a developer through the process of creating a mobile project.

Mobile Explorer View

The Mobile Development perspective includes the Mobile Explorer view, which contains a subset of the information in the Package Explorer. Mobile Explorer provides a more-focused display of the files and folders used in a mobile project.

Outline Editor

The Outline Editor allows developers to visually develop their mobile applications. The editor displays a "tree" view (or outline) of the mobile application. The tree contains nodes for an application's window, views, and dialogs. Child nodes of a view or dialog list the user interface elements, such as buttons or text entry fields, that a view or dialog contains. Using the Outline Editor, developers can do the following:

- Visually add user interface elements and drag and drop them to change their positioning on the tree.

- Set properties for user interface elements. For example, a font color property can be set for a button to indicate the color to use for the text on the button.

- Create multiple views for an application.

- Add event listener and event action nodes to the tree. For example, a listener can be added that "listens" for when a user presses a button, and an associated action can cause the application to transition to another view.

XML to Java Code Generation

Mobile Development not only makes it easy for mobile developers to quickly and visually develop their mobile applications, but it also generates the Java code for the project from the visual model. This increases developer productivity by allowing the developer to focus on writing the core business logic that is required to power the application without having to write Java code for basic user interface controls.

Mobile Administrator Integration

Mobile Development provides mechanisms to easily integrate with webMethods Mobile Administrator. The New Mobile Development Project Wizard provides panels that a developer uses to create a new mobile project and specify the corresponding Mobile Administrator instance to use to build, test, and deploy the project.

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webMethods OneData

SQL Server Support

As of version 9.0 SP1, SQL Server can be used as a webMethods OneData repository, with limitations as indicated in the *webMethods Product Suite Release Notes* for versions 9.0 SP1 and 9.5. Some limitations in previous versions have been addressed in OneData 9.6, as follows:

- The Network Recursive Hierarchy now permits data browsing and core data management functionality. This capability is available from the top menu for both the primary and secondary axis.

- It is now possible to create new projects.

- Model Configurator and Data Manager both now support LOB data types.

Internationalization

The Data Steward functionality in the OneData user interface has been localized as of OneData 9.5 SP1. Users can choose their preferred language through the Preferences menu on the Menu toolbar.

Data Quality Improvements

The following improvements have been made with respect to data quality:

- **Scheduling batch cleansing and matching jobs.** It is now possible to use the Job Center to schedule batch cleansing and batch matching jobs. New functions are also available in APIs to trigger cleansing and matching jobs from external systems.

- **Integration with webMethods Locate.** OneData supports an additional data quality engine, webMethods Locate, which can be used in Cleanser projects.

- **Built-in matching engine.** OneData now includes an internal data matching engine, which can be used in Matcher projects.

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webMethods Optimize for Infrastructure

Universal Messaging Monitoring Enhancements

webMethods Optimize for Infrastructure now monitors webMethods Universal Messaging clusters, threads, and connections.

Improved Optimize Upgrade Experience

The Optimize for Infrastructure data migration framework has been automated in the following areas to simplify upgrade from versions 8.2.x, 9.0 SP1, and 9.5 SP1 to version 9.6:

- Support for Coherence clustering to reduce manual changes
- Support for SNMP agents to reduce manual changes

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webMethods Optimize for Process

Universal Messaging Clustering

webMethods Optimize for Process now fully supports Universal Messaging clustering.

Ability to Monitor Milestones

Process tracking functionality in Optimize for Process has been extended to support the analysis of process stages and milestones. Optimize for Process now provides the following information in the form of both EDA events and REST services:

- Stage started

- Stage completed

- Stage breached

Improved Visualization Using Software AG Presto

webMethods Optimize for Process includes new features that improve the visualization of processes. These features require a Software AG Presto license. The new features are as follows:

- **Process Overview Dashboard.** This dashboard provides a high-level view of any process, including intrinsic metrics, historical views, and normality comparisons. This view provides the ability to quickly find potential issues, obtain information about alarms and stage activity, and use email actions to share findings with others.

- **Process Instances Dashboard.** This dashboard provides a view of process activity and performance across a specified time range. A chart at the top of the dashboard displays historical information about process volume activity and cycle time performance. A table at the bottom shows individual process instances and offers the ability to send email notifications for individual process instances.

- **Stage Instances Dashboard.** This dashboard provides a view of stage activity and performance for a process across a specified time range. The top of the dashboard shows metrics about each stage, including information about activity, cycle time, and alarms. Selecting one or more rows in this table reveals information about individual stage instances and offers the ability to send email notifications for individual stage instances.

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webMethods Service Development

Local Service Development Certifications

Local service development has been certified to support the following Eclipse plug-ins:

- Subclipse 1.10.x

- Polarion Software Subversive SVN plug-in and connector 3.0.x

- Eclipse Git Team Provider 3.3.x

Publishing Documents as JMS Messages

webMethods Service Development now includes support to create a launch configuration that publishes an instance of an IS document type to a JMS provider. By using a launch configuration to publish the JMS message, developers can test the document type in a JMS solution without needing to build a service that sends the document type as a JMS message.

webMethods Trading Networks

Event Enablement

webMethods Trading Networks is now event enabled and can publish all events related to Trading Networks transactions and tasks to the event store. The run-time events are categorized into five groups: Transaction Events, Transaction Complete Events, Delivery Task Events, Service Execution Task Events, and User Initialized Task Events. Events of a particular group can be published by setting the corresponding property to True.

Asset Caching

Trading Networks can cache partner profiles, document types, document attributes, and trading partner agreements using Ehcache. Caching accelerates the processing of Trading Networks transactions by avoiding database lookups before fetching assets at run time.

webMethods Universal Messaging

Improved JNDI Usability

When JNDI connection factories are managed using webMethods Universal Messaging Enterprise Manager, the JMS URL can now be specified during connection factory creation. In addition, the URL of existing connection factories can now be viewed or changed.

webMethods Suite Integration

Universal Messaging support in various webMethods products has been further extended. For details, see the release notes for the various products.

Documentation

Significant changes to product documentation sets or to individual documents are described in the readmes for each product.

Cross-Product Documentation

A new PDF publication, *Working with the webMethods Product Suite and the Java Service Wrapper*, describes how various webMethods suite products that run on the Software AG Common Platform use the Java Service Wrapper, an application developed by Tanuki Software, Ltd.

Documentation Installation Changes

The documentation for webMethods is now combined with the documentation for Intelligent Business Operations. The installation node on the Software AG Installer is called "webMethods and Intelligent Business Operations Documentation." The default installation directory is now *SoftwareAG_directory*_documentation/webMethods_and_Intelligent_Business_Operations.

webMethods Command Central

The following documentation changes were made in this release for webMethods Command Central:

- *webMethods Command Central Help* now includes information about how to configure, manage, and administer Command Central and Platform Manager using the Command Central web user interface, command line tool, and REST API.

- *Getting Started with the Command Central REST API* is a new PDF publication that describes Command Central REST API services and resources.

webMethods Composite Application Framework

A new HTML-based publication, the *CAF Tag Library Reference*, is available with version 9.6. This VDL documentation package provides information and attributes about all of the available CAF controls in the tag library.

webMethods EntireX

Navigation within the *Common Integration Scenarios* section of the webMethods EntireX documentation has been significantly enhanced. High-level, illustrated scenario descriptions lead to more detailed sections below. New scenarios that cover integration with webMethods Integration Server have been added.

webMethods Mobile Administrator

A new PDF publication, *webMethods Mobile Administrator Installation Supplement*, has been added to provide preparation, installation, and uninstallation instructions for webMethods Mobile Administrator.

webMethods Mobile Support

The following new documents describe how to use webMethods Mobile Support and the Mobile Support Client to synchronize data between mobile devices and a backend database:

- *Developing Data Synchronization Solutions with webMethods Mobile Support* describes the Mobile Support components that make up the Mobile Support feature and explains how to configure Mobile Support. This PDF publication also explains how to develop mobile data synchronization solutions using Mobile Support's services and APIs.

- *webMethods Mobile Support Client Java API Reference* contains details about the Mobile Support Client API library.

webMethods Task Engine

webMethods Task Engine version 9.6 provides support for Mobile Task Integration (MTI), which enables a user to interact with MTI-enabled tasks running in the Task Engine from an iOS or Android mobile device. A separate PDF publication, *Software AG Designer Mobile Task Integration Supplemental Documentation*, is available from the documentation web site and with the documentation installation. This publication describes the procedures required to create a mobile task application in Software AG Designer, how to publish the application to Mobile Administrator, and how to connect to and interact with the mobile task application from a mobile device.

webMethods Universal Messaging

The following PDF publications were added for webMethods Universal Messaging:

- *Migrating from webMethods Broker to webMethods Universal Messaging* describes how to migrate the JNDI and JMS assets from webMethods Broker to Universal Messaging, and to configure Universal Messaging instead of Broker for webMethods messaging.

- *webMethods Universal Messaging Clustering Guide* describes how to configure Universal Messaging in a high-availability clustered environment.

Upgrade

Simplification of Side-by-Side Upgrades

Side-by-side upgrade has been greatly simplified by the replacement of many manual steps with automation via migration utilities. The migration utilities migrate configuration data and assets from the 8.2, 9.0, and 9.5 product releases to 9.6. Most migration utilities offer a migration that uses default settings, but a customized migration can be created and reused for multiple product installations. The migration utilities write detailed information to the command window and to a log file. The use of automated migration increases both the speed and accuracy of an upgrade.

Products that Offer Migration Utilities

In an earlier release, Integration Server offered a migration utility. In the 9.5 and 9.6 releases, other products have created migration utilities using the same migration framework. As of the 9.6 release, products that offer migration utilities are as follows:

- Integration Server

- Products hosted by Integration Server: ActiveTransfer, Business Rules, Communicate, Deployer, Mediator, Monitor, Trading Networks, adapters, and eStandards Modules

- Command Central and Platform Manager

- Event Driven Architecture

- Infrastructure Data Collector

- My webMethods Server

- OneData

- Universal Messaging

Products that Have Simplified Upgrade Using Other Methods

webMethods Broker and CentraSite have greatly simplified their upgrades. CentraSite provides export and import utilities that automatically migrate configuration data.

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webMethods Product Suite 9.7

Release Notes

Release 9.7 of the webMethods product suite introduces a launch of webMethods Integration Cloud, Software AG's cloud-based integration platform as a service (iPaaS) product. This release also enhances the capabilities of webMethods BPMS with the launch of webMethods Business Console and analytics tightly integrated with process actions. In addition, the launch of webMethods API-Portal enables organizations to take their API management initiatives externally to developers and partners. With these additions, Software AG will continue to provide the agility needed to fully power your digital enterprise.

Release Highlights

Integration

webMethods Integration Cloud is Software AG's public, cloud-based integration platform as a service (iPaaS). This offering provides hybrid integration capabilities as a service, including use cases that involve the integration of both SaaS-to-SaaS and SaaS-to-on-premises applications. Based on the highly acclaimed and mature webMethods Integration Server runtime, the Integration Cloud platform leverages webMethods AgileApps Cloud as well as additional product suite components, including webMethods CloudStreams, Software AG Command Central, and webMethods Universal Messaging, to provide distinct capabilities for the cloud service.

Architecturally, the cloud platform has been transformed into a multi-tenant environment that enables tenants to share a common development platform while providing tenant isolation, security, and privacy within their own separate execution instances. The hybrid architecture permits the on-premises Integration Server to securely connect to Integration Cloud for the purpose of synchronizing metadata to allow on-premises services to be called from the cloud.

The highlight of this offering is a device-friendly user interface that is built on the responsive web design framework. This interface features a guided development environment that walks users through the lifecycle stages required to graphically map, transform, and enrich their integrations.

Finally, the cloud service features built-in source code control and a unique deployment architecture for seamlessly moving integrations through the different lifecycle stages.

Business Process Management

webMethods BPMS has a new face with the release of webMethods Business Console. Built on the responsive web design framework, Business Console's device-friendly user interface provides role-based administration, monitoring, and social guidance for managing business processes and tasks. Business Console provides the following features:

- An inbox enables task workers to view and act on all tasks assigned to them. Inbox worklists can be customized to suit each individual's needs. The inbox can be personalized so that task workers can display a certain number of tasks, specify sort order, and search and filter inboxes using default or custom saved searches.

- Tight integration with a collaboration platform enables task workers to easily collaborate with process participants.

- A recommendation engine assists experts in guiding task workers to complete their tasks faster and more effectively.

webMethods BPMS is also introducing Closed Loop Analytics, which provides the ability to initiate process actions based on analytical insights. Users can set process milestones, goals, and associated Service Level Agreement (SLA) rule violations and then define KPIs that are based on goal, policy, or business issues. These SLA violations and KPIs can be tracked in webMethods Optimize and used to analyze trends that are above or below normal ranges. Out-of-the-box process dashboards (available through Business Console) monitor process and stage business process intrinsics and initiate escalation actions to address violations or breaches. The escalations are created using a pluggable action framework that is built using rules and provides the ability to plug in custom process, service, or workflow escalation actions.

API Management

With the release of webMethods API-Portal, organizations can now expose their own internal APIs to third-party developers and partners.

API-Portal is a fully customizable, self-service portal for exposing APIs. Built on the responsive web design framework, API-Portal's device-friendly user interface provides easy access to end-to-end usage analytics, built-in API testing, metadata-driven API documentation, and integrated collaboration.

API-Portal provides tight integration with CentraSite and webMethods Mediator, greatly simplifying the provisioning and the run-time policy enforcement of these APIs. The integrated, end-to-end API toolchain provided by the webMethods product suite allows APIs to be created and integrated with webMethods Integration Server, lifecycle-managed by CentraSite, protected and virtualized by Mediator and webMethods Enterprise Gateway, and monitored by Insight. As part of the Software AG API Management platform, API-Portal enables developers and partners to engage with, and contribute to, the new channels made available to them.

Cross-Suite Enhancements

The following webMethods products, which use Terracotta for caching, are now compatible with Terracotta version 4.1:

- CentraSite
- Software AG Command Central
- webMethods CloudStreams
- webMethods Enterprise Gateway
- webMethods eStandards Modules
- webMethods Integration Server
- webMethods Mediator
- webMethods OneData
- webMethods Optimize
- webMethods Process Engine
- webMethods Trading Networks

Contents

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

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

CentraSite

Improved Profile Configuration for Virtual Types

CentraSite now provides the ability to clone profile definitions from the base type when configuring virtual types. This functionality is available when the inheritance of profiles on the virtual type is disabled in the Control user interface.

Improved Handling of Virtual Types in Searching and Browsing

Search functionality can now be configured to ignore inheritance between the base type and the virtual types, which provides more flexibility and consistency in the way in which virtual types are handled during search and browse actions. This functionality is available when performing advanced configuration of asset types in the Control user interface.

Support for Updating to Deployed Virtual Services

CentraSite supports updating virtual services that are in a deployed state using a command line utility. This utility contains a mechanism to update the service WSDL and redeploy the service to all targets in a single operation.

64-Bit Support on Windows Platforms

The CentraSite registry and repository now run in a native 64-bit operation on Windows operating systems.

New Global Run-Time Policies

CentraSite now provides global run-time policies that apply to virtual services through a dynamic scope definition in the Business UI. Prior to version 9.7, CentraSite provided service-specific run-time policies. A new activity, Manage Governance Rules, provides this capability in the Business UI.

REST API Enhancements

The data model for REST APIs has been extended to allow the capture of additional metadata. APIs can now be described with multiple resources, HTTP access methods, parameters, usage examples, and error codes.

Integration with webMethods API-Portal

CentraSite is tightly integrated with webMethods API-Portal. This integration enables API providers to publish SOAP-based and REST-based API metadata from CentraSite to API-Portal and securely expose APIs to external developers, partners, and other consumers.

My webMethods Server

Enhanced Configuration through Software AG Command Central

Command Central can now be used to manage the configuration of My webMethods Server clustering, environment variables, memory, proxies, and users.

Increased Scalability of My webMethods Server Clusters

My webMethods Server now provides the ability to use Universal Messaging to handle state synchronization between cluster nodes. This allows much greater horizontal scalability than was achieved with the previous database-based mechanism.

Software AG Command Central

Additional Product Configuration

Software AG Command Central now supports the following additional configuration for webMethods products:

webMethods Business Rules

- License key

webMethods Integration Server

- Clustering
- Memory
- Proxy
- Users
- Web service endpoints
- wmPublic pub.file service permissions

webMethods Monitor

- My webMethods Server endpoint

My webMethods Server

- Clustering
- Environment variables
- Memory
- Proxy
- Users

webMethods Universal Messaging

- Clustering
- Memory
- Users

Universal Messaging Log File Access

Command Central now provides access to Universal Messaging log files. These log files can be viewed, searched, and downloaded centrally from the Command Central web user interface or by using command line tools.

