



IBM MobileFirst Platform Foundation

IBM MobileFirst™ Platform Foundation V7.1.0 on IBM® Containers

Plugin for IBM UrbanCode Deploy

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About this document

This edition applies to the first and subsequent versions of the plugin. The information can change at any time.

1 Plugin overview

The plugin includes steps that can manage the build and deployment of a MobileFirst Server on a container.

1.1 Steps included

The plugin includes steps that are related to the deployment of a MobileFirst Platform Foundation container and the deployment of apps and adapters, including the following:

- Create databases
- Prepare and push server images
- Prepare and push analytics images
- Start server container
- Start server group
- Start analytics container
- Start analytics container group
- Create server container (create database, prepare, push, and start container)
- Create server container group (create database, prepare, push and start container group)
- Deploy apps and adapters
- Remove existing container
- Remove existing container group
- Remove server runtime
- Undeploy apps and adapters from a runtime

1.1.1 Software requirements and compatibility

The following table lists software requirements based on the plugin version.

Plugin Version	Required Software	Compatible Software
IBM MobileFirst Platform Foundation on IBM Containers plugin Version 1.0	IBM UrbanCode Deploy Version 6.1.0 or later	IBM MobileFirst Platform Foundation Version 7.1.0

2 Deploying a MobileFirst Platform Foundation container

Before deployment, ensure that the following software is installed and running:

- IBM UrbanCode Deploy
- IBM Containers Extension (ICE) CLI on the UrbanCode Deploy Agent
- IBM MobileFirst Platform Foundation CLI on the UrbanCode Deploy Agent

Additional requirements might include:

- A source control management (SCM) system.
- A public IP address on IBM Bluemix (for the deployment of single-node containers)

Before building and deploying the MobileFirst Platform Foundation containers, ensure that:

- If applicable, your SCM system is configured and contains the artifacts listed in this article:
<http://developer.ibm.com/mobilefirstplatform/documentation/getting-started-7-1/bluemix/run-foundation-on-bluemix>
- UrbanCode Deploy is configured as follows:
 - Components were created to pull the container artifacts to the code station.
 - Component processes or application processes include steps from the plugin to deploy the containers.

Procedure

1. Commit any changes to the container artifacts.
2. Request the deployment in UrbanCode Deploy.
3. View the database created by the Bluemix database service.
4. Open the MobileFirst Operations Console and view the runtimes deployed.

Tip: In a non-production environment, you can deploy a single-node container that requires a public IP address from Bluemix.

Example of the creation of component integrating with GIT SCM

The following component configuration shows the SCM configuration (GIT) for pulling the container artifacts based on the version change automatically.

The screenshot shows the configuration page for a component named 'IBM MobileFirst Container Creation'. The 'Description' is 'Creates the MobileFirst Container as a single node'. Under 'Teams', there is a green plus icon. The 'Template' is set to 'None' and 'Component Type' is 'Standard'. The 'Version Source Configuration' section is expanded, showing 'Source Configuration Type' as 'Git'. The 'Repository URL' is 'git@islrppcxv70.in.ibm.com:MFP_Container.git', and the 'Branch' is 'mayank'. There are empty text areas for 'Includes' and 'Excludes', and a 'GIT Path' of 'git'. Below this, 'Preserve Execute Permissions' is checked, 'Extensions of files to Convert' is '.txt,.log,.properties', 'Import Versions Automatically' is checked, 'Copy to CodeStation' is checked, and 'Default Version Type' is 'Full'. Three radio buttons are present: 'Use the system's default version import agent/tag.' (selected), 'Import new component versions using a single agent.', and 'Import new component versions using any agent with the specified tag.'. The 'Cleanup Configuration' section shows 'Inherit Cleanup Settings' checked and 'Run Process after a Version is Created' unchecked. 'Save' and 'Cancel' buttons are at the bottom.

Example of container creation steps

The following steps take place during container creation:

Download MobileFirst Platform Foundation container files - downloads the container files from code station to the plugin location.

Delete existing files and directories - deletes the existing container files from a defined location (provided by the user).

