webMethods Microservices Runtime 10.4 Readme

April 2019

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

This file contains important information you must read before using webMethods Microservices Runtime 10.4. You can find system requirements, user documentation, and installation and upgrade instructions on the Documentation website or the TECHcommunity website. At those locations, you can also find suite-related security and globalization information.

Included in this file is information about functionality that has been added, removed, deprecated, or changed for this product. Deprecated functionality continues to work and is supported by Software AG, but may be removed in a future release. Software AG recommends against using deprecated functionality in new projects.

webMethods Microservices Runtime provides a superset of the functionality available in webMethods Integration Server. Review the webMethods Integration Server 10.4 readme for information about webMethods Integration Server 10.4.

1.0 Critical Information

This section lists any critical issues for the current release that were known when this readme was published. For critical information found later, go to the Knowledge Center on the Empower website.

2.0 Known Issues

This section lists any issues for the current release that were known when this readme was published. For known issues found later, go to the Knowledge Center on the Empower website.

3.0 Usage Notes

This section provides any additional information you need to work with the current release of this product.

As of Microservices Runtime version 10.4, Microservices Runtime receives runtime configuration settings, such as the Java heap size, from setenv.bat/sh. This change is due to the removal of the OSGI platform from Microservices Runtime.

Additionally, because Microservies Runtime does not support running multiple instances on the same host machine under the same Software AG_directory, the Microservices Runtime directory structure no longer includes the following directories:

Integration Server_directory/instances/instanceName

If you need to modify the default property settings for Microservices Runtime, edit the Integration Server_directory\setenv.bat(sh) file. The following table shows the settings formerly set in the custom_wrapper.conf file that are now set using the setenv.bat/sh file:

This property in custom_wrapper.conf…	**Is replaced by this setting in setenv.bat/sh…**
wrapper.java.additional.203=-Dwatt.server.append.classes=	APPENDCLASSES
wrapper.java.additional.*n*	JAVA_CUSTOM_OPTS
wrapper.java.additional.*n*=XX:MaxDirectMemorySize=	JAVA_CUSTOM_OPTS
wrapper.java.maxmemory	JAVA_MAX_MEM
wrapper.java.initmemory	JAVA_MIN_MEM
wrapper.java.additional.202=-Dwatt.server.prepend.classes=	PREPENDCLASSES.

The following table shows settings you can change that were formerly in the wrapper.conf, custom_wrapper.conf, but are now located in other files or removed

Setting	New location (if applicable)
Running Microservices Runtime in Debug Mode	Integration Server_directory\bin\ startDebugMode.bat(sh)
Java location	JAVA_DIR property in Integration Server_directory\bin\setenv.bat(sh)
JMX_ENABLED	Integration Server_directory\bin\setenv.bat(sh)
JMX_PORT	Integration Server_directory\bin\setenv.bat(sh)

Additionally, the following files are now located in Integration Server_directory\bin:

jcode.bat(sh)
startDebugMode.bat(sh)
server.bat(sh)
startup.bat(sh)
shutdown.bat(sh)

- As of Microservices Runtime version 10.3, Microservices Runtime creates two predefined URL aliases named “health” and “metrics” which correspond to the health gauge and metrics gathering capabilities respectively. Software AG does not recommend editing the predefined “health” or “metrics” URL aliases.
- If you migrate to Microservices Runtime version 10.3 or higher from an earlier version and you already have a URL alias named “health” and/or “metrics”, Microservices Runtime does not create a health and/or metrics URL alias. Any invocations of the health or metrics endpoints will not result in execution of health indicators or metrics gathering, respectively. If you want to use the health gauge and/or metrics gathering, you need to rename your existing health URL alias. Microservices Runtime will create a new health and/or metrics URL alias that corresponds to the health endpoint and/or metrics functionality upon restart.

4.0 Fixes Included in Each Release

This section lists the latest fix level that has been included in each release for each product component. A release is listed in this section only if changes occurred in that release. Go to the Knowledge Center on the Empower website for detailed information about fixes.

Release 10.1

- IS_10.0_WmConsul_Fix1

5.0 Other Resolved Issues

This section lists the issues that were resolved in each release but were not part of the fixes listed in the previous section. A release is listed in this section only if changes occurred in that release.

6.0 Documentation Changes

This section describes significant changes to the documentation, such as the addition, relocation, or removal of product guides, online help, chapters, or other major content. A release is listed in this section only if changes occurred in that release.

Release 10.2

- The *Developing Microservices with webMethods Microservices Container* guide has been renamed *Developing Microservices with webMethods Microservices Runtime* to reflect the product name change from webMethods Microservices Container to webMethods Microservices Runtime.

Release 10.0

- Information about using webMethods Microservices Container is located in *Developing Microservices with webMethods Miroservices Container*.

7.0 Terminology Changes

A release is listed in this section only if changes occurred in that release.

Release 10.2

Old Term	New Term
webMethods Microservices Container	webMethods Microservices Runtime

8.0 Added, Removed, Deprecated, or Changed Items

This section lists features, functionality, controls, portlets, properties, or other items that have been added, removed, deprecated, or changed. A release is listed in this section only if changes occurred in that release.

Release 10.4

Added Item	Description
New configuration variable properties	A configuration variables template now includes configuration variables for properties in health indicators, Universal Messaging connection aliases for native messaging, user accounts, and Consul Registry Server aliases.
Prometheus metrics for packages, service request duration, and CloudStreams connectors	The Microservices Runtime metrics endpoint returns new metrics for the number of packages, services, and CloudStreams connectors. The endpoint also returns metrics about service request durations.