Job Viewer

Command Central uses background jobs to perform various actions. The Command Central web user interface now provides the ability to view active and recently completed jobs.

Platform Manager Bootstrap

Installing products using Command Central requires the target machine to have Platform Manager installed. Platform Manager can now be remotely installed from Command Central as part of the process of adding a new installation to the landscape. If the target machine has SSH enabled, Command Central can perform the installation remotely. Otherwise, Command Central provides easy commands that can be copied to a command line on the target machine to perform the installation locally.

Fix Installation (Command Line Interface Only)

Command Central now provides the ability to install fixes on any installation managed by Command Central. This can be done using simple command line tools for browsing fixes, accessing readme files, and installing or uninstalling fixes.

Out-of-the-Box Templates for Typical Installations

Command Central offers several out-of-the-box templates when template-based provisioning is used to set up new installations. These templates assist with typical installations of Integration Server, Universal Messaging, My webMethods Server, webMethods Broker, and Terracotta.

Custom Attributes for Components

Custom key/value pairs can now be associated with components (instances) in Command Central. These key/value pairs can be used to tag instances with useful metadata, such as geographic locations and project names.

Attributes can be used with the command line tools to perform actions such as start/stop on multiple instances at once.

Note: Although attribute values can be viewed and edited in the Command Central web user interface, using them to perform operations is currently only possible from the command line tools.

Software AG Designer

Enhanced About Page

The About Software AG Designer page has been enhanced to display clear information about the installed products, organized in tabs according to the provider.

The Software AG tab displays all installed Software AG products by name, including version and fix number if a fix has been applied. In addition, the button tooltips display the Eclipse feature(s) related to a particular product.

Support for Mac OS X

Software AG Designer and specific plug-ins, including the Service Development and Mobile Development plug-ins, are now supported on Mac OS X versions 10.8 and 10.9.

Software AG Installer

Ability to Create Images for Multiple Operating Systems from a Single Script

A special type of script can now be created that provides the ability to generate images for multiple operating systems. The script differs from regular scripts in that, each time the script is run to generate an image, the installer connects to Empower and downloads the latest releases of the product at that point in time into the image.

Save Preferences

After the installer is run, any proxy settings and the last installation directory specified are now saved for the next run of the installer.

Software AG MashZone

New License Model

Previous versions of Software AG MashZone primarily used a named user model. MashZone now includes support for both a named user model and the concurrent licensing model.

SSO Plug-in Support

Additional support for SSO has been added in MashZone. For details about how to implement plug-ins to various SSO systems, see the ARIS documentation.

Additional Database Support

MashZone now supports Oracle 12c and Microsoft SQL Server 2012.

Software AG Presto

New Licensing Process

Software AG Presto customers will now need to install both a Presto and a Universal Messaging license when downloading and installing Presto. The product has a default 30-day license if the necessary license keys have not been obtained at the time of installation.

New Connectors for Apama and Terracotta

Apama events can now be directly consumed in Presto. After the Apama server is registered in the Presto admin console, messages will show as mashables in Presto. Additionally, the endpoint of a Terracotta Server Array can be registered to dynamically discover caches in BigMemory.

Shared Sign-On with My webMethods

Presto dashboards can be embedded in My webMethods, preventing the need to sign on twice. This feature can be seen in action when the full BPM suite is used.

Performance Enhancements

Query time for some queries in Presto has been reduced by more than 90 percent. In addition, the Enterprise Saxon parsing libraries have been added to Presto, which eliminates several bugs in EMML and boosts performance.

Localization Support

A new box on the log-in page provides the ability to set a language preference. English is the only available language in this release.

Presto Analytics Updates

Presto's RAQL analytics query language now supports cross data set functions. Note that some RAQL queries may not be backward compatible as a result of the syntax changes.

Dashboarding Enhancements

A new Line Chart has been added to Mashboard to facilitate the easy configuration of event data received by the Presto server.

Software AG Process Performance Manager

Data Analytics

It is now possible to use percentiles and standard deviation in data analytics realms. In addition, data analytics realms can now be persisted in the backend database.

Process Analytics

Software AG Process Performance Manager now provides a scheduling capability for automating import jobs. This functionality can be accessed in the Customizing Toolkit. Process Performance Manager now also offers a mechanism allowing for simple transfer of import customizations between PPM instances, for example from DEV to TEST environments.

Software AG Runtime

Several new security services and capabilities were added to the Security Infrastructure (SIN) of the Software AG Common Platform in this release. Products that run on the Common Platform can take advantage of the following enhancements:

- The way in which group names are resolved during LDAP authentication is more flexible. Incomplete user or group names (for example, a DN without a group, or a group without a user) are now permitted, and recursive searches can now be conducted upward as well as downward.

- Queries can be submitted to LDAP without the use of a password if the queries are submitted by a technical user. However, user and group information is fetched on behalf of the end user, not the technical user, and any permission restrictions imposed on the end user are respected when the request is made.

- The CentraSite and Command Central internal user stores can now be managed through Command Central.

webMethods ActiveTransfer Server

Asset Creation Using Services

webMethods ActiveTransfer now provides services to programmatically create all assets, including virtual folders, ports, post-processing events, scheduled events, and users.

Extensions to the Execute Event Service for Easier Programmatic Execution of Events

ActiveTransfer now provides options to pass a variety of parameters, including source file name, source location, target file name, and target location, directly when invoking the *executeEvent* service. This avoids the need to create multiple events, especially when transferring files between a large number of source and target file systems.

Filter Files Using Regular Expressions in Actions

ActiveTransfer now provides the ability to filter files using regular expressions based on filename, folder name, and protocol used for file transfers.

Flexible Processing of Actions in Post-Processing and Scheduled Events

ActiveTransfer provides additional flexibility during the processing of actions defined in post-processing and scheduled events. The output from an Integration Server service action can be used as input to actions that follow.

Improved Auditing of Event Actions and File Transfers

ActiveTransfer now provides a complete audit trail of all event actions executed as part of post-processing or scheduled events. The audit trail details are tracked as activities and can be searched in the Event Log screen to diagnose any problem areas. All file transfers (internal and external) initiated directly through post-processing and scheduled events can also be directly tracked using the File Transactions monitoring screen.

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webMethods API-Portal

webMethods API-Portal is a web-based, self-service portal that enables an organization to securely expose APIs to external developers, partners, and other consumers for use in building their own apps on their desired platforms.

API-Portal is a new offering from Software AG and is designed to integrate with, and complement, your CentraSite, webMethods Mediator, and webMethods Enterprise Gateway components. Adding API-Portal to an organization's webMethods stack helps the organization support its "Open API" initiatives while leveraging its current investments.

Self-Service Portal

API-Portal provides a consumer-centric UI for the discovery of REST and SOAP APIs. Consumers can quickly find the APIs they need using a simple keyword search. Alternatively, the API Gallery provides a list of all APIs that are currently available, grouped according to the published information.

Discovery of APIs is generally allowed anonymously (guest access). Consumers who are interested in using an API are then onboarded.

Highly Customizable User Interface

API-Portal provides a highly configurable user interface that enables providers to customize and brand the portal in accordance with their company's corporate identity. Providers can implement their own branding (logos, skins, corporate colors and fonts, and more); change layouts for the portal landing page, API gallery, and API details pages; and even customize the privacy and usage terms of their branded portal.

API-Portal includes a demo tenant, SAGTours, which illustrates how API-Portal can be rebranded and customized.

Portal Usage Analytics

For API providers, using the statistics that API-Portal collects helps organizations understand where their visitors are coming from, what pages gather the most interest, which APIs are popular, and which ones aren't. This information can be used to derive actions to improve the portal web experience and increase API adoption by developers. Two included dashboards (Global and User) provide usage information such as page views (by registered users versus anonymous) for a period of time, geographic distribution of users, and bounce rate (that is, hitting the landing page but not going deeper in the site).

Integrated REST API Testing

Using the provided code samples with their expected error/return codes and descriptions, developers can easily try out APIs they are interested in directly from within API-Portal and see first-hand how the API behaves. For example, developers can try test invocations with different input parameters and see the results.

When testing an API, developers can evaluate parameter types (Path, Query, and Header) and authentication methods (basic authentication, API key, OAuth2 credentials, or no authentication).

To see what an input message will look like, developers can test the input of request bodies to be sent to an API. If the REST definition contains sample messages in CentraSite, the first sample will be shown to give the consumer an idea of what an input message should look like.

Community Forum

A collaborative community environment in API-Portal allows API consumers to rate APIs and contribute to open discussions with other developers.

- API consumers can comment on and rate certain APIs and can read the comments and ratings of other users for that API.

- API consumers can receive administration messages about events.

- API providers can provide information about a certain API.

- Administrators can announce administration events.

- Administrators can moderate API streams.

- Coordinators (defined during group creation) can moderate the global administration group.

Provision of Access Tokens for API Usage

API-Portal integrates with capabilities in CentraSite and Mediator for access token provisioning (API keys and OAuth2 tokens) to allow consumers to request access tokens for consuming APIs in API-Portal.

API providers can decide, based on how they configure the APIs in CentraSite, whether approval is required before a consumer is given access to the API.

Approval workflows in CentraSite allow the provider to individually approve access token requests that developers submit from API-Portal. Access tokens are automatically provisioned to the webMethods gateway infrastructure.

Integration with CentraSite

API-Portal is tightly integrated with CentraSite, allowing publication of rich metadata about SOAP and REST APIs from CentraSite to API-Portal.

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webMethods BPMS

Business Console

webMethods Business Console provides dashboard functionality for business processes and tasks. Launched using My webMethods and built on the responsive web design framework, the Business Console user interface provides an optimal viewing experience on tablets.

Business Console provides the ability to do the following:

- Monitor and manage business processes and tasks in real time using a web browser.

- Manage task assignment and execution.

- Collaborate task execution and improve business processes.

- Identify user skills and endorse users for their skills.

- Network with task experts.

- View or perform context-based recommendations from task experts.

- View trending information related to business processes on social media.

- Change the Integration Server and webMethods Task Engine instances to which Business Console connects.

- Program user skill management.

- Manage task lists and view task details using an improved user interface.

Features available in Business Console are controlled by the functional privileges assigned to the user.

Process Engine

The following enhancements were made for Process Engine:

- **Process resubmission.** Process resubmission has been improved to make this task more intuitive and consistent. Process instance resubmission is now more useful as a means to correct unhandled failures, and execution semantics are more intuitive without the need to set various switches and options.

- **Independent process audit.** A new internal process auditing feature will handle all process auditing tasks, including situations in which Integration Server is experiencing a problem or the database is unavailable. In previous releases, auditing was handled by the Integration Server shared audit subsystem.

Task Engine

The following enhancements were made for Task Engine:

- **JMS scaling.** JMS message handling has been improved to assist in Task Engine scalability, including replacement of the RDBMS implementation of JMS with Universal Messaging. Advantages of this feature are that it 1) eliminates the top three RDBMS calls made by My webMethods Server to Task Engine, 2) replaces the previous Software AG proprietary JMS implementation, 3) eliminates "Task Out of Date" messages from Task Engine, and 4) adopts Terracotta as part of the standard webMethods clustering solution.

- **Reference architecture and implementation for scalable and high-performance task searches.** Task Engine can now search external data sources, enabling rapid, optimized searches over large amounts of extracted task data.

- **Ability to emit EDA events.** Task Engine can now act as an event source to enable consumers, such as business rules, CEP, and MashZone dashboards, to consume and act on task events. Task Engine emits all intrinsic (generic) events, such as start, update, and assign, which consumers can decide how to subscribe to and use.

Closed Loop Analytics

The following enhancements are introduced with Closed Loop Analytics:

- **Goals, milestones, and stage creation and analysis.** BPMS provides capabilities to create goals, stages, and milestones for processes. These can be created and edited from both Software AG Designer and the webMethods Monitor web interface. On the process execution side, Monitor provides new visualization for viewing the stage and goal progression of the process.

- **Dashboards.** BPMS provides dashboards for processes and stages, displaying information such as cycle times and alarms for stage breaches. The dashboards are available in Business Console. The dashboards seamlessly navigate to instance-level information in Monitor. Administrators can then take escalation actions by executing an out-of-the-box escalation process.

- **Escalation action and action framework.** The Closed Loop Analytics feature of the webMethods product suite offers the ability to trigger an escalation process when an error or other supported event occurs. Within this escalation process, a task can be created and assigned to one or more My webMethods Server users, enabling those users to take action in response to the escalated event.

As an action framework, Closed Loop Analytics provides a predefined business rule that can be triggered by an escalation event to start an escalation process. The predefined rule can be used as is, or it can be replaced with a custom rule and action.

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webMethods Broker

Migration Utility

webMethods Broker offers a new command line utility to migrate JNDI assets and JMS assets, such as JMS queues and topics, from Broker to webMethods Universal Messaging. This migration utility provides the ability to move most of an organization's assets automatically.

Improvements for Default Settings

The default values for settings such as cache, storage file size, parallel channels, and file settings have been adjusted to reflect customers' current common settings.

Monitor Authentication

Broker Monitor now connects to Broker Server only after Broker Server authenticates the requesting Broker Monitor, thus providing additional security for Broker Server.

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webMethods Business Rules

"In Effect" Dates and Times for Rules

The Rules Management Console now offers the ability to specify the date and time that a rule or a decision table should be in effect.

Smart Cut, Copy, and Paste in Rules Designer

When editing decision tables in Designer, users can now use the new cut, copy, and paste function to copy cells, columns, and lines and either paste them within the same decision table or into another decision table. When pasting the cells, Designer automatically identifies the compatibility of the action and adjusts the data types, if necessary.

Rule Verification Enhancements

Rule verification now also includes redundancies and missing rules. A redundancy warning is reported if parts of one rule, rules of one decision table, or rules of several decision tables within one rule set are dispensable. A missing rule warning is reported if a probable combination of conditions is not explicitly tested in a decision entity or a rule set.

Filter for Decision Table Columns

The Rules Management Console now offers the ability to filter columns in decision tables in order to better focus on the columns of interest.

Rule Reordering

The Rules Management Console provides the ability to change the order of the rules in a (sequential) decision table.

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webMethods CloudStreams

Complex Query Support in the Salesforce Partner SOAP API Connector

The webMethods CloudStreams cloud connector service wizard has been enhanced to provide support for complex queries with relationships.

Community-Based Connectors

CloudStreams connectors are available for download from the Software AG "TECHCommunity" website, located at:

http://techcommunity.softwareag.com/ecosystem/communities/public/webmethods/products/cloud streams/downloads/

Support for Editing Connection Alias Parameter for a Cloud Connector Service

CloudStreams supports the ability to change the connection alias parameter for a pre-built cloud connector service.

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webMethods EDA Enablement

Extensions to NERV Functionality

NERV has been extended to support event and event schema parsing, as well as resolution of component schemas in the Event Type Store. The EDA Orchestrator, where this functionality was previously available, has been removed.

Deployment of Custom Endpoint Binary Bundles and Endpoint Instances

Custom endpoint binary bundles can now be deployed separately from endpoint instance bundles or the routes that use them. The respective endpoint instance bundles and routes can then be deployed later.

webMethods Enterprise Gateway

Mobile Data Synchronization Enhancements

The Mobile Data Synchronization framework allows developers to quickly author offline mobile applications using the capabilities of this framework. This framework has been enhanced to provide support for the following additional mobile data synchronization scenarios:

- webMethods Mobile Support now enables developers to author a simple mobile sync component for use cases where the mobile sync component has direct access to the backend data and does not need to store backend data in the sync store.

- Mobile Support now works with Integration Server clustering.

- Developers can now author a mobile sync component that can take input from the mobile application and run user-specific queries against the backend data.

Support for Running Mixed Enterprise Gateway and Integration Server Environments

The dependency and tight coupling between webMethods Enterprise Gateway and webMethods Integration Server versions have been removed. Enterprise Gateway and Integration Server versions can now be mixed and matched, beginning with Enterprise Gateway 9.7. Enterprise Gateway 9.7 is certified to work with all Integration Server versions starting from version 9.5.1.

Support for Preventing SQL Injection Attacks

SQL injection is one of the most common attacks carried out on APIs exposed over the Internet. Enterprise Gateway now supports the use of a SQL injection filter. With this filter, Enterprise Gateway can check incoming request parameters and payload against a list of known database-specific SQL injection rules or standard SQL injection rules. If the SQL injection filter identifies an offending request, Enterprise Gateway can be configured to reject such requests and alert the administrator.