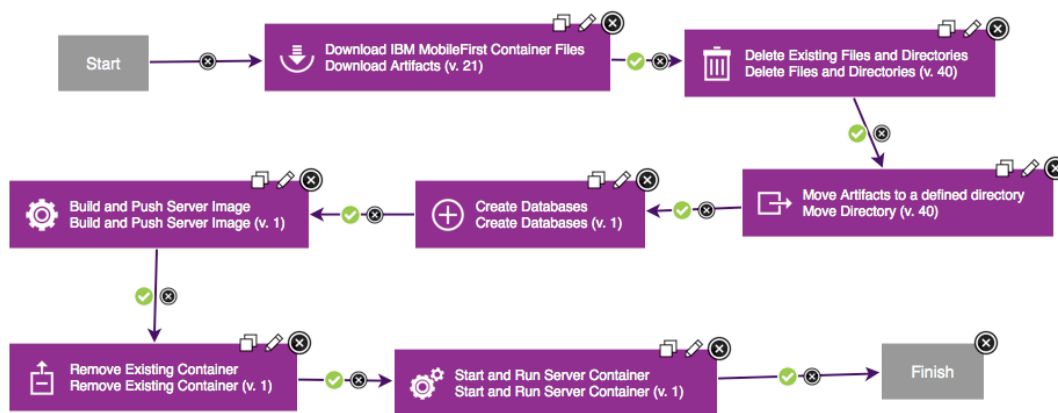
Move container files to a defined directory - moves the downloaded files from the plugin location to the defined directory.

Create databases - creates the required databases, which includes the MobileFirst Platform Foundation administrative database and runtime databases (if any of the runtimes are included in the `/usr/projects` folder structure).

Prepare and push server image - prepares the container image.

Remove existing container - removes the existing container (if required).

Start server container - starts the container and binds the public IP address to the running container.



3 Deploying apps and adapters to the MobileFirst Platform Foundation container

Before deployment, ensure that IBM UrbanCode Deploy is installed and running. In addition, the following software might be required:

- An SCM system
- A build engine, such as Jenkins (This is needed if you are automating the build process for the apps and adapters.)

Before you can build and deploy apps and adapters, you must have completed the following:

- Configured the SCM system.
- Placed the apps and adapters in the `usr/projects` folder of the container artifacts.
- Configured UrbanCode Deploy:
 - Created components to pull the project artifacts mentioned in the previous step to the code station.
 - Created component processes or application processes that include steps from the plugin to deploy the apps and adapters.

Procedure

1. Commit any changes to the container artifacts.
2. Request the deployment in UrbanCode Deploy.
3. View the apps and adapters deployed to the container.

Example of sample step properties

Edit Properties



Name *	Deploy Apps and Adapters
Server IP *	134.168.18.97
Server Port (HTTPS) *	9443
Server Admin Username *	admin
Server Admin Password *
Server Admin Root	worklightadmin
Certificate Directory	/opt/ibm-mfpf-container/MFP_Container/mfpf-server/
Container Artifacts Folder *	/opt/ibm-mfpf-container/MFP_Container
Working Directory	

3.1 Important properties in the process steps

Step properties are described briefly in the properties table for each step. This section highlights some of the more important properties and provides additional details about them.

3.1.1 Bluemix API URL

Bluemix API endpoint, used for the authentication of the user with the Bluemix.

The value expected is `https://api.ng.bluemix.net`.

3.1.2 Bluemix CCS Host

The Containers Cloud Service (CCS) Host URL. The format is `https://containers-api.ng.bluemix.net/v3/containers`.

The expected value for this step property is `https://containers-api.ng.bluemix.net/v3`.

3.1.3 Container Artifacts Folder

For the build and deployment of containers, please refer to the .zip file to be downloaded from <https://developer.ibm.com/mobilefirstplatform/documentation/getting-started-7-1/bluemix/run-foundation-on-bluemix>.

This .zip file has to be unzipped to a directory and this step property has to be the full path of the directory where it is unzipped.

3.1.4 Server Image Tag

Tag to be used for tagging the MobileFirst Server image. The format of the tag should be *registry-url/namespace/your-tag*.

3.1.5 Certificate Directory

The directory that stores the certificate bundle to verify. The steps related to apps, adapters, and runtimes rely on this property for a secure connection.

This is an optional step property, however, the connection with the MobileFirst server will not be secure if not provided.

4 Process steps in a MobileFirst Platform Foundation plugin

The plugin includes steps that prepare and deploy a MobileFirst Platform Foundation container. The plugin manages apps and adapters on the MobileFirst Server. The plugin also includes steps that remove and upload applications to the Application Center.