Removed Item	Replacement, if any
Microservices Runtime no longer uses OSGi platform	None.
Microservices Runtime no longer uses the Java Service Wrapper or the configuration files wrapper.conf and custom_wrapper.conf for property settings.	Set Java system properties are set in Integration Server_directory/bin/setenv.bat(sh) using the JAVA_CUSTOM_OPTS property.
Microservices Runtime cannot be run as a Windows service.	An Integration Server equipped with a Microservices Runtime license can be run as a Windows service.
Microservices Runtime cannot be used with Digital Event Services.	An Integration Server equipped with a Microservices Runtime license can be used with Digital Event Services.
Microservices Runtime cannot be used with the Event Routing feature.	An Integration Server equipped with a Microservices Runtime license can be used with the Event Routing feature.

Changed Item	Description
Microservices Runtime directory structure	Because Microservices Runtime no longer uses the OSGi platform, a Microservices Runtime installation does not include the following directory: Integration Server_directory/profiles Because Microservies Runtime does not support running multiple instances on the same host machine under the same Software AG_directory., the Microservices Runtime directory structure does not include the following directories: Integration Server_directory/instances/instanceName
Windows Start Menu Commands	When running Microservices Runtime on Windows, the Windows start menu commands no longer include the instanceName. Microservices Runtime does not support running multiple instances on the same host machine under the same Software AG_directory.
A JMX port is no longer enabled by default for Microservices Runtime	Manually enable the JMX port by editing the IntegrationServer_directory/bin/setenv.bat(sh) file.

Release 10.3

Added Item	Description
Configuration Variables Template	A configuration variables template is a properties file that contains configuration data as a series of key-value pairs where the key name reflects the asset and particular asset property for which you can supply a value. The property values are set in the template and then applied by a Microservices Runtime at startup. By externalizing configuration information, a single Docker image created for a Microservices Runtime can be used across multiple environments, including different stages of the production cycle.

Added Item	Description
Automatic Package Deployment	Automatic deployment of packages allows Microservices Runtime to install or upgrade packages automatically without needing to use Deployer or Microservices Runtime Administrator. Automatically deploying packages can be particularly useful for a Microservices Runtime that runs in a Docker container because it allows new or updated packages to be automatically added to the Microservices Runtime running the container which removes the requirement to rebuild the Docker image each time you want to add or update a package.
Health Gauge	The health gauge returns an overall UP or DOWN status for the Microservices Runtime based on the collective status of enabled health indicators. When the health endpoint is invoked, Microservices Runtime executes all of the enabled health indicators. A health indicator determines the UP or DOWN status of a specific component of Microservices Runtime. If all of the health indicators return an UP status, the entire Microservices Runtime is considered to be up. If even one of the health indicators returns a DOWN status, the entire Microservices Runtime is considered to be down.
Metrics Gathering for Prometheus	Microservices Runtime includes a metrics endpoint that, when invoked, generates metrics about the server and services on the server. Microservices Runtime returns the statistics in a Prometheus format which the Prometheus server can use to provide insight to the operation of the Microservices Runtime and the services it contains.

Release 10.2

Added Item	Description
Circuit Breaker	The circuit breaker feature provides the ability to configure a circuit breaker for any service residing on a Microservices Runtime or an appropriately licensed Integration Server.

Release 10.0

Added Item	Description
WmConsul Package	Package used for configuring connections to Consul. The WmConsul package also contains public services for registering and deregistering microservices containers as well as locating a host for a specific microservice.

9.0 Added, Removed, Deprecated, or Changed Built-In Services

A release is listed in this section only if changes occurred in that release.

Release 10.0

Added Service	Description
pub.consul.client:deregisterService	WmConsul. Deregisters a microservice from a Consul server.
pub.consul.client:getAllHostsForService	WmConsul. Queries the Consul server for a list of active hosts that have registered the given microservice with Consul.
pub.consul.client:getAnyHostForService	WmConsul. Queries the Consul server for a list of active hosts that have registered the given microservice with Consul and if there are multiple hosts for this microservice, randomly return one of those hosts.
pub.consul.client:registerService	WmConsul. Registers a microservice with a Consul server. Use as a startup service for the package being registered as a microservice.

10.0 Added, Removed, Deprecated, or Changed Parameters

A release is listed in this section only if changes occurred in that release.

Release 10.3

Added Parameter	Description
watt.server.autodeploy.alwaysUseHotDeployment	Specifies whether or not Microservices Runtime always uses hot deployment for automatic deployment of packages.

Added Parameter	Description
watt.server.autodeploy.enabled	Specifies whether automatic deployment of packages is enabled or disabled for Microservices Runtime.
watt.server.autodeploy.interval	Specifies the interval, measured in minutes, at which Microservices Runtime executes the autodeploy system task to check for new or updated packages to deploy.

Release 10.2

Added Parameter	Description
watt.server.circuitBreaker.threadPoolMax	Specifies the maximum number of threads that the server maintains in the circuit breaker thread pool.
watt.server.circuitBreaker.threadPoolMin	Specifies the minimum number of threads that the server maintains in the circuit breaker thread pool.

11.0 Copyright Information

12.0 Support

Visit the Empower website to learn about support policies and critical alerts, read technical articles and papers, download products and fixes, submit feature/enhancement requests, and more.

Visit the TECHcommunity website to access additional articles, demos, and tutorials, technical information, samples, useful resources, online discussion forums, and more.

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