Support for Integration with External Virus Scanning Tools

Enterprise Gateway supports integration with external virus scanning tools using the ICAP protocol. The antivirus scan filter in Enterprise Gateway can perform a virus scan on incoming request payloads by integrating with a known virus scanning tool. If the request payload contains malicious content, Enterprise Gateway can be configured to reject the request and alert the administrator.

webMethods EntireX

COBOL Enhancements

This release of webMethods EntireX includes the following enhancements for COBOL:

- **COBOL Mapping Editor.** The COBOL Mapping Editor has been redesigned with a workflow-oriented user interface and the look and feel of the Natural Mapping Editor. Extracting the COBOL interface and designing a single or multiple IDL interfaces is now accomplished on one screen, which means that both sides of the extraction (COBOL side and IDL side) can be controlled at any time. The new function COBOL > Modify Interface and COBOL > Extract further Interface, in the extended context menu of the IDL file, provides the ability to refine the extractions so that work can be paused and continued later. Many other improvements have been made, including the ability to switch COBOL programs, find text in COBOL source, set constants for level-88 fields, and specify IDL name prefix for FILLER.

- **Long numeric data types.** The maximum number of digits for IDL data types N, NU, P, and PU has been increased. The concrete length depends on the maximum supported by both endpoints.

- **Client-side server mapping.** Server mapping can now be deployed on the client side, whereas in previous releases server mapping was only permitted on the server side. In many cases, client-side server mapping is much more convenient.

EntireX Adapter for IS Enhancements

This release includes the following enhancements for EntireX Adapter for IS:

- **Selective extraction from IDL.** The EntireX Workbench IDL Extractor for Integration Server previously extracted an IDL file for all services of an Integration Server package. A new built-in service now provides the ability to extract an IDL file only for specified Integration Server services. The new built-in service is available in the WmEntireX package.

- **Support for security exits.** Adapter services for RPC connections now support user-written security exits.

Application Monitoring

Application Monitoring is an EntireX feature that provides the ability to monitor the response times in distributed applications and to monitor certain error situations. The EntireX Application Monitoring Data Collector collects the response time data of each involved software component of selected synchronous EntireX RPC services. The Application Monitoring Data Collector stores the KPI values in CSV (comma-separated values) files that can be processed by any tool that supports CSV files. A sample MashApp is also provided.

Infrastructure Monitoring with Command-Line Scripts

EntireX has been enhanced with a set of Windows command-line scripts for common administration tasks that simplify everyday work. These scripts provide the ability to do the following:

- Show details of a specified or default broker and the active external services registered to it.

- Monitor, at a specified interval, the standard broker, registered services, and clients that call the broker. The output is written to a CSV file.

- Check whether all brokers and services of a defined application are active. Checks are performed to determine whether a specified service is registered with the broker, and an RPC ping command is used to verify that a specified server can be called.

EntireX Broker Support for 64-Bit Addressing Mode

EntireX Broker under z/OS now runs in 64-bit addressing mode (AMODE). Earlier versions ran in 31-bit mode, which meant that up to 2 GB of storage locations could be addressed—a limit referred to as "the bar." The 64-bit mode raises EntireX Broker above the bar so that up to 16 EB (exabytes) can be addressed. This increase in capacity provides the ability to send and receive an almost unlimited number of messages. The maximum size of a single message is still limited to 2 GB.

With the exception of the PSTORE-VERSION attribute, the attribute file can remain unchanged for the 64-bit Broker.

All user exits for conversion and translation run unchanged in 31-bit mode. However, if an organization has written custom security exits, these exits must be 64-bit–enabled.

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webMethods Integration Cloud

webMethods Integration Cloud is a new offering from Software AG. A cloud application hosted and operated by Software AG, Integration Cloud allows subscribers to connect to and configure integrations between cloud applications (for example, Salesforce.com and ServiceNow) and on-premises applications (for example, SAP).

Multi-Tenant Hosted Cloud Service

Integration Cloud is a multi-tenant cloud service. Multiple tenants develop integration flows using a shared, web-based user interface built on the responsive web design framework. The tenants also share the development execution instance with other tenants. Each tenant receives a separate production execution environment that provides complete separation between each tenant's services and data. The tenant does not need to know the IP address of the execution instance because the intelligent routing layer in Integration Cloud routes the tenant's request to the correct execution instance.

Tenant Registration and User Management

Tenant registration and self-service (user and access profile management) is a key capability of Integration Cloud. Tenants can register with the Integration Cloud service using the public website. Once the tenant account is provisioned, the tenant administrator can log in to the Integration Cloud website and create additional users and access profiles. Administrators can use roles to restrict user access to Integration Cloud features. Integration Cloud permits new users to register for free and provides a one-month subscription to test drive the features of the service.

Application Management

Integration Cloud provides out-of-the-box connectivity to various SaaS applications, such as Salesforce, ServiceNow, and StrikeIron. These application connectors, along with prebuilt operations, are loaded into Integration Cloud and are available for tenant reuse. Tenants can create accounts and additional operations for each application. The application management area also displays on-premises applications, accounts, and operations.

Stage Management

Newly registered tenants receive access to a single development environment, called a "stage" in Integration Cloud terminology. Tenants can create up to four stages (environments) depending on their license. Tenants can promote integration flows and accounts from one stage to another. Stages allow tenants to implement a rigorous software development lifecycle process in the cloud.

Responsive Browser-Based User Interface for Citizen Developers

Integration Cloud features a user interface that is built on the responsive web design framework and created purposely for citizen developers. This interface can be accessed using any modern web browser and supports guided development using wizards for creating integration flows and both cloud and SaaS operations. Because the interface is built using standards-based HTML5, it is also accessible from an iPad and other mobile devices.

Support for Mapping, Transformation, and Enrichment

Mapping, transformation, and enrichment are strengths of the on-premises webMethods integration platform. This functionality is now available to all Integration Cloud users. Integration Cloud provides out-of-the-box support for transformers, which includes drag-and-drop transformation and mapping capability. In addition, citizen developers can call cloud and SaaS operations for transformation and enrichment.

On-Premises Connectivity

Integration Cloud customers can connect their on-premises Integration Server infrastructure with their Integration Cloud instance to support integration scenarios between cloud and on-premises applications. Administrators can define on-premises applications, operations, and accounts using the Integration Server Administrator interface. These definitions (metadata from on-premises services) can then be uploaded to Integration Cloud where they are used to build cloud to on-premises integration flows. Connectivity between on-premises Integration Server and Integration Cloud is made secure by the Universal Messaging layer, which initiates the connection from the on-premises Integration Server to the Integration Cloud, thereby removing the need to open firewall ports on premises.

Seamless Operations

Integration Cloud is fully managed and operated by Software AG. Integration Cloud provides the ability to do the following:

- Search audit logs to get detailed information regarding the execution of various integration flows.

- Search for failures and identify potential causes so they can be corrected.

- Schedule the execution of various integration flows or execute integration flows on demand.

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webMethods Integration Server

NTLM Token Support

The NTLM (Windows NT LAN Manager) authentication support in webMethods Integration Server allows consumer services hosted in Integration Server to access services that support NTLM authentication. This is particularly useful for accessing .NET services hosted on the Windows platform.

Connectivity with webMethods Integration Cloud

webMethods Integration Cloud is Software AG's new integration platform as a service (iPaaS) offering. Integration Cloud customers can connect their on-premises Integration Server infrastructure with their Integration Cloud instance. To achieve this, Integration Server now provides built-in functionality to connect and share on-premises metadata with the customer's instance running on Integration Cloud. With this feature, administrators can set up an account with Integration Cloud and then define applications by selecting on-premises services. These application definitions can be shared with the Integration Cloud instance.

Enhancements for Assigning User-Defined Prefixes during Creation of Web Service Descriptors

When consumer or provider Web service descriptors are created from WSDL documents, Integration Server provides support for specifying user-defined namespace prefixes to be used instead of the prefixes in the XML Schema definitions associated with the WSDL document.

Additional Integration Server Configuration Using Software AG Command Central

Administrators use Command Central to centrally manage and monitor their webMethods environment. With this release, administrators can centrally configure additional Integration Server features using Command Central. The exact configuration parameters supported in this release can be found in the Command Central release notes.

Display of Installed Security Providers on the Integration Server "About" Screen

Integration Server displays the installed security providers on the Integration Server Administrator "About" screen.

Universal Messaging Support Added for Duplicate Detection for webMethods Messaging Triggers

webMethods Messaging triggers subscribing to document types configured to use webMethods Universal Messaging as their messaging provider can now be configured for duplicate detection using redelivery count, document history database, and document resolver services.

Enhancements to Provider-Side Filtering when Using Universal Messaging as the Messaging Provider

When Universal Messaging is the webMethods messaging provider, webMethods messaging triggers that receive documents from Universal Messaging can save a filter for the contents of the message body. Previously, filters saved on the provider were applied only to the message properties header. Now, Universal Messaging can filter the contents of the properties header and the body of the message. By creating provider filters for the body as well as the header of the document, triggers can be more selective about which documents they receive.

Universal Messaging Support for Request/Reply Services

The following request/reply services in the WmPublic package can now be used when Universal Messaging is the messaging provider:

- pub.publish:publishAndWait

- pub.publish:reply

- pub.publish:waitForReply

WmPKI Package Deprecation

The WmPKI package has been deprecated.

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webMethods Mediator

Run-Time Aliases

webMethods Mediator now supports the use of replacement tokens (aliases) for defining the properties of endpoints and routing targets that are automatically resolved during deployment. This simplifies deployment of virtualized services to multiple stages.

EDA Enablement

Mediator can now fully leverage EDA/NERV for communication of run-time events and metrics to other webMethods suite products.

Support for REST API Enhancements

Mediator supports the extended metadata model of virtual REST APIs to allow virtual REST services with multiple and nested resources.

webMethods Mobile Administrator

Detailed Push Notification Delivery Log

webMethods Mobile Administrator displays a list of recently submitted push notifications for each application, with delivery and error details that facilitate the debugging of push notifications.

Log Files and Maintenance Tasks Available in the Web User Interface

In the maintenance menu, a list of processes related to Mobile Administrator is available to verify that all parts are operating correctly. In addition, server logs can be viewed and downloaded from the web user interface and used to debug API requests and overall function of the server.

Mobile Administrator Included in Software AG Installer

Mobile Administrator can now be found in the Mobile section of the Software AG Installer. The installer copies Mobile Administrator setup files to the specified target directory

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webMethods Mobile Designer

Windows 8 Support

The entire Mobile Suite, including webMethods Mobile Designer, now supports the development of applications that run on Windows 8 for x86-based tablets, in addition to the existing support for Windows RT for ARM-based tablets. As in Windows RT, only Metro or Windows Store applications are supported. Desktop applications are not supported.

Logging API

Mobile Designer now supports local logging to the device console, depending on the target operating system. Mobile Designer provides a java.util.logging API that is based on the Java Logging API standard. The java.util.logging package that Mobile Designer provides contains classes and interfaces that are based on the Connected Limited Device Configuration (CLDC) 8 standard.

Support for the HTTP PUT and DELETE Methods

Previous releases of Mobile Designer supported the use of the HTTP methods GET and POST. The HttpConnectionHandler class has been extended to allow for the use of the PUT and DELETE methods as well.

JSON/Base64 Library Included with Mobile Designer

Base64 and JSON libraries have been added to Mobile Designer, making it unnecessary to directly include them in mobile application projects.

webMethods Mobile Development

Palette for "Drag and Drop" Application Development

In Software AG Designer, the Mobile Development perspective now includes a palette in the Outline Editor (application model) that can be used to drag and drop controls, components, and predefined templates onto the application model. The palette, which currently has seven categories, can be collapsed and expanded.

Some palette entries display wizards when palette items are dropped onto the outline. The wizards provide the ability to easily create complex structures of controls or to customize controls. Sets of controls are typically created as a new subtree in the application outline.

Data Sources, Bindings, and Transformations

Support was added for global data sources that are available across multiple views. Data sources are managed in the Application Controller implementation of the mobile application project. Additionally, data bindings and data transformations make the use of data sources much more powerful.

OPL/Task Client Support

A new Task Client palette entry provides the ability to add Task Client services to an application. The created resources use webMethods Task Engine RESTful web services.

SyncComponent (Offline Data Synchronization Integration of Mobile Support)

The Mobile Support SyncComponent was added to the palette to support offline work with data. SyncComponent can be configured by using the application model and provides a continuous connection to a specific Integration Server. SyncComponent synchronizes local and remote data after a configurable update interval and is implemented on top of the Mobile Support package. Local data is stored on the device through the use of a SQLite database.

Web Service Support

The palette allows the addition of WSDL files to the application model. Mobile Development and Mobile Designer automatically generate Java code to access this web service (similar to wscompile).

webMethods OneData

New User Interface Preview

This release of webMethods OneData provides a preview of the next-generation user interface for browsing data in the Advanced Parent-Child level hierarchy. The preview functionality provides the ability to view, sort, paginate, and filter the data.

Data Quality Functionality Enhancements

OneData now includes a configuration screen that provides the ability to create data matching rules, set priorities for rule execution, and configure and maintain rule-project relations when using the internal matching engine. It is now possible to have multiple matching rules assigned to one consolidation object.

SQL Server Support

As of version 9.0 SP1, SQL Server can be used as a OneData repository, with limitations as indicated in the webMethods Product Suite Release Notes for versions 9.0 SP1, 9.5, and 9.6. The following limitations from previous versions have been addressed in OneData 9.7:

- The Network Recursive Hierarchy now also permits auxiliary data management functionality, hooks execution, and use of the supertype–subtype construct.

- It is now possible to create and use Process Flow interactive hooks.

- A Conceptual Object export job is now available.

- Time-bound and Archive Snapshot objects are now supported.

Hooks Scheduling

In addition to post-action or pre-action hooks and on-demand manual triggering of hooks, OneData now provides the ability to define schedules for hooks execution using the Job Center.

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webMethods Optimize for Infrastructure

Terracotta Monitoring

webMethods Optimize for Infrastructure can now monitor Terracotta installations by monitoring and exposing the Terracotta CMP API. This feature provides the ability to obtain a baseline of overall Terracotta performance and observe when behavior is abnormal or hits specific usage characteristics.

Integration Server Monitoring of JDBC Pools

Optimize for Infrastructure has further enhanced its Integration Server monitoring capabilities by adding the ability to monitor JDBC pools.

Integration Server Delta KPIs

New KPIs were added to calculate the change between the last and the current readings.

webMethods Optimize for Process

Enhanced Process Tracker Scalability

Process Tracker load management has been enhanced to substantially improve throughput. As a result, Process Tracker can now process more than one million process control operations per hour.

New APIs for Gaining Access to Optimize Information

APIs were added to webMethods Optimize for Process to allow programmatic access to Optimize information. These APIs include the following:

- Open Count for Time
- Open Process Count for Time Range
- Process Errors
- Process Metrics Data
- Process Model List
- Process Steps for Model
- Stage Cycle Time
- Stage Definitions
- Stage Errors
- Stage Instances
- Stage Instances For Process Instance
- Stage Volumes (stages are a grouping of process steps)
- Step Instances

webMethods Service Development

Mac OS X Support

webMethods Service Development is now supported on Mac OS X versions 10.8 and 10.9.

Usability Improvements

The following usability improvements were added:

- A new Comments tab provides the ability to enter instructions on the usage of an element, descriptive comments, or notes.

- New keyboard shortcuts provide the ability to navigate the Service Development perspective and perform actions such as locate and open elements, run services, and collapse or expand tree structures.

- A new option provides the ability to configure Designer to show or hide the "No input" dialog box when Designer runs a service that does not have input parameters.

- The Service Development perspective is redesigned so that views that are unrelated to service development, such as Bookmarks, Task, Outline, and Problems, are not displayed by default.

- A new Open Integration Server Element dialog box provides the ability to quickly search for an element on Integration Server.

Run/Debug Preferences

A new run/debug preferences page contains a Flow Annotation Types preference that can be used to configure how a selected annotation appears in flow steps.

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webMethods Trading Networks

B2B Analytics

webMethods Trading Networks provides a variety of charts and dashboards for performing deep targeted analysis on Trading Networks partner transactions. These charts and dashboards provide an excellent snapshot of current transaction volume trends that indicate top-tier and bottom-tier partners based on business activity. The charts provide the ability to drill down to gain additional insight into the underlying data. The data in any of these charts and dashboards can be exported to CSV files.

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webMethods Universal Messaging

C++ Client Improvements

New features have been added to the existing C++ client for webMethods Universal Messaging to make the client more robust and improve its performance.