4.1.1 Create Databases

Based on the number of projects placed in the `/usr/projects` folder (which is part of the artifacts directory), this step iteratively creates the administrative and runtime databases.

The database is created as a service on Bluemix and is bound to a Bluemix app.

Table 4-1: Input properties for the Create Databases step

Name	Type	Description	Required
Admin Schema Name	String	Database schema name (defaults to WLADMIN)	No
Bluemix API URL	String	Bluemix API endpoint. (https://api.ng.bluemix.net)	Yes
Bluemix Application Name	String	The Bluemix application name that should be bound to the container	Yes
Bluemix Org	String	Bluemix Organization to be used	Yes
Bluemix Password	Password	Password for Bluemix login	Yes
Bluemix Space	String	Bluemix Space to be used	Yes
Bluemix User	String	Bluemix user ID or email address	Yes
Container Artifacts Folder	String	Container Artifacts un-zipped location	Yes
Bluemix DB Service Name	String	Bluemix database service instance name	Yes
DB Service Plan	String	Bluemix database service plan	Yes
DB Type (sqldb or cloudbantNoSQLDB)	String	Type of the database for IBM MobileFirst Platform Foundation to use - sqldb or cloudbantNoSQLDB are accepted	Yes

4.1.2 Prepare and Push Server Image

Prepares the server image and pushes it to the Bluemix container image registry to the corresponding organization and space.

Table 4-2: Input properties for the Prepare and Push Analytics Image step

Name	Type	Description	Required
Bluemix API URL	String	Bluemix API endpoint. (https://api.ng.bluemix.net)	Yes

Name	Type	Description	Required
Bluemix CCS Host	String	IBM Containers Cloud Service Host (https://containers-api.ng.bluemix.net/v3)	Yes
Bluemix Org	String	Bluemix Organization to be used	Yes
Bluemix Password	Password	Password for Bluemix login	Yes
Bluemix Space	String	Bluemix Space to be used	Yes
Bluemix User	String	Bluemix user ID or email address	Yes
Container Artifacts Folder	String	Container Artifacts un-zipped location	Yes
Server Image Tag	String	Tag to be used for tagging the IBM MobileFirst Platform Foundation image	Yes

4.1.3 Prepare And Push Analytics Image

Prepares the analytics image and pushes it to the Bluemix container image registry to the corresponding organization and space.

Table 4-3: Input properties for the Prepare and Push Analytics Image step

Name	Type	Description	Required
Analytics Image Tag	Analytics Image Tag	Analytics Image Tag	Analytics Image Tag
Bluemix API URL	Bluemix API URL	Bluemix API URL	Bluemix API URL
Bluemix CCS Host	Bluemix CCS Host	Bluemix CCS Host	Bluemix CCS Host
Bluemix Org	Bluemix Org	Bluemix Org	Bluemix Org
Bluemix Password	Bluemix Password	Bluemix Password	Bluemix Password
Bluemix Space	Bluemix Space	Bluemix Space	Bluemix Space
Bluemix User	Bluemix User	Bluemix User	Bluemix User
Container Artifacts Folder	Container Artifacts Folder	Container Artifacts Folder	Container Artifacts Folder

4.1.4 Start Server Container

Start the MobileFirst Server container on Bluemix, based on the configurations provided. This uses the image tag from the IBM Bluemix image registry to create the container.

Table 4-4: Input properties for the Start Server Container step

Name	Type	Description	Required
Bluemix API URL	String	Bluemix API endpoint. (https://api.ng.bluemix.net)	Yes
Bluemix Application Name	String	The Bluemix application name that should be bound to the container	No
Bluemix CCS Host	String	IBM Containers Cloud Service Host (https://containers-api.ng.bluemix.net/v3)	Yes
Bluemix Org	String	Bluemix Organization to be used	Yes
Bluemix Password	Password	Password for Bluemix login	Yes
Bluemix Space	String	Bluemix Space to be used	Yes
Bluemix User	String	Bluemix user ID or email address	Yes
Container Artifacts Folder	String	Container Artifacts un-zipped location	Yes
Enable SSH?	Boolean	Enable SSH for the container. Accepted values are Y or N	No
Enable Volume?	Boolean	Enable mounting volume for container logs	No
Environment Properties	String	MobileFirst Platform Foundation properties as comma-separated key:value pairs	No
Expose HTTP?	Boolean	Expose HTTP Port. Accepted values are Y or N	No
Expose HTTPS?	Boolean	Expose HTTPS Port. Accepted values are Y or N	No
Maximum Log File Size	String	Maximum size of a log file	No
Maximum Log Files	String	Maximum number of log files to maintain before overwriting	No
SSH Key	String	SSH Key to be injected into the container	No