Brokerless API Renamed to umTransport API and Supported in C++

The existing Brokerless API for lightweight client–client communication has been renamed to umTransport API.

This umTransport API is now available for C++ clients, in addition to the existing support for Java clients. The C++ does not presently support asynchronous communication between clients and only supports TCP sockets and TCP secure sockets as a communication transport.

Performance Improvements

The following enhancements were made to improve performance:

- New Paged channel types provide the ability to use high-speed, off-heap memory that stores events in persisted memory mapped files. This new channel type increases performance over other persisted channel types.

- JavaScript drivers have benefited from various performance improvements.

- When joining channels, it is now possible to manage the interest within the channels for sending and receiving events as part of the join. This can reduce the amount of bandwidth used by only forwarding events from channels where there are subscribers to a channel of the same name on the remote realm or cluster.

Protocol Buffers Administration API

A new Java API provides the ability to manage the Protocol Buffer (Protobuf) configuration on the server. Integration Server uses this API to synchronize document types and support server-side filtering.

ninistancemanager Command Line Tool No Longer Installed within the Default Instance

The ninstancemanager tool is now installed separately from the default instance during installation. This provides more flexibility during installation and removes the dependency that the initial default instance must always be present.

Additional Support for Universal Messaging in Command Central

The following Universal Messaging administration tasks can now be performed in Command Central:

- User management
- Cluster configuration
- Memory configuration settings
- Log file access

Documentation

Cross-Component Documentation

The product readme sections for Fixes; Other Resolved Issues; Documentation and Terminology Changes; and Added, Removed, Deprecated, or Changed Items, BIS, Parameters, and APIs have been made cumulative to make upgrading easier. Specifically, these sections now include information for release 9.6 as well as 9.7. In future releases, the relevant information will continue to be added to these sections in the readmes to continue this ease-of-use improvement.

ActiveTransfer

In the PDF publication *Managing File Transfers with webMethods ActiveTransfer*, the contents of Appendix A, Built-In Services, and Chapter 14, Using the Web Client, were moved to separate PDF publications. The new PDF publications are as follows:

- The *webMethods ActiveTransfer Built-In Services Reference* PDF publication covers the public APIs that were available in the 9.6 release, as well as the new asset management APIs and the document types referred to by these new APIs.

- The *webMethods ActiveTransfer Web Client User's Guide* PDF publication contains information to assist end users in using the ActiveTransfer web client.

Business Console

A new PDF publication, *Working with webMethods Business Console*, describes how to use Business Console to administer and manage business processes. This guide is for administrators and other users of Business Console.

Command Central

The following changes were made to the Command Central documentation in this release:

- The webMethods Command Central online help is renamed to *Software AG Command Central Help*.

- The *Software AG Command Central Help* PDF publication replaces *webMethods Command Central Help* and *webMethods Command Central and Platform Manager Command Reference*.

Composite Application Framework

Documentation for the following items has been removed from the CAF Development Help and added to the HTML-based publication *CAF Tag Library Reference*:

- User Interface Controls Reference

- Converters Reference

- Validators Reference

- CAF UI Controls Details Properties Reference

The *CAF Tag Library Reference* now provides information and attributes about all of the available CAF controls for both JSF 1.x and 2.x applications.

Integration Cloud

The new context-sensitive *webMethods Integration Cloud Help* describes how to use Integration Cloud and its features.

Upgrade

Platform Manager Upgrade from 9.6 Automated

Platform Manager data can now be automatically migrated through the use of the new Platform Manager migration utility.

Part of Infrastructure Upgrade from 9.0 Automated

Some Infrastructure data can now be automatically migrated through the use of the Infrastructure migration utility.

Integration Server Migration Utility Enhanced to Migrate from Specific Instances

The Integration Server migration utility now supports multi-instance functionality by offering the ability to migrate from specific 9.6 instances to specific 9.7 instances.

OneData Migration Utility Supports Use of Zip File

A zip file of the old OneData installation can now be used as the source instead of having to copy the installation to the 9.7 machine. In addition, the OneData migration utility now automatically recognizes the source release number so the release number does not have to be supplied.

Infrastructure Data Collector Migration Utility Migrates All Data and Supports Use of Zip File

The Infrastructure Data Collector migration utility now automatically migrates all product data. In addition, a zip file of the old Infrastructure Data Collector installation can now be used as the source instead of having to copy the installation to the 9.7 machine.

Universal Messaging Migration Utility Bundled with Universal Messaging Product

The Universal Messaging migration utility now comes with the Universal Messaging product. The selection of a separate node on the Software AG Installer product selection tree is no longer needed to obtain the migration utility. (Note: The migration utility for migrating from webMethods Broker to Universal Messaging remains separate from the Universal Messaging product.)

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WEBM-RN-97-20141015b

webMethods Product Suite 9.8

Release Notes

Release 9.8 of the webMethods product suite represents a significant step towards the establishment of Software AG's Digital Business Platform. In addition to expanding the webMethods cloud offerings, this major release improves developer productivity, supports key emerging standards, and makes business users more productive while also helping them make better decisions through improved analytics. Our goal with this release is to provide you with the agility to fully power your digital enterprise.

Release Highlights

Integration

This release of the webMethods suite includes many integration enhancements. It includes advances in cloud integration, declarative template-based provisioning, ODATA support, hot deployment capabilities, advanced API management, and much more.

The key features include:

- webMethods Integration Cloud now enables the development of simple multi-step orchestration flows between any SaaS or on-premises applications, providing support for more complex integration patterns.

- webMethods Integration Server now supports the Salesforce Lightning Connect standard, which is based on OData. This new standard enables applications hosted on Force.com to easily connect and access data from external sources using a simple point-and and-click model.

- webMethods Integration Server offers native support for OData version 2.0. Native OData version 2.0 support enables a REST-based protocol for CRUD-style operations (Create, Read, Update and Delete) against resources exposed as data service.

- Software AG Command Central allows provisioning of complex multi-server environments using declarative templates. Users can define environment-specific server mappings and configurations with the simplest possible set of configuration files.

- Software AG Command Central encrypts passwords in templates using a secure shared-secret. This allows passwords to be stored and applied without the risk of being compromised by anyone who has file system access to the templates.

- webMethods Integration Server provides support for the hot deployment of packages, allowing Integration Server administrators to quickly update packages without stopping the server.

- webMethods Universal Messaging now enables the configuration of Zones. Realm servers in the same Zone inform each other about local subscribers to channels/topics, so that other members of the Zone can forward messages to subscribers as needed.

- webMethods OneData's next generation user interface (New UI Preview) now includes new data detail views and advanced filtering.

- webMethods Application Platform now gives users the ability to develop and integrate application logic written in Java into the webMethods platform without proprietary webMethods APIs. Users can utilize popular Java development models (such as POJOs or Spring Beans) as the application logic, and can then run them directly within a webMethods runtime container, removing the need for a third-party application server.

- webMethods Trading Networks provides a variety of charts and dashboards for performing targeted deep analysis on partner transactions. It also features enhanced usability in a variety of areas, including improved keyword search of Trading Partner Agreements (TPAs).

- Terracotta monitoring in webMethods Optimize for Infrastructure includes support for SSL encryption in the discovery of Terracotta Server Arrays (TSAs), detailed Cache Manager and Cache monitoring, and delta readings to cumulative key performance indicators (KPIs).

Business Process Management

The webMethods Business Process Management (BPM) Suite adds more capabilities to the Business Console to improve usability and customization while also providing businesses with the visibility and performance they need to improve decision making.

The key features include:

- Business Console displays user-aggregated data dashboards that allow process and stage level activity, along with better process administration.

- Monitor provides process predictions by showing the percentage of completion, estimating when a process might complete, and calculating the average cycle time for running instances.

- Monitor also features enhanced monitoring of individual instances of a dynamically referenced process.

- Open CAF provides a new approach to user interface development in My webMethods Server (MWS). It gives developers maximum flexibility in creating rich, interactive user interfaces, without being constrained to the proprietary webMethods Composite Application Framework (CAF) framework.

- webMethods Optimize for Infrastructure can now discover and monitor Presto servers.

- webMethods Deployer now allows users to roll back any previous deployment of webMethods Business Rules assets from a Rules Engine on Integration Server. It also allows users to browse and delete existing assets from a My webMethods Server.

API Management

This release of webMethods API Management platform contains significant enhancements to CentraSite Mediator. This release also introduces API Cloud Managed Services, which provides hosting of API-Portal within webMethods Cloud, enabling customers to expose their APIs to internal users, third-party developers, and partners.

The key features include:

- Support for user onboarding that leverages existing social network accounts.

- Administrators can configure private API communities to which users can be assigned or invited.

- Administration user interface allows customization of portal page content as the first level of self-service.

- Individual tenant backup and restoration of API-Portal and collaboration.

Cross-Suite Enhancements

webMethods product suite 9.8 provides several enhancements across various products. Listed here are a few highlights:

- webMethods 9.8 products support Java 8.

- webMethods 9.8 products support SQL Server 2014 for webMethods database schemas.

- webMethods suite 9.8 installation is supported on Red Hat Enterprise Server Linux version 7.

- Eclipse version for Software AG Designer and its plug-ins have been upgraded to version 4.4.

Contents

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

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

Application Platform

Develop Application Logic Using Standard Java Frameworks

Application Platform provides users the means to develop and integrate application logic written in Java into the webMethods platform without proprietary webMethods APIs. Also, users can now employ popular Java development models (such as POJOs or Spring Beans) as the application logic and run them in a webMethods runtime container. Consequently, there is no need for a third-party application server.

Integrate with Integration Server Services

Application Platform services can benefit from bi-directional integration with Integration Server service, such as Flow service or adapter services.

- Use simple Java annotations to expose Application Platform services within Integration Server and make them callable from Flow services, triggers, or web service connectors.

- Automatically create Java class wrappers for Integration Server services to make them callable from the Application Platform service, without using Integration Server's proprietary client APIs.

Deploy into the Same Container

Application Platform services run in the Integration Server container. Use Asset Build Environment and Deployer to build and deploy Application Platform services from one environment to another.

CentraSite

Importers for RAML and Swagger API Documentation Formats

The CentraSite Business user interface supports direct importing of REST APIs that are described through RAML and Swagger API documentation formats. CentraSite 9.8 supports RAML version 0.8 and Swagger version 2.0.

Scheduled Report Execution

CentraSite provides default reports that API-Portal consumers can use to monitor their API usage for a specific duration. Reports can be scheduled on a regular basis (daily, weekly, monthly) to automatically generate and distribute reports to the e-mail addresses that API-Portal consumers provided during registration.

Gateway Management in CentraSite Business UI

The unified concept of *Gateways* in CentraSite Business user interface replaces Target Management in CentraSite Control. Using gateways, CentraSite users can create Mediator and API-Portals instances in the Business user interface. Additionally, gateways provide a fine-grained security model that helps control which users can view and use gateways for publishing.

Archive Import for Business User Interface

CentraSite Business user interface offers a new "Archive Import" option to import assets by importing the archive file (ZIP file) to which the assets were previously exported. The Create Asset Wizard provides access to this new feature.

Retry Mechanism for API-Portal Communication

CentraSite provides a configurable retry mechanism that ensures the delivery of messages from CentraSite to API-Portal, and protects requests from transient failures that might occur while messages are being sent.

Unified Publishing for API-Portal and Mediator

The CentraSite Business user interface unifies the previously available "Publish" and "Publish to API-Portal" actions used to publish an API to Mediator and API-Portal, respectively. These actions also support bulk operations in this release.

Kerberos-based SSO

CentraSite supports Kerberos authentication for SSO.

FICO Blaze Advisor, FICO Compiled Sequential and FICO Decision Simulator

Product Deprecation

FICO Blaze Advisor, FICO Compiled Sequential and FICO Decision Simulator have been deprecated.

Removal of FICO Blaze Advisor

FICO Blaze Advisor has been removed due to missing Java 8 compliance.

My webMethods Server

OpenCAF

OpenCAF is a new approach to user interface development in My webMethods. OpenCAF gives developers maximum flexibility in creating rich, interactive user interfaces, without being constrained to the proprietary webMethods Composite Application Framework (CAF) framework.

Developers can import HTML, CSS, and JavaScript assets into their project and enrich them with CAF controls (for example, navigation). It provides the best of both worlds, allowing developers to use standard or custom-designed HTML/CSS templates to leverage their favorite JavaScript libraries and frameworks, while using enterprise capabilities (such as navigation, access control, clustering, integration) of My webMethods Server.

OpenCAF surfaces mainly in Software AG Designer with updated wizards for project creation.

Concurrent Initial Startup

Previously, when configuring a cluster of newly installed My webMethods Servers, users had to start one instance and allow it to finish bootstrapping the database before starting additional nodes. This time-consuming process is now simplified with an automated installation of complex environments. Additional My webMethods Servers detect that bootstrapping is underway, and wait for it to complete automatically.

Additional Software AG Command Central Support

The following My webMethods capabilities are now exposed through Software AG Command Central:

- Viewing, filtering, and download of log files.

- Configuration of endpoints for Monitor and Business Rules portlets.

- Creation and deletion of My webMethods Server instances from the command-line.

webMethods Deployer Rollback of My webMethods Server assets

Users can roll back projects containing My webMethods Server assets to a previous state, if required.

Deletion of My webMethods Server Assets Using webMethods Deployer

Deployer supports deletion sets for My webMethods Server assets. Users can browse and select assets for deletion and then trigger their deletion.

Software AG Designer

Eclipse 4.4.0 Update

Software AG Designer and all its plug-ins are supported on Eclipse version 4.4.0.

Software AG Designer Installation

It is now possible to install Software AG Designer and its plug-ins in a subfolder of C:\Program Files directory in the Windows environment.

Software AG Command Central

Declarative Composite Template-Based Provisioning

Declarative templates enable the provisioning of complex multi-server environments. Three-level inheritance allows users to customize standard out-of-the-box templates and use them with environment-specific server mapping and configuration through the simplest possible set of configuration files.

Command Central orchestrates installation, patching, and configuration of the environment using parallel processing, wherever possible.

Improved Password Handling in Templates

Previously, outbound passwords were not included in Command Central templates for security reasons. Therefore, passwords had to be set separately after applying a template, in order to make a system operational. Now, Command Central encrypts passwords in templates using a secure shared-secret. This allows the storage and application of passwords without the risk of being compromised by anyone with file system access to the templates.

Terracotta Support

Command Central allows management of Terracotta instances for the following:

- Installation of Terracotta.

- Start/stop of Terracotta instances.

- Configuration of ports.

- Configuration of memory settings.

- Configuration of Terracotta clustering.

- Monitoring of basic KPIs.

- Viewing, filtering, and downloading of Terracotta log files.

Additional My webMethods Server Support

Command Central allows management of the following for My webMethods Server:
- Configuration of endpoints for Rules and Task Engine portlets.
- Creation of My webMethods Server instances.
- Viewing, filtering, and download of My webMethods Server log files.

Additional Integration Server Support

Command Central now allows management of the configuration of remote server aliases in Integration Server.

Pre-QA Fix Installation

Users can install pre-QA fixes with Command Central. Each Pre-QA fix must be enabled with a key that Software AG Global Support provides as part of a Support Incident.

Product Installation (Command-Line Interface Only)

Users can install products on a remote server using Command Central command-line tools or REST APIs. This facility is available for adding products to an existing installation or performing a new installation, especially in combination with Platform Manager bootstrapping.

License Installation Report

Command Central now makes it easier for customers to manage and monitor their compliance with their license agreements. After obtaining an electronic license manifest (which contains complete details of the licensed software) from Software AG, customers can import the electronic license manifest into Command Central, and generate a report showing any mismatch between the landscape known to Command Central and their license agreements.

Software AG Installer

Checksum Verification for Downloaded Files

Product jar files and product files downloaded from Empower require SHA256 checksum verification.

Java 1.8 in Installer DMG and EXE Files

The DMG and EXE files, used to start the Software AG Installer, contain Java 1.8. The previous release contained Java 1.7.

Install Allowed for Some Products in the Program Files Directory

Users can now install some Software AG design-time products in the Program Files directory of a Microsoft Windows system. The installer indicates which products meet the condition.

Software AG Presto

Dashboard

Presto presents a new business user-centric and freeform dashboard in this release. This feature offers users an easy-to-use means of generating dashboards based on a flexible layout, visualizing both streaming data and data from Terracotta BigMemory. Users also have the option to refine and condense data from BigMemory before being visualized. The use of Real-Time Analytics Query Language (RAQL) enables this feature. The (Freeform) dashboard comes with out-of-the-box components that include line chart and grid view.

Miscellaneous Enhancements

Presto also offers the following features:

- Configuration of chart themes in Presto Apps.

- Enhanced querying through RAQL built-in functions for handling date values.

- Read-only mode to enable users to deploy and execute apps and mashables even if they do not have creation privileges.

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webMethods Process Performance Manager

Real-Time to Historic Visual Data Analytics

Process Performance Manager (PPM) presents and allows process analytics for the user who is directed to PPM from Optimize. When customers implement PPM templates for webMethods BPMS, PPM displays data for the original Optimize process to which the users had referred.

Data Analytics

During overlapping imports, PPM detects duplicate rows using the primary key of the table, and prevents duplication. For this process, the Compact Test Kit (CTK) user interface provides the facility to configure primary key settings.

Operations and Automation

PPM provides additional options for users to work with data sources. Users can now:

- View the current data source list.

- Add and remove currently available data sources.

- Change the order of data sources.

- Create and maintain their own data source lists and use them in their automation jobs.

- Configure PPM job notifications to use different sender e-mail addresses.

- Manually retrieve summary and detailed job status files from the server using a URL.

The other PPM enhancements include:

- Improved PPM which prevents two processes from working on the same data.

- Inclusion of specification for usernames and passwords in individual automation jobs.

Content Packages

Content packages for SAP Sales and Distribution Module and Material Management have been enriched to include additional fields, measures and dimensions, where needed. The additions include Quantity Conversion, Quantities, and Currencies fields.

Software AG Runtime

Single Sign On with Security Assertion Markup Language (SAML)

In a Software AG Runtime instance of the Common Platform environment, user authentication is possible using a SAML token for single sign on (SSO). The SAML token is validated against an external SAML provider.

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webMethods ActiveTransfer Server

Improved Management of Events through Virtual Folders

webMethods ActiveTransfer offers the ability to use virtual folder definitions (instead of direct IP addresses) in scheduled and post-processing events for remote endpoints involved with file transfers. The use of virtual folders facilitates central management of all endpoints. Any change to an endpoint address only needs a single edit in the virtual folder definition, which automatically reflects in all events that access the endpoint.

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webMethods API-Portal

User Onboarding with Social Network Accounts

API-Portal now supports user onboarding by leveraging existing social network accounts for Google and Facebook.

Configurable Onboarding Approvals

The API-Portal Administrator enables configuration of explicit approvals for user onboarding requests or use of confirmation e-mails.

Testing of SOAP APIs

In addition to REST API testing, API-Portal now provides testing of SOAP-based APIs.

API Communities

Administrators can configure private API communities to which users can be assigned or invited.

When APIs are associated with communities, only community members can view and use the associated APIs.

Self-Service Support

The Administration user interface allows the first level of self-service customization of portal content pages. An easy-to-use editor enables customization of the Home page. In the advanced mode, users can edit other pages by modifying the underlying templates.

Tenant Backup and Restore

Users can back up and restore API-Portal and collaboration data for individual tenants.

API Consumption Reports

Users can request reports on their API consumption through the API-Portal. Based on the configured schedule, API-Portal e-mails the requested report to users.

Simplified Architecture

The number of infrastructure processes needed for API-Portal is reduced by the co-location of several runnables into shared JVMs.

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webMethods ApplinX

New Look and Feel for Web Applications

The look and feel of ApplinX Web applications is enhanced. In particular, for applications specifically designed for easier use on mobile devices.

Usability Improvements

Creating new ApplinX applications is simplified. Users do not need to define a repository, because the application now uses an internal repository.

Performance Improvements

CPU usage is optimized. When using Natural host keys pattern, CPU usage is reduced on average by approximately 50 percent compared to what was previously observed.

Session Filtering

In ApplinX Administrator, users can filter their sessions by Session ID, Application, Device Name, Duration, State, Connection Pool and Type.

Detecting Use of ActiveX when Downloading a Natural File

The download process for a Natural file uses a new property which indicates whether the download process uses ActiveX.

Mobile Browser Support

ApplinX supports mobile browsers (for example, Safari) to:

- Perform checks to indicate whether a particular feature is supported by a browser.

- Override default setting which disables modal windows mobile devices, such as iPad and iPhone.

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webMethods BPMS

Business Console

webMethods Business Console includes additional capabilities that enable users to:

- Create and manage group tasks.

- Customize the logo, title, color theme, masthead, and landing page.

- Save and reuse task searches.

- View the process analytics dashboard in the "Processes" tab.

BPMS: Process Engine, Monitor and Closed Loop Analytics (CLA)

Monitor includes following changes in this release:

- Consolidation and merge of business process dashboard views in the My webMethods Server process administration page.

- Ability to convert the process analytics pages to Google Web Toolkit (GWT) and surface a process analytics page in the "Process" tab of Business Console.

- Ability to surface custom process IDs in a process analytics page and in CLA dashboards.

- Addition of a principal picker in CLA dashboards for escalation of task assignments.

- Ability to provide process projections by showing the percentage of completion, estimating when a process might be complete, and calculating the average cycle time for running instances.

- Use of Call Activities to invoke dynamic processes instead of using the *referenced processes* previously used. The dynamic referenced processes feature is deprecated.

- Ability to monitor individual dynamic referenced process instances.

- Improved Process Engine handling of parent-child status and interface. Parent-child process handling is streamlined and the Process Engine parent-child status and interface is improved.

Additionally, Send Tasks is enhanced to only publish sub-process return documents instead of publishing both native documents and sub-process return documents.

webMethods Broker

webMethods Broker 9.6 features (tested and supported) in webMethods 9.8 are:

Migration Utility

webMethods Broker offers a new command-line utility to migrate JNDI and JMS assets (such as JMS queues and topics) from Broker to webMethods Universal Messaging. This migration utility provides the ability to automatically move most of an organization's assets.

Improvements for Default Settings

The default values for settings, such as cache, storage file size, parallel channels, and file settings, are adjusted to reflect customers' current common settings.

Monitor Authentication

Broker Monitor connects to Broker Server only after Broker Server authenticates the requesting Broker Monitor. This feature strengthens the Broker Server security.

webMethods Business Rules

New Set of Functions

A new set of functions is now available in:

- Rules Engine.
- Rules Development feature of Software AG Designer.
- Rules Management Console, including math functions, date functions, inRange functions for dates, conversion functions, and mathematical expressions.

In the Rules Management console, a completely redesigned expression editor replaces the former function editor.

Deployer Improvements

Business Rules now supports automatic rollback for deployment to previous version and state.

Command Central Integration

Inventory, Runtime Status, and provisioning using templates are all available in Command Central for Business Rules.

Within Command Central, users can configure connection information for Business Rules to an Integration Server.

webMethods CloudStreams

Support for an Updated Salesforce connector

CloudStreams connector for Salesforce is updated to support partner SOAP API v31.

Support Connectivity to Salesforce Wave (Analytics Cloud)

CloudStreams connector for Salesforce supports Salesforce Wave. The connector sends data to Salesforce Wave to help Salesforce generate analytics.

Support OAuth Tokens in Connection Pools

Users can now configure CloudStreams connection pools to use OAuth tokens for authentication to SaaS APIs.

Support for Enhanced NetSuite Connector

The CloudStreams connector for NetSuite is enhanced for better usability:

- Identification and automatic selection of mandatory and optional fields.

- Pre-population of NetSuite record fields, based on business object selection and other related conditions.

webMethods Composite Application Framework

OpenCAF

OpenCAF is a new approach to user interface development in My webMethods. It gives developers maximum flexibility in creating rich, interactive user interfaces without being constrained to the proprietary webMethods Composite Application Framework (CAF) framework.

Using OpenCAF, developers can import HTML, CSS, and JavaScript assets into their project and enrich them with CAF controls, navigation, and so on. It allows developers to use standard or custom-designed HTML/CSS templates to leverage their favorite JavaScript libraries and frameworks, while also using the enterprise capabilities of My webMethods Server, such as navigation, access control, clustering, integration, and so on.

OpenCAF surfaces mainly in Software AG Designer, with updated wizards for project creation.

webMethods Deployer

Business Rules Rollback and Deletion

Deployer includes these new features for business rules:

- Rollback of a previous deployment of webMethods Business Rules assets from a Rules Engine on Integration Server.
- Browsing and deletion of existing webMethods Business Rules assets from a Rules Engine on Integration Server.

My webMethods Server Rollback and Deletion

In this release, Deployer allows users to:

- Roll back a previous deployment of My webMethods Server assets.
- Browse and delete existing My webMethods assets from a My webMethods Server.

Deployment of Universal Messaging JNDI Assets

Deployer deploys JNDI assets to Universal Messaging servers. These include ConnectionFactories, Queues, and Topics.

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webMethods Enterprise Gateway

Support for Displaying Connections from Enterprise Gateway to Internal Servers

webMethods Integration Server Administrator has a new option to display active connections between Enterprise Gateway and Internal Servers. This option is available from Display Connections to Enterprise Gateway Registration Port in the View Enterprise Gateway Server Details screen. The complete navigation is: Ports Screen > Port number of an Enterprise Gateway registration port > Security > Ports > View Enterprise Gateway Server Details > Display Connections to Enterprise Gateway Registration Port.

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webMethods EntireX

These enhancements are part of webMethods EntireX Version 9.7.0.7, which is included with webMethods Suite 9.8.

EntireX Workbench under C:\Program Files

As part of the Software AG Designer, the EntireX Workbench can now be run under C:\Program Files.

Support for Java 8

EntireX now supports Java 8.

Support for RedHat v7

EntireX now supports Red Hat Enterprise Linux AS 7 on 64-bit platforms.

Enhanced COBOL and CICS Support

The enhanced COBOL and CICS support includes:

- Use of concrete COBOL data length for a variable number of array elements.

- Mapping of fixed-size COBOL arrays to an unbounded IDL array in the IDL Extractor.

- Inclusion of the maximum expected length of the output data in the CICS RPC Server User Exit before calling the CICS transaction.

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webMethods Integration Server

Support for OData Standard

Integration Server offers native support for OData (Open Data Protocol) version 2.0. The purpose of OData is to provide a REST-based protocol for CRUD-style operations (Create, Read, Update and Delete) against resources exposed as data services. Integration Server supports the new asset type OData service. Developers can quickly develop OData services using the OData service wizard available in the Designer Service Development plug-in.

Web Service Authentication Using Kerberos for Outbound Service Requests

Integration Server uses Kerberos tokens to invoke a Kerberos-secured web service. Integration Server Administrator enables and configures Kerberos authentication for outbound web service requests. At run time, users can also provide includes Kerberos authentication details in a web service connector.

Support for Salesforce Lightning Connect

Salesforce Lightning Connect is a new way for Force.com applications to connect with backend office applications. Integration Server can host OData-based data services that provide access to backend applications. Force.com accesses these servers and represents the on-premises data as external objects in Salesforce.

Basic Authentication Support for Universal Messaging Connections

webMethods messaging connections to Universal Messaging servers can now include credentials for basic authentication (username/password). This allows basic secured communications to a Universal Messaging server for webMethods messaging (also known as *native pub-sub*).

pub.publish:deliver* Services Support for Universal Messaging

The pub.publish:deliver* services now support Universal Messaging as well as webMethods Broker. The pub.publish:deliver* services deliver documents to a specific webMethods messaging trigger or Integration Server.

Utility for Migrating Publishable Document Types and Trigger Filters to Work with Universal Messaging

When switching webMethods messaging provider from Broker to Universal Messaging, users may want to:

- Change the encoding type of the publishable document types to protocol buffers.

- Update webMethods messaging trigger filters to benefit fully from the provider-side filtering available with Universal Messaging.

A new utility, the pub.utils.messaging:migrateDocTypesTriggersToUM service, enables the migration of publishable document types and filters for subscribing triggers to work with Universal Messaging instead of Broker. This utility also updates a subset of the publishable document types and triggers. This ability supports a phased migration or updates all publishable document types and triggers in a single operation. The utility also provides a report-only mode that allows the user to inspect the changes the utility will make before the changes are committed.

Support for Hot Deployment of Integration Server Packages

Integration Server allows hot deployment of packages, which enables Integration Server administrators to quickly update packages without stopping the server. When using the "Hot Deployment" option for package deployment, Integration Server queues up new requests coming to the package. After a package finishes handling all existing in-process requests, Integration Server deploys a new package, and then begins processing the queued requests.

Support for SOCKS Proxy for Outbound Requests

Socket Secure (SOCKS) routes network packets between clients and servers through a proxy server. Integration Server supports SOCKS proxy when sending outbound requests to other servers. SOCKS support is limited to versions 4 and 5.

Support for Chunking Flow Service Results

Integration Server provides the ability to chunk results for a specified service. This can very useful in cloud integration scenarios when an on-premises service returns a large data set to Integration Cloud. Integration Cloud requests the on-premises Integration server to send data in small batches sequentially. This approach is useful on networks with bandwidth constrains.

Additional Public Caching Services

Integration Server provides built-in services that access the batch Ehcache APIs, including pub.cache:getAll, pub.cache:removeAll, and pub.cache:putAll.

Removal of WmPKI Package from Integration Server Distribution

Integration Server version 9.7 announced the deprecation of the WmPKI package. This release removes the deprecated WmPKI package from Integration Server.

webMethods Mediator

Enhanced Logging and Tracing

Mediator supports a more granular logging configuration to enable better tracing of the Mediator operational and error information. Users can configure logging through Integration Server.

Configurable Service Result Caching

For caching of service results, Mediator provides a new Runtime Policy Action that allows configuration of the caching behavior for each virtualized service. This functionality is available for SOAP- as well as REST-based services, and can be configured in the CentraSite Business user interface.

Cross Platform NT LAN Manager (NTLM) Authentication

Mediator uses NTLM-based authentication on Windows and UNIX-based (Linux) platforms.

REST-to-SOAP Transformation

For the exposure of existing SOAP Services as REST APIs, Mediator provides a Runtime Policy Action that triggers the automatic transformation of XML and JSON payloads to SOAP messages.

Content-Type Defaults for REST Services

A new Runtime Policy Action is available to set the default Content-Type for requests or responses if the Accept or Content-Type HTTP Headers are not specified.

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webMethods Mobile Administrator

Switch to Software AG License Format

Mobile Administrator uses the standard Software AG license key format.

Windows Build Node Wizard

Similar to the Mobile Administrator Mac Build Node wizard, the Windows Build Node wizard highlights and verifies installation steps for all SDKs and dependencies.

Improved installation on Suse Linux Enterprise (SLES)

Installation of Mobile Administrator on Suse Linux Enterprise 11 is improved.

webMethods Mobile Designer

Install Mobile Designer via Software AG Installer Natively

Now, Software AG installer directly installs Mobile Designer.

Program Files Installation

Mobile Designer (along with Software AG Designer and Mobile Development) supports installation in the C:\Program Files\ folder on Windows platforms. Also, users no longer require administration rights to run Mobile Designer.

iOS 8 Support

Mobile Designer provides full support of iOS 8 and iPhone 6 devices.

Support for iOS SDK 8.x

Mobile Designer (and Mobile Administrator) supports the use of iOS SDK 8.x for development, both for local builds and on Mobile Administrator build nodes.

Support for Windows Phone 8.1 Project Format

Mobile Designer now supports generation of both Windows Phone 8.1 and Windows Phone 8.0 projects. This extended support of the Windows Phone platform allows users to use Windows Phone 8.1 features and distribution formats.

Windows Phone Rotation Support

Rotation of the user interface of mobile apps on the Windows Phone 8 platform is significantly improved.

Configuration of Mobile Designer Instance

Software AG Mobile Development preferences include Mobile Designer configuration of the Mobile Designer instance used in the Software AG Designer workspace. Therefore, the MOBILE_DESIGNER environment variable is no longer required for Software AG Designer and Mobile Development.

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webMethods Mobile Development

Improved New Mobile Development Project Wizard

In the "New Mobile Development Project" wizard users can select one of the predefined pane configurations for application creation. Furthermore, users can now log in to Mobile Administrator with a username and password instead of an access token.

Mobile Development Preferences

The preferences dialog box for Mobile Development now supports setting a default package name, a Mobile Administrator instance for the "New Mobile Development Project" wizard, and selection of the Mobile Designer installation to be used within the Eclipse workspace.

Outline Editor Enhancements

The Outline Editor now supports:

- Fold and unfold operations for the application model.
- Contextual filtering and sorting of all drop-down properties.

Re-orderable List Views

Native list views can now be re-ordered by the use of native platform conventions.

Improved Web Service Definition Language (WSDL) Support

The existing WSDL support is significantly improved.

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webMethods OneData

Enhanced New User Interface Preview

This release extends the use of the preview of OneData's next generation user interface (which was introduced in version 9.7) for data browsing in the parent-child level hierarchy. The enhancements are:

- New data detail views allow users to see the complete data record in separate screens.
- Advanced filtering capabilities.
- Insertion and editing of data with context menus and screens.

Service Layer Improvements

Service logging and data auditing for incoming data are improved to provide more detailed information (six logging levels) that is presented in a format harmonized across the Representational State Transfer (REST) and JMS application programing interfaces (APIs). The data audit information is also easily accessible through the user interface using new System Objects.

Improvements to XSD generation and handling for data objects allow OneData to support complex data structures as well as easier and more flexible handling of XSDs for API clients.

The REST service performance for data import is also improved.

Security Improvement

OneData now supports SSO between a client browser and OneData with Windows Integrated Authentication using the Kerberos protocol.

User Interface Improvement in Data Manager

Columns, selected as *Description* while creating foreign keys, appear as hyperlinks in the Data Manager grid. On clicking these column hyperlinks, OneData directs users to the related objects.

Support Expanded for Interactive Hooks

Integration Server's interactive hooks can use forms and work with OneData objects which have workflows defined.

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webMethods Optimize for Infrastructure

Presto Monitoring

Optimize for Infrastructure now includes Presto as a first class citizen. Discovery of Presto and monitoring of its key metrics are now possible within Optimize for Infrastructure.

Enhanced Terracotta Monitoring

Terracotta monitoring is enhanced to include SSL encryption in the discovery TSAs, detailed Cache Manager and Cache monitoring, and delta readings to cumulative KPIs.

Enhanced Universal Messaging (UM) Monitoring

The full-featured UM monitoring is extended to include:

- Monitoring support for 9.7 and 9.8 UM servers.
- Simple authentication with user ID and password to connect to Universal Messaging.
- Cumulative KPIs for existing monitoring, and delta KPIs on them.

Performance Enhancements

The base Optimize engine improvements are:

- Much faster startup time.
- Much higher throughput in both clustered unclustered configurations.

These improvements bring Optimize to new performance levels, enabling its application in situations that would have been unmanageable previously.

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webMethods Optimize for Process

Enhanced Closed Loop Analytics

Closed Loop Analytics (CLA), which was introduced last release, is enhanced with many new capabilities for business users:

- New Email action in CLA dashboards.

- Support for customer process instance IDs.

- Support for estimated process completion time.

- New principal picker in task assignments.

Additionally, the user interface presents many aesthetic changes.

New KPI Type: Counter

In earlier releases, while Optimize performed robust statistical analysis of inbound streaming data, it lacked the simple ability to define a KPI that counted events and records. The current release addresses this gap. Now, users can create KPIs that count the occurrences of any *non-blank* field in an Optimize event.

In-context Jump to PPM for Exploration

Should users see something on a dashboard that requires additional investigation to understand its root cause, they can now jump directly to PPM while retaining the original context of the dashboard. Once in PPM, the user has the full strength of the PPM engine to explore historical data related to the process under investigation.

Performance and Scale Enhancements

In addition to immensely improved throughput of KPI Engine, DCA Dimension handling and Stats engine, the startup time of Analytic Engine is greatly reduced. When coupled with the ability to horizontally scale Analytic Engines, this release meets and exceeds the throughput requirements of even the most demanding operational situations.

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webMethods Service Development

Support for VCS Operations from the Package Navigator View

When using the Local Service Development feature, users can perform Virtual Client Services (VCS) operations on Integration Server assets directly from the Package Navigator view instead of from the Package Explorer view. This improvement streamlines the user experience and reduces the number of steps required to complete the task.

Note: If your VCS client is Team Foundation Server, you cannot use this feature with Java services.

Support for OData Standard

Integration Server offers native support for OData (Open Data Protocol) version 2.0. The purpose of OData is to provide a REST-based protocol for CRUD-style operations (Create, Read, Update and Delete) against resources exposed as data services. Integration Server supports the new asset type, OData service. Developers can quickly develop OData services using the OData service wizard available in the Designer Service Development plug-in.

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webMethods Trading Networks

Enhanced B2B Analytics

webMethods Trading Networks includes a variety of charts and dashboards for deep targeted analysis on partner transactions. Users have an additional set of dashboards and charts to monitor a variety of metrics, either across all partners, or for a specific partner. The metrics include transaction volume trends, total value trends (based on purchase order amount, invoice amount, and so on), late functional acknowledgement (FA), violations, and the split between successful and failed transactions. Filtering of the information shown in charts is also possible to focus on a sub-set of partners (top-tier, bottom-tier, and so on).

Improved management of TPAs

webMethods Trading Networks has simplified the editing of Trading Partner Agreement (TPA) parameters, especially for TPAs containing an array list. An array list now appears as a table in a pop-up window. An administrator can create rows for and add values to child elements. The tabular representation makes it easy for users to compare values across all the elements in an array without opening and closing each element individually.

Improved Usability

webMethods Trading Networks has enhanced usability in a variety of areas:

- Improved keyword search of Trading Partner Agreements (TPAs), where keywords can now search for senders and receivers, in addition to agreement ID.

- Trading Networks maintains context sensitivity across all its screens. The initial state before a user's action is recorded, and returns the user to the initial state after a user action is complete.

- Users can also directly import ZIP files as well as bin and XML files. Administrators no longer have to extract ZIP files before importing them.

Support for Substitution Variables during Deployment

webMethods Trading Networks enables users to specify substitution values for almost all assets. This ability to substitute values during deployment removes the need to go into target systems to tweak configurations after deployment. For easy monitoring and tracking of deployment activities, Trading Networks Activity logs the deployment of all assets through Deployer.

webMethods Universal Messaging

Automatic Interest Propagation Using Zones

Universal Messaging now allows the configuration of Zones. Realm servers in the same Zone inform each other about local subscribers to channels/topics, so that other members of the Zone can forward messages to local subscribers when required. This minimizes unnecessary wide area network (WAN) traffic by only forwarding messages when there is a known interested party on the remote Realm server.

Also, users can configure Zones from the Enterprise Manager or by using a newly introduced section of the Admin API. This feature is the equivalent of webMethods Broker Territories.

Basic Authentication with Admin API and Enterprise Manager

The Universal Messaging Admin API and Enterprise Manager support the passing of basic authentication credentials when a connection is established. This provides a more secure configuration of the Realm and improved authentication of administrative clients.

Realm XML Export Includes JNDI Assets

XML export of a Realm server now includes the option to export JNDI assets: ConnectionFactories, Topics, and Queues. These are used for deployment using Deployer.

Documentation

Significant changes to product documentation sets or to individual documents are described in the readmes for each product.

webMethods BPMS

- Business Console includes context-sensitive online help.

webMethods Mobile Administrator

- Information previously in the *webMethods Mobile Administrator Configuration Guide* is now included in the new *webMethods Mobile Administrator User's Guide*. The *webMethods Mobile Administrator Configuration Guide* is deprecated.

Distribution of Documentation

- Documentation is now no longer available for download from the Software AG Installer.

- Customers with existing Empower credentials can view and/or download the documentation from the Software AG customer portal Empower at https://empower.softwareag.com/Products/Documentation/ . For convenience, selection boxes are available on the web pages for flexible bulk download of product documentation as zipped content.

- Users registered with the Software AG TechCommunity can view the documentation at http://techcommunity.softwareag.com/ . When registering with the TechCommunity, users must select Documentation as an area of interest on the registration form.

Upgrade

Infrastructure

Migration of infrastructure for webMethods and IBO products that are running on the common platform has been completely automated. This includes migration of Software AG Runtime. You now migrate all infrastructure and Software AG runtime using the Infrastructure migration utility.

Command Central

Migration of Command Central port configuration has been automated; you can migrate port configurations using the Command Central migration utility. You can also migrate the ehCache DiskStore used by Command Central.

Platform Manager

Migration of Platform Manager port configuration has been automated for upgrade from 9.6 or 9.7; you can migrate port configurations using the Platform Manager migration utility.

My webMethods Server

The My webMethods Server migration utility now supports the use of a zip file containing the source installation. You no longer have to copy the actual source installation to the target machine and recreate the directory structure.

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webMethods Product Suite 9.9

Release Notes

webMethods 9.9 represents significant enhancements to Software AG's Digital Business Platform. This release enables the development of integration centric, event centric, decision centric, and process/task centric applications that are API-enabled and deployed across a hybrid cloud environment.

Release Highlights

Integration

This release of the webMethods suite includes many integration enhancements, such as advanced support for XML Namespaces, enhancements for Inbound Kerberos authentication for web services, and REST services, and OData enhancements.

The key features include:

- In addition to IData, Integration Server now includes a new data type to represent XML. This data type allows for enhanced support for XML.

- Software AG Designer now lets you compare packages and elements in Integration Server. Developers can use the compare capability to:

  - Compare packages and elements on the same server or on different servers.

  - Track changes to a package or element during the development process.

- Customers who want to use the API-Portal standalone or integrated with third-party environments can now leverage a simple email-based workflow to send access token requests to configured groups of users.

- Framework enhancements in CloudStreams enable support for REST metadata lookup and custom operation definition. This release also adds new connectors for MS Dynamics and Sage CRM.

- webMethods OneData's next generation user interface provides enterprise-class full-text search functionality in the new user interface.

API Management

This release of webMethods API Management platform contains significant enhancements to CentraSite, Mediator and API-Portal.

The key highlights are:

- APIs defined in Swagger or RESTful API modeling language (RAML) formats can be directly imported and managed in API-Portal.

- API-Portal provides the ability to share APIs through social networks or email and to follow APIs for updates.

- API-Portal has enhanced Self Service customization and auditing.

- CentraSite and Mediator provide full support for versioning of SOAP and REST APIs.
- The CentraSite Business user interface helps you easily navigate and visualize dependencies and relationships between assets for various use cases.

webMethods Business Process Management Suite

The webMethods Business Process Management (BPM) Suite adds more capabilities to the Business Console, the Business Rules, the Rules Management console, and the Mobile suite, to provide businesses with the visibility and performance needed to improve decision making.

The key features are:

- webMethods Business Console now supports visualization of possible paths for process estimated time of arrival (ETA).
- Enhanced process list management and task list management in webMethods Business Console.
- webMethods Business Console has the ability to escalate all pending tasks within a process through a priority event.
- Process Engine and Task Engine have adopted the Enterprise Routing Framework for emitting EDA events.
- Mobile Designer now provides integration with Service Development to browse and automatically add Integration Server services from Integration Server to the application model.
- The Rules Management Console (RMC) has been added as an endpoint for webMethods Deployer. This endpoint also supports "merge" and "hot deploy."
- Import/export between Software AG Designer and the Rules Management Console is improved to allow locking and auditing for any Rules Content Repository API for Java (JCR) access.
- The existing "Public API" has been extended by a new RESTful API for the Rules Management Console that allows a user to import, export and deploy rule projects.

Operational Intelligence

The key enhancements for operational intelligence are:

- This release enhances the Optimize integration in Process Performance Manager (PPM) functionality by allowing PPM users to create alerts in Optimize for the intrinsic measure that is being analyzed.
- For users who are running both Optimize and PPM, the dashboard provides a "View in PPM" function to do an in-context jump to PPM. This feature allows users to explore longer-term historical data in the same process using extensive analytic capabilities.
- Optimize now offers expanded monitoring and visibility with full Apama monitoring, discovery, and KPIs. In addition, enhanced Integration Server and Presto monitoring is also introduced.

Suite Enhancements

The webMethods Suite provides several enhancements across various products. The highlights in this release include:

- Command Central has an enhanced fix installation user interface, which you can use to install fixes remotely, and also have the fix installation date displayed.

- Command Central can now be used to manage the Lightweight Directory Access Protocol (LDAP) configuration of Integration Server, Command Central itself, and other products. It also includes many enhancements to template-based provisioning.

- A smooth migration path is available from Broker to Universal Messaging.

- Enhanced support for Kerberos authentication with Representational State Transfer (REST) service inbound authentication and inbound web service authentication in Integration Server. This authentication support also extends to inbound and outbound web service authentication in Mediator, and single sign-on (SSO) using Kerberos in My webMethods Server and CentraSite.

- webMethods Deployer now supports connections to Universal Messaging servers that are configured to authenticate clients using username/password.

- Through the use of simple annotations, the Application Platform services are discoverable and callable from Composite Application Platform (CAF) and OpenCAF user interfaces, making it easy for developers to add business logic to their CAF and OpenCAF applications without the need to resort to third-party application servers or complex Java deployments

Contents

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

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

CentraSite

Graphical Asset Navigator

The Asset Navigator provides a graphical representation of relationships between assets. The graphical asset navigator in CentraSite Business user interface helps users to easily navigate and visualize dependencies between assets for various use cases. Several use cases for navigation are provided out of the box to allow for analysis of the runtime deployment landscape, organization structure or dependencies to/from particular assets. The asset navigator can be extended through saved searches.

API Versioning

CentraSite and Mediator now provide full support for versioning of SOAP and REST APIs. The CentraSite Business user interface allows versioning of virtual services and publishing of distinct versions to Mediator. Mediator is able to host multiple versions of the same service during run-time. Versioning indicators in the URL allow Mediator to perform an automatic routing of requests to the appropriate version.

Enhanced Consumer Registration

The consumer registration functionality is enhanced to support design-time and run-time scenarios. Administrators can configure which asset types can consume instances of other asset types. Configured runtime identification criteria are automatically presented as mandatory input for consumers. Normal approval policies can be leveraged to trigger approval workflows.

Run-Time Storage Optimization

CentraSite provides an optimized data storage management for handling large volume of run-time events. Customer logging large volumes of runtime metrics and events into CentraSite should enable the new data store for heavily improved log purging and data housekeeping purposes.

Automatic Generation of Swagger API Documentation

Rest APIs, defined from scratch or imported using either RAML or Swagger importers in CentraSite, can now be used to dynamically generate a Swagger 2.0-compliant documentation using the "Download Documents" action in the CentraSite Business user interface.

Database Master-Slave Replication

CentraSite database can now be configured for master-slave replication across multiple nodes.

REST API Synchronization

Changes on the native REST API can now be re-synchronized with existing virtual REST APIs. In the improved Virtualization wizard, users are informed of the existing delta between the native REST API and virtual REST API and then allowed to skip, clone, or overwrite resources to suit their requirements.

Usability Enhancements

The handling of virtualized services has been improved. Users can now navigate back and forth between the native service and its related virtualized services using the Basic Information profile. Users can also directly update virtualization settings in the details page of the virtualized service.

Report Scheduling

CentraSite allows for scheduled execution of reports. Users can select reports and configure the reporting schedule. Reports are sent to users through email. All users can manage their scheduled reports through their User Preferences in the CentraSite Business user interface.

OData Support

CentraSite Business user interface provides support for importing OData services, which are based on Open Data Protocol (OData) version 4.0, using the Create Asset wizard. The inherent support for visualization and virtualization of the OData services will be provided in upcoming releases.

My webMethods Server

Single Sign-On Using Kerberos Authentication

My webMethods Server can now be configured to authenticate users directly based on their Windows logon. User sessions are established using Kerberos authentication, thereby removing the need for them to log in to My webMethods Server explicitly.

Single Sign-On Using SAML Identity Provider

My webMethods Server can now be configured to authenticate users through an external SAML 2.0-based identity provider. Users can log in using a central identity portal and be redirected straight into My webMethods without having to log in again.

See Composite Application Framework *and Task Engine for details of new capabilities in the respective components.*

Software AG Command Central

Fix Installation User Interface

It is now possible to install fixes remotely from the Command Central web user interface. Building on the command-line tool and API capabilities (introduced previously) and installing fixes is now easier than ever. On any installation of version 9.7 and later, users can browse, install, and revert fixes managed by Command Central directly from the Command Central web user interface.

Support Patches, provided by Software AG Global Support, while working on a support incident, can also be installed using this mechanism.

Fix Installation Date Display

The date a fix installed is now shown in Command Central. It is also returned by the fix inventory command-line tool command and API calls.

LDAP Configuration

Command Central can now be used to manage the LDAP configuration of Integration Server, Command Central itself and other products. This includes the web user interface, command-line tool, API, and support in templates.

Mirror Repositories

When installing products or fixes using Command Central, users can choose from a master repository (hosted by Software AG) or a local image repository (an image file downloaded using Installer or Update Manager). In addition, users can now create a network accessible Mirror repository within the network. This hosts a copy of installable items to provide a streamlined method of installation. It is no longer necessary to provide internet access to managed installations or move very large image files around. Mirror repositories ensure that only the modules necessary are transferred across the internal network. In this release, Mirror repositories can be used when installing products. Mirror repository support for fixes will be included in a future release.

License Management Scheduled Report

Command Central provides aggregated monthly reports of the Command Central-managed landscape, showing installed instances on an hourly/daily basis. This enables more effective management of dynamically scaling landscapes and virtualized environments.

Java System Properties Configuration

Users can now use Command Central to configure the Java system properties of various products, such as My webMethods Server (including Task Engine), Integration Server, and Command Central. These settings can be used for certain product-specific configurations that need to be set using Java virtual machine (JVM) properties.

Template-Based Provisioning Enhancements

Template-based provisioning includes these improvements:

- Composite templates now can re-use external snapshot templates in the list of templates to apply for a given layer. The improvement allows users to combine easy-to-use snapshot templates with the power of complex, multi-host composite templates. This also works for 9.7 and 9.8 installations.

- New implicit variables, ${node.host} and ${node.alias}, can now be used inside inline templates to create dynamic content that is host/alias specific. This simplifies the configuration of more advanced multi-node and clustered templates.

- Java system properties can now be referenced within the template.yaml definition for further customization. This allows default settings to be shared across multiple templates hosted by Command Central.

- Composite templates now perform update operation on the existing product instances when the template is reapplied. This allows additional components like Integration Server adapters to be provisioned to existing installations just by updating and reapplying the same template.

- When applying a template using the Command Central command-line tool users can now combine the use of input properties file with additional parameters on the command line. This allows better re-use of environment parameter files and simplifies template development and application.

- Composite templates can now have configuration sections without product and fix sections and do not require product and fix repositories to be defined.

- Command Central supports bootstrapping (remote Platform Manager installation) on Windows hosts running the OpenSSH service.

- The installation directory can be specified in UNIX format and work across both UNIX and Windows hosts.

- Template application is done layer by layer. This ensures that upper layers are provisioned only after lower layers (on which they may depend) are ready.

- Composite template application now displays a more accurate WARNING status instead of DONE when some phases of the template application complete with non-critical errors.

Consistent Status Reporting

Previously, the status of a component (Online, Stopped, Unresponsive, etc.) was not shown consistently throughout the Command Central web user interface, especially when a lifecycle operation (Start, Stop, etc.) had just been initiated. Now, the status reported by Command Central

is always what is reported by the component itself and is consistent between the summary and detail screens.

Command Central Bootstrap Installer

Command Central bootstrap installer is a fast, simple**,** and **an** easy way to get Command Central server up and running in a few minutes using a single downloadable and executable installer package. **The** Command Central bootstrap **installer is** for Windows, Linux**,** and OS X operating systems.

Software AG Designer

Software AG Designer now includes these enhancements:

- Software AG Designer and all its plug-ins now use the Eclipse 4.4.2 version.
- When uninstalling Software AG Designer, the installer now removes all directories from the file system. Previously, uninstallation did not remove all Software AG Designer-related files and directories.

Software AG Installer

Products Installable from Software AG Installer

Users can now install Apama and Integration Agent from the Software AG Installer.

Software AG Designer Uninstallation Removes All Related Directories

While uninstalling Software AG Designer, the installer removes all related directories from the file system. Previously, uninstallation did not remove all Software AG Designer-related files and directories.

Integration Server Instance Created during Installation can be Named by User

Users can now name the Integration Server instance that is created during installation. Previously, the instance was always named "default," and this name could not be changed.

Optimize Shut Down Automatically

Previously, the installer automatically shut down most products that already existed in a target installation directory before installing additional products. However, some products, including Optimize Analytic Engine, had to be must shut down manually. The installer now shuts down Optimize Analytic Engine automatically.

Software AG Presto

Freeform Dashboard Enhancements

The Freeform dashboard includes these enhancements:

- New chart types (pie/donut, gauge, and column)**.**
- New controls for filtering (drop-down list, input field)**.**
- New controls for placing images and text labels**.**
- Ability to turn on/off borders**.**
- Dashboard styling via CSS themes (customizing logo, color schemes, fonts, etc.)**.**
- New XML Data source for consuming RESTful URLs including mashups**.**
- Parameterized XML and RAQL data sources for passing context into data sources**.**
- Support for Import/Export of dashboards through the administration tool**.**

Real-Time Analytics Query Language (RAQL) Enhancements

The RAQL enhancements for Presto include:

- Flexible data grouping with "rollup" and "cube"
- Native support for Apama data

Google Map View Enhancements

The Google Map view now allows users the ability to:

- Customize marker icons.
- Configure zoom level.

Docker Support

Presto Packaging Kit for Docker helps users "dockerize" Presto web application**.**

Presto Repository Databases

Presto repository databases now include support for Microsoft SQL Server 2014.

Software AG Runtime

New Software AG Infrastructure Administrator's Guide

For details, see New Software AG Infrastructure Administrator's Guide.

New Software AG Infrastructure Readme

The readmes for Software AG Common Platform, Software AG Runtime, Software AG Security Infrastructure, and Software AG Web Services Stack have been combined into a single Software AG Infrastructure readme. In addition, the combined readme has been expanded to contain cumulative information for these products back to the 9.5 release.

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webMethods AgileApps

New Data Centers, New Brand

New data centers are opening in the United States and Europe. Others are planned around the globe. The new data centers will be hosted on Amazon ECS, with an HTTP address that employs the new brand name, "AgileApps Cloud". For example, http://{yourDomain}.agileappscloud.eu.

Enhanced Case Merge

Users who merge two records can select which custom tasks and which field values to retain from the current record, while attachments, activity history, and hours-logged are automatically merged.

Session Managements

Session limits can be specified, to limit the number of concurrent sessions a user is allowed to have.

Task Assignment Notifications Controlled by Rules

When a task is created or re-assigned to someone else, an email notification is sent to the new task owner, by default. In new customer accounts, the behavior in each situation is now under the control of an Event Rule defined on the Tasks object, allowing notifications to be turned off or conditionalized, so they are sent out only for specified circumstances.

Packaging Enhancements

The packaging enhancements include:
- Application reports that are visible to everyone and those that are visible to application roles are automatically added to a package as part of an application.
- When the "Overwrite Previous Package" option is enabled:
  - Email Templates, Quick Text definitions, and Web Forms defined on an object are now overwritten when the package is installed.
  - Processes deleted from the publisher's system are deleted from the installer's system.
  - Translation Workbench entries deleted from the publisher's system are deleted from the installer's system.

Standard Installation Process

An on-premise installation of the AgileApps platform is accomplished using the standard Software AG installation procedures.

Certificate-based Platform Access

When the on-premise installation architecture is configured with a certificate-validation server, the platform can be accessed by browsers or by REST APIs without a login step, by supplying an identifying certificate.

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webMethods API-Portal

Direct API Import

Users can now import and manage APIs defined in Swagger or RAML formats directly in API-Portal. This enables a standalone operation of API-Portal without the need to publish APIs from CentraSite. Parsers for additional formats can be plugged in through an extension point.

Email-Based Access Token Workflow

Customers who want to operate API-Portal as a standalone or integrated with third-party environments can leverage a simple email-based workflow to send access token requests to a configured group of users. A new REST service provides the ability to provision custom access tokens back into API-Portal.

Advanced Collaboration

API-Portal provides the ability to share APIs through social networks or email and to follow APIs for updates.

Auditing Enhancements

System events like login attempts, API deployments, and access token requests are now audited. Integrated dashboards allow visualization and filtering of audit data for diagnostic purposes.

Usability Enhancements

The menu of API-Portal for logged-in users has now been redesigned to better suit mobile device rendering. The administration section provides simpler navigation between various administration areas.

Enhanced Self Service Customization

Self Service Customization provides a simpler selection of available templates for customization. Users can customize individual templates through new in-page editors that support syntax highlighting, code completion, and reformatting.

Support for SOAP APIs Exposed as REST APIs

SOAP APIs which are enabled for automatic SOAP-to-REST transformation and exposed through webMethods Mediator are now displayed as pure REST APIs in API-Portal with the option for web service definition language (WSDL) download.

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webMethods Application Platform

webMethods Application Platform Services in My webMethods Server

Users can now deploy webMethods Application Platform services into a My webMethods Server container. Through the use of simple annotations, the Application Platform services are discoverable and callable from Composite Application Framework (CAF) and OpenCAF user interfaces. This capability makes it easy for developers to add business logic to their CAF and OpenCAF applications without the need to resort to third-party application servers or complex Java deployments.

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webMethods ApplinX

Comparing ApplinX Applications

Typically, users can compare two versions of the same application. The results of the comparison can then be used to perform impact analysis before deploying a new ApplinX application version.

Invoking a Procedure Using REST

In addition to SOAP, users can invoke ApplinX web services using REST from the Procedure Group Entity Editor.

Upgrade to Tomcat Server 8.0

The ApplinX internal Tomcat server is now version 8.0.

Improved Performance for Large Send Sections

Performance improvement has been done for large send sections, for example, Natural Data Transfer upload or the AS/400 save state feature.

Enter Key Recognition

ApplinX can now differentiate between the two Enter keys (on the main keyboard and the numeric keypad).

Note: This applies only to the following browsers: Mozilla Firefox 29 and above, Chrome, Internet Explorer 11.

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webMethods BPMS

[Monitor, Process Engine, Task Engine (including Mobile Task Integration), and Business Console]

Task Engine Enhancements

Task Engine includes the following enhancements:

- Performance improvement of My webMethods Server scheduler service by replacing and re-implementing it. The current event algorithm no longer queries Task Engine, but keeps a persistent sorted data structure that tracks calculated "Event Times" and Task IDs.

- Scalability and high performing task search capability by implementing Reference architecture. This flexible approach enables users to:
  - Create a custom database (such as elastic search and Hadoop) to which to write task data.
  - Use the created database to:
    - Create custom indices.
    - Archive the data.

- Ability to name or rename description for tasks.

- Enterprise Routing Framework for emitting EDA events for Task Engine.

Business Console Enhancements

Business Console includes the following enhancements:

- Ability to create mandatory and non-mandatory tasks in a to-do list (group task).

- Improved process list management and task list management. Now users can:
  - View the task instances associated with a process.
  - View process diagram and process duration in the process details page.
  - Search for process instances.
  - Customize labels of tabs in task details and process details pages.

Process Engine/Monitor

Process Engine/Monitor includes the following enhancements:

- Process ETA (estimated time of arrival) visualization for each possible path.

- Ability to escalate all pending tasks within a process through a priority event.

Enterprise Routing Framework for emitting EDA events for Process Engine.

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webMethods Broker

webMethods Broker 9.6 is tested and supported with webMethods 9.9.

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webMethods Business Rules

Support of Data Types List, Table, and Document

Decision table results, event rule results, and service actions now support the data types list, table and document. Additionally, the Rules Development feature can perform list operations (createList, appendToList, insertIntoList, removeFromList).

webMethods Deployer Integration

The Rules Management Console (RMC) is added as an endpoint for webMethods Deployer. This endpoint also supports "merge" and "hot deploy".

Rules Import/Export

Import/export between Software AG Designer and the Rules Management Console has been improved allowing locking and auditing for any Rules JCR access. The Rules Management Console now automatically recognizes new or modified rule projects, and enables removal of the "Welcome" page. Furthermore, a rule project users can import "from archive" without the need for the rule project to exist beforehand.

Event Routing Framework

Business Rules has adopted the new webMethods Event Routing Framework.

Extension of "Public API"

The existing "Public API" is extended by a new RESTful API for the Rules Management Console that allows users to import, export and, deploy rule projects.

Customization of the Rules Management Console

The Rules Management Console has been separated into several independent portlets. In addition, users can now customize it using CSS stylesheets.

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webMethods CloudStreams

CloudStreams Framework Enhancements

CloudStreams framework has been enhanced to support two additional capabilities:

- Dynamic metadata lookup for SaaS providers exposing REST resources. This lookup provides information about available resources, their methods, and fields.

- Transformation capability for customizing requests and responses in the signature of SOAP connector services.

Additional Connectors

New connectors are available for the following SaaS applications:

- Microsoft Dynamics CRM

- Amazon SNS

- Amazon Data Pipeline

- Amazon Kinesis

- Amazon RDS

- Amazon Redshift

- Facebook

- Google Calendar

- Google Contacts

- LinkedIn

- Melissa Data Search

- Melissa Data Verifier

- Twitter

Migration Enhancements

Now, CloudStreams supports migration of cloud connector services from an existing version to a newer version of the SaaS provider.

webMethods Composite Application Framework

webMethods Application Platform Services in My webMethods Server

Users can now deploy webMethods Application Platform services into a My webMethods Server container. Through the use of simple annotations, the Application Platform services are discoverable and callable from Composite Application Platform (CAF) and OpenCAF user interfaces, making it easy for developers to add business logic to their CAF and OpenCAF applications without the need to resort to third-party application servers or complex Java deployments.

webMethods Deployer

Support Deployment of Rules Assets to Rules Management Console

Asset Build Environment and Deployer now enable users to build webMethods Business Rules assets and deploy them to:

- Rules Management Console in My webMethods Server.

- Primary Rules engine in Integration Server.

Support of Authenticated Connections for Deployment of Assets to Universal Messaging

webMethods Deployer now supports deployment of assets to Universal Messaging servers that are configured to enforce authentication using either basic authentication or certificate-based authentication.

webMethods Enterprise Gateway

Support for Custom Filters

webMethods Enterprise Gateway allows the definition and use of custom filters with Enterprise Gateway Rules. Users can define the processing that a service must perform, and then create a custom filter that invokes the service. For example, a service might perform authentication and authorization of clients or processing of payloads within the gateway. When developing the flow service that performs the custom processing, users have full access to the capabilities of the webMethods flow language and the built-in public services.

webMethods EntireX

Multiple Possible Outputs for COBOL

For COBOL integration scenarios, the concept of multiple possible outputs (MPOs) is now supported. This means that you can define a set of possible layouts for the reply structure. At runtime, one concrete layout is returned based on a selector value.

Monitoring and Administration

- A new logging exit for the monitoring scripts on Windows is available. This enables users, for example, to call their own routines and/or write to CSV files.

- A new Java Custom Callback interface is available for EntireX Application Monitoring, allowing users to implement their own actions for each KPI or error record received. Users can trigger their own actions, such as pushing KPIs to another data store and handling KPI-specific actions.

- Users can now use Command Central to administer EntireX Brokers of version 9.9 running on Linux, UNIX or Windows. A graphical user interface is available to perform tasks as starting and stopping Brokers, monitoring basic KPIs, setting ports, static trace level, and editing attribute files.

  In addition, users now have the facility to create and delete the EntireX Brokers Command Central command line.

Security Enhancements

- EntireX Encryption is now deprecated, and in its place, SSL/TLS is the method of choice for Transport Layer Security.

- T-TLS is fully verified on z/OS.

- ATLS is verified on z/VSE with EntireX Fix 11.

- EntireX Adapter for Integration Server allows users to change enabled TLS protocols and cipher suites.

- OpenSSL version 1.0.1 is supported.

Enhancements in EntireX Adapter for Integration Server

- Listener statistics are provided.

- License status message is more precise.

- The EntireX Adapter documentation set has been combined with the EntireX documentation set. All references between EntireX and EntireX Adapter documentation are now clickable hyperlinks.

Improvements for Ease of Operation and Enhanced User Experience

- EntireX Mini Runtime is now installed using the Software AG Installer.

- Multiple error messages have been reworked, in particular IDL parser messages.

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webMethods Integration Server

Enhanced Support for XML

Integration Server now includes a new data type to represent XML in addition to IData. The new data type, XML data, more faithfully represents XML content. Thereby, XML data enables support for XML Schema constructs, such as substitution groups, nested model groups, the any wildcard, and the anyAttribute wildcard. XML data also offers significant improvements in the handling of XML namespaces. XML data is surfaced in Integration Server and Designer through XML document types which are created from XML Schema definitions. Integration Server also includes public services for converting XML documents to XML data and vice-versa.

Enhancements to URL Alias

Integration Server now provides support for defining URL alias destinations based on specific incoming ports. This enables users to define a single URL alias that may resolve to different destinations based on the business partner submitting the request. In addition, users can now define the "empty path" as an alias allowing the definition of a default destination for any incoming port.

Support Inbound Kerberos Authentication for Web Services and REST Services

Integration Server now supports authentication of an inbound web services request containing a Web Services Security-based Kerberos token through incorporation of the WS-Security Kerberos policy. In addition, Integration Server can now authenticate an HTTP request that contains a Kerberos token. The authentication includes identifying ports that can accept a Kerberos token. The improved Kerberos support increases Integration Server interoperability with Microsoft .NET-based environments.

Ability to Name the Default Instance of Integration Server

During installation, administrators can now provide the name that Integration Server uses for the default instance.

Command Central Integration

Command Central can now be used to centrally administer and configure LDAP settings for a given Integration Server instance.

Enhanced OData Support

OData services hosted in Integration Server provide out-of-the-box support for handling $expand and $filter system query options. Users do not need to write custom code to handle these operators. The Use custom filter property of OData service allows users to choose whether or not to use custom filters instead of the built-in filters that Integration Server provides when using $filter.

Send and Receive Events Using the Event Routing Framework

Integration Server can send events in a synchronous manner to the messaging provider using the Software AG Event Routing framework. Integration Server can also create subscriptions to or unsubscribe from event types using Software AG Event Routing.

Deprecation of WmVCS package

The WmVCS package, which provides the functionality for using the VCS Integration Feature, is deprecated.

Display Time Zone on Integration Server Administrator Scheduler Pages

The pages for working with scheduled tasks in Integration Server Administrator now display the time zone setting for the current server. This can be especially helpful for administrators when adding or modifying scheduled tasks.

webMethods Mediator

API Versioning

CentraSite and Mediator now provide full support for versioning of SOAP and REST APIs. The CentraSite Business user interface allows versioning of virtual services and publishing of distinct versions to Mediator. Mediator is able to host multiple versions of the same service during runtime. Versioning indicators in the URL allow Mediator to perform an automatic routing of requests to the appropriate version.

Enhanced Runtime Aliases

Mediator Runtime Aliases have been enhanced to allow Request/Response and Error Processing steps to be configured as Runtime Aliases.

Kerberos Authentication Support

Mediator provides inbound and outbound support for Kerberos authentication.

webMethods Mobile Suite

ARIS Mobile Services Enhancements

Mobile Designer now fully supports integration with ARIS API and creation of applications based on ARIS data. ARIS API REST services can be created automatically.

Integration Server Introspection

Mobile Designer now provides integration with Service Development to browse and automatically add services from Integration Server to the application model.

Data Modeling

The Entity Modeling Language has been introduced to define a project specific data model and its support within the application model.

Improved Data Binding Support

DataBindings can now also be added to the following elements: Entry, DateEntry, Entry, RadioButton and Checkbox.

Expanding of AML Editor

The AML Editor will now automatically expand its elements once it is opened to show the basic structure of the model.

Improved Push Notification Support for Mobile Applications

Applications can now access the full payload, receive a notification when the UID was created, and receive error messages.

ContentAdapter Support for Multiple Templates in a ListView/ListViewElement

Each ContentAdapter now supports multiple TemplateAssignment objects. A TemplateAssignment represents a template in combination with a filter expression. The ContentAdapter also supports multiple RowSelectionListener objects.

SideView Support

Mobile Designer now supports native SideViews that can be used as alternative to NavViews and can contain any control. Users can set two side views for a main window, one for the left side and one for the right side.

Performance Improvements for iOS and Windows platforms

Performance of Mobile Designer runtime has been improved significantly for iOS and Windows platforms.

Improved Project Structure in XCode

Now all Java packages are represented as folders in the project explorer of the cross-compiled XCode project instead of all files in one folder.

Improved Control for nUIDialogWindows

Users can now modify the default dimensions of a nUIDialogWindow. This allows applications to provide a more consistent style for their application.

Product Deprecation

Mobile Administrator is deprecated.

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webMethods OneData

Additions to Data Steward User Interface

OneData now provides enterprise-class full text search functionality in the new user interface.

Service Layer Improvement

RESTful Application Program Interface (API) now supports explicit transactions. Developers can implement use cases in which multiple REST web service calls are wrapped within a single transaction.

Metadata Localization

Users can now localize metadata created in projects; for example, in objects or column names. OneData includes a new menu option, Metadata Localization, to define translations for metadata elements in the user's language of choice.

Archive and Purge Log Job

It is now possible to define schedules for jobs performing log archiving and purging. Administrators can also define how much log data to retain.

Security Enhancement

A number of Data Manager screens can now be protected against security vulnerability of Cross-Site Request Forgery (CSRF) using the org.owasp.csrfguard.Enabled and referer-pattern properties.

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webMethods Optimize for Infrastructure

SNMP Upgrade

The SNMP version support has been upgraded to SNMP v3, enabling customers to take advantage of new capabilities in this later version.

Upgrade Improvements

webMethods has established Java Service Wrapper as a standard across the suite. In this release, migration for Java Service Wrapper customizations for Optimize has been automated so that users will no longer need to re-apply them when performing an upgrade.

Apama Monitoring

Users can now monitor Apama through Optimize for Infrastructure. In addition, users can also discover Apama instances and set KPIs set on a number of components:

- Correlator attributes
- Monitor
- Timer
- Container
- Listener
- Context
- Receiver
- Plug-in Receiver

Secure MWS Monitoring

Connections to MWS can now be established over HTTPS, enabling Optimize to monitor secured MWS installations.

Enhanced Integration Server Monitoring

Users can discover and monitor file polling ports in Integration Server.

Extended Presto Monitoring

Presto monitoring by Optimize for Infrastructure is enhanced to include the Tomee Tomcat Server.

webMethods Optimize for Process

BAM-Only Processes Show Failing Steps

Optimize for Process now supports "failing" steps for BAM-only processes. Just as with an orchestrated process, users see a red "X" on the live process model when an un-orchestrated process step fails. This visual cue enables easy recognition of issues and quicker resolution.

Enhancements to In-Context Jump to PPM

For users who run both Optimize and PPM, the dashboard provides a "View in PPM" function to enable an in-context jump to PPM. When in PPM, users can explore long-term historical data on the same process using extensive analysis capabilities.

In this release, from the KPI instance detail page, an "Investigate" button automatically opens a new browser tab and PPM is loaded with the appropriate context.

Updates for Closed Loop Analytics

Closed-Loop Analytics (CLA) includes enhancements for business users.

When a user initiates an email or a task from a CLA dashboard, the system remembers the stage selection on the return URL. This means that clicking the URL not only takes the user to the correct page, but also displays the proper stage that initiated the pre-selected action.

Additionally, there are several aesthetic improvements to the dashboards. For example, unnecessary borders have been removed in the Business Console.

Performance Improvements

Performance improvements in this release include:

- Reduced Analytic Engine start-up time

- Improved throughput of KPI readings

- Efficient means of determining the status of Stage Instances

These enhancements continue the trend of implementing performance improvements with every release to support large-scale implementations.

Ease of Operations

Optimize Analytic Engine and Web Service Data Collector shut down automatically when installing or uninstalling products. This simplifies maintenance efforts and reduces the likelihood of installation issues.

Suite Monitoring

Users can now perform basic monitoring of Analytic Engine using the Command Central user interface.

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webMethods Process Performance Manager

Real-Time to Historic Visual Data Analytics

Process Performance Manager (PPM) presents and allows process analytics for the user who is directed to PPM from Optimize. When customers implement PPM templates for webMethods BPMS, PPM displays data for the original Optimize process to which the users had referred. This release enhances this functionality by allowing the PPM user to create an alert in Optimize for the currently being analyze intrinsic measure. This alert option is available from the context menu.

Data Analytics

Extraction process for data analytics now supports partial data extraction using either timestamp columns or sequence columns to determine the difference between the source and PPM data store. Users can configure which method of partial delta extractions can be use in CTK.

Process Extractors

JDBC Process Extractor was enhanced to recognize and allow the use of non-standard SQL table name and schema names. It will now be able to recognize case-sensitive names or ones using special characters.

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webMethods Service Development

Support for Comparing Packages and Elements

Developers can now use the compare capability to compare packages and elements on the same server or on different servers, and thus track changes to a package or element during the development process. This support is available for the following:

- Packages
- Folders
- Flow Services
- IS Document Types

The compare editor provides a visual comparison of the items compared along with annotations that indicate the changes. Users can also use the compare capability to compare the current version of a flow service or an IS document type with their previous versions.

Support for Automatic Scrolling and Expanding of Variables during Mapping

Software AG Designer provides automatic scrolling and expanding capabilities while mapping complex data types in integration pipelines. When mapping large pipelines in Designer, developers no longer have to scroll to view the fields before being able to drag a map line from the source variable to the target variable. The pipeline editor is now able to scroll and expand automatically while the mouse is dragged from the source variables to the target, thus bringing the target variables into view. This increases the ease of use and helps reduce errors in complex mappings.

Java Compilation Enhancements

Software AG Designer automatically compiles the Java service when it is checked out of the version control system using the built-in check out facilities in Designer.

Adapter Notifications Support for Non-Default webMethods Messaging Aliases

Adapter notifications generate publishable document types which were previously bound to the default webMethods Messaging connection alias. Now, developers can select which specific messaging connection to use for each generated document type.

Testing capabilities support Universal Messaging

Developers can now use two testing features of Software AG Designer with Universal Messaging:

- Publishable document types can be sent from Software AG Designer to Universal Messaging using the Run As > Publishable Document option.

- webMethods Messaging Triggers subscribing from Universal Messaging can be tested using the Run As > webMethods Messaging Trigger option.

webMethods Trading Networks

Flexible Suspension of Document Deliveries to Partners

webMethods Trading Networks provides a flexible schedule-based ability to suspend document deliveries to partners. This enables administrators to proactively schedule document delivery suspensions based on planned outages informed by partners. Depending upon the nature of the outage, delivery suspension schedule can be setup to recur at a set interval (daily, weekly, monthly, and yearly) or can be triggered once. Administrators also have the ability to set the start time and end time of the scheduled interval in a partner's time zone, thereby avoiding errors that result from manual time zone conversions.

Support for Database Partitioning

webMethods Trading Networks provides out-of-the-box support for database partitioning for Oracle database. Database partitioning is especially useful when archiving data from production tables to archive tables and provides a significant performance improvement compared to a batch based archival process.

Customizable scripts enable:

- Partitioning of data based on time intervals.

- Deletion of data from a partitioned database.

- Archiving of runtime data to a partitioned database...

- Deletion of archived data from a partitioned database.

webMethods Universal Messaging

Automatic Creation of JNDI Entries During JMS Migration from webMethods Broker

Earlier, it was necessary to manually create JNDI destination entries for migrated queues and channels if webMethods Broker JMS connections were configured using Native webMethods API instead of JNDI Lookup. Now, the Broker-to-Universal Messaging JMS migration utility provides the option to auto-generate relevant JNDI destination entries for migrated queues and channels.

Realm Properties Configurable Using Command Central

Command Central now provides support for configuration of Universal Messaging realm properties using the Command Central web user interface, command line, or templates.

JMS Resource Adapter Pre-packaged

Universal Messaging now provides a pre-packaged JMS Resource Adapter for easy use in third-party application servers.

Enterprise Manager Enhancements

The following usability improvements are now available in Enterprise Manager:

- When creating or editing JNDI Connection Factories, users can now select, view, or change the Shared Durable flag for Connection Factory with greater ease. The Shared Durable flag for Connection Factory flag defines if multiple client connections are allowed to concurrently read from JMS Topic Durable Subscriptions.

- When viewing Named Objects (also called Durable Subscriptions) associated with a channel, Enterprise Manager now displays the number of messages pending retrieval by the subscriber.

- Removal of the login section at the top of the JNDI panel provides a more streamlined user interface for JNDI editing.

AMQP 1.0 Support

Universal Messaging now supports a significant part of the AMQP 1.0 standard wire protocol for messaging, specifically the parts that are exposed through the JMS API.

The following capabilities are supported:

- TCP and TLS (alternative NOT negotiated) transport.

- AMQP PLAIN and AMQP over Simple Authentication and Security Layer (SASL).

- Publishing to Topics and Queues (non-transactional).

- Temporary Queues.

- Keep Alives.

- Synchronous and Asynchronous consuming on topics and queues (non-transactional).

- Flow control.

- Durable subscribers.

- Interoperability with UM publishers and subscribers (using any of the available client APIs).

- Interoperability with existing AMQP JMS clients (SwiftMQ, Apache QPID and Apache Legacy QPID).

- Some interoperability with MQTT clients.

Note: AMQP support is only available with the fully-featured Universal Messaging license (NUMWF or NUMTF).

Adapter Notifications Support for Non-Default webMethods Messaging Aliases

Adapter notifications generate publishable document types which were previously bound to the default webMethods Messaging connection alias. Now, developers can select which specific messaging connection to use for each generated document type.

Testing capabilities support Universal Messaging

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Support of Authenticated Connections for Deployment of Assets to Universal Messaging

webMethods Deployer now supports deployment of assets to Universal Messaging servers that are configured to enforce authentication using either basic authentication or certificate-based authentication.

Documentation

Significant changes to product documentation sets or to individual documents are described in the readmes for each product.

Cross-Product Documentation

- New Software AG Infrastructure Administrator's Guide

  The documentation for Software AG Common Platform, Software AG Runtime, Software AG Security Infrastructure, Software AG Web Services Stack, and the Tanuki Software, Ltd. Java Server Wrapper as it is used by Software AG products has been combined into a single guide named Software AG Infrastructure Administrator's Guide.

- Complete Installation and Upgrade Information in One Compendium

  You can now find an HTML compendium on Empower containing all installation and upgrade information under a single navigation and search. The compendium is also available for download. This is in addition to the PDF library which is published as before.

- Renamed Guides

The following guides have been renamed:

- Old name: webMethods and Intelligent Business Operations System Requirements

  New name: System Requirements for Software AG products

- Old name: Supported Upgrade Paths for webMethods and Intelligent Business Operations Products

  New name: Supported Upgrade Paths for Software AG Products

- Old name: Installing webMethods and Intelligent Business Operations Products

  New name: Installing Software AG products

- Old name: Upgrading webMethods and Intelligent Business Operations Products

  New name: Upgrading Software AG Products

The product brands covered by these guides are listed in the respective documents.

- Readmes contain cumulative information back to webMethods 9.5 release, and are logically combined.

  Readmes have been changed to contain cumulative information from webMethods 9.5 through 9.9. Supported upgrade paths for 9.9 are from 9.0 and later, so the 9.9 readmes now contain all necessary readme information for all upgrades to 9.9.

  In addition, some readmes have been logically combined for ease of use. For example, the readmes for Rules Engine, Rules Development, and Rules Console Management have now been combined into a single Business Rules readme, and the readmes for Software AG Common Platform, Software AG Runtime, Software AG Security Infrastructure, and Software AG Web Services Stack have been combined into a single Software AG Infrastructure readme.

webMethods EntireX

Documentation for EntireX Adapter is now incorporated in the EntireX documentation for ease of use. All references between EntireX and EntireX Adapter documentation are now clickable hyperlinks. The EntireX Adapter documentation is also provided as a standalone PDF file under webMethods Product Line > Adapters and eStandards Modules > Adapters on the Software AG documentation website.

Software AG Event Routing

"Communicating between Software AG Products Using Event Routing" PDF publication has been included in this release. It contains information about administering, configuring, and using Software AG Event Routing.

Upgrade

Infrastructure Data Collector Migration Utility Migrates Java Server Wrapper Customizations

The Infrastructure Data Collector migration utility now migrates JAAS, JMX, SSH, security, Java Service Wrapper custom wrapper, log, platform debug, Web Services Stack, and watchdog configurations automatically. Previously, users had to perform their migration manually.

Integration Server Migration Utility Can Migrate WmFixMessages and WmFlatFile Packages

The Integration Server migration utility now offers the ability to migrate the WmFixMessages package (webMethods Fix Module) and the WmFlatFile package. Previously, you had to migrate these packages manually.

Readmes Contain Cumulative Information Back to webMethods 9.5 Release

Readmes have been changed to contain cumulative information from webMethods 9.5 through 9.9. Supported upgrade paths to 9.9 are from 9.0 and later, so the 9.9 readmes now contain all necessary readme information for all upgrades to 9.9.

Complete Installation and Upgrade Information in One Compendium

You can now find an HTML compendium on Empower containing all installation and upgrade information under a single navigation and search. The compendium is also available for download. This is in addition to the PDF library which is published as before.

Renamed Guides

The following guides have been renamed:

- Old name: webMethods and Intelligent Business Operations System Requirements

    New name: System Requirements for Software AG products

- Old name: Supported Upgrade Paths for webMethods and Intelligent Business Operations Products

    New name: Supported Upgrade Paths for Software AG Products

- Old name: Installing webMethods and Intelligent Business Operations Products

    New name: Installing Software AG products

- Old name: Upgrading webMethods and Intelligent Business Operations Products

    New name: Upgrading Software AG Products

The product brands covered by these guides are listed in the respective documents.

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