Name	Type	Description	Required
Server Container Name	String	Name of the MobileFirst Platform Foundation container to be created	Yes
Server IP	String	IP address that the MobileFirst Platform Foundation container should be bound to	Yes
Server Image Tag	String	Tag to be used for tagging the MobileFirst Platform Foundation image	Yes
Server Memory	String	Assign a memory size limit to the container in megabytes (MB)	Yes
Trace Specification	String	Trace specification to be applied to MobileFirst Platform Foundation	No

4.1.5 Start Server Group

Start the MobileFirst Server container group (cluster) on IBM Bluemix, based on the configurations provided. This uses the image tag from the IBM Bluemix image registry to create the container group.

Table 4-5: Input properties for the Start Server Group step

Name	Type	Description	Required
Bluemix API URL	String	Bluemix API endpoint. (https://api.ng.bluemix.net)	Yes
Bluemix Application Name	String	The Bluemix application name that should be bound to the container	No
Bluemix CCS Host	String	IBM Containers Cloud Service Host (https://containers-api.ng.bluemix.net/v3)	Yes
Bluemix Org	String	Bluemix Organization to be used	Yes
Bluemix Password	Password	Password for Bluemix login	Yes
Bluemix Space	String	Bluemix Space to be used	Yes
Bluemix User	String	Bluemix user ID or email address	Yes

Name	Type	Description	Required
Container Artifacts Folder	String	Location where Container Artifacts were extracted to	Yes
Enable Volume?	Boolean	Enable mounting volume for container logs	No
Environment Properties	String	MobileFirst Platform Foundation properties as comma-separated key:value pairs	No
Maximum Log File Size	String	Maximum size of a log file	No
Maximum Log Files	String	Maximum number of log files to maintain before overwriting	No
Server Container Group Desired	String	The desired number of instances	Yes
Server Container Group Domain	String	The domain name of the route	Yes
Server Container Group Host	String	The host name of the route	Yes
Server Container Group Maximum	String	The maximum number of instances	Yes
Server Container Group Minimum	String	The minimum number of instances.	Yes
Server Container Group Name	String	Name of the MobileFirst Server container group	Yes
Server Image Tag	String	Tag to be used for tagging the IBM MobileFirst Platform Foundation image	Yes
Server Memory	String	Assign a memory size limit to the container in megabytes (MB)	Yes
Trace Specification	String	Trace specification to be applied to MobileFirst Platform Foundation	No

4.1.6 Start Analytics Container

Start the MobileFirst Platform Foundation Operational Analytics container on Bluemix, based on the configurations provided. This uses the image tag from the Bluemix image registry to create the container.

Table 4-6: Input properties for the Start Analytics Container step

Name	Type	Description	Required
Analytics Container Name	String	Name of the Container to be created	Yes
Analytics Data Directory	String	Specify the directory to be used for storing analytics data.	No
Analytics Data Volume Name	String	Specify name of the volume to be created and mounted for analytics data.	No
Analytics IP	String	IP address that the Analytics container	Yes
Analytics Image Tag	String	Tag to be used for tagging the analytics image	Yes
Bluemix API URL	String	Bluemix API endpoint. (https://api.ng.bluemix.net)	Yes
Bluemix CCS Host	String	IBM Containers Cloud Service Host (https://containers-api.ng.bluemix.net/v3)	Yes
Bluemix Org	String	Bluemix Organization to be used	Yes
Bluemix Password	Password	Password for Bluemix login	Yes
Bluemix Space	String	Bluemix Space to be used	Yes
Bluemix User	String	Bluemix user ID or email address	Yes
Container Artifacts Folder	String	Container Artifacts un-zipped location	Yes
Enable Analytics Data Volume?	Boolean	Enable mounting volume for analytics data.	No
Enable SSH?	Boolean	Enable SSH for the container. Accepted values are Y or N	No
Enable Volume?	Boolean	Enable mounting volume for container logs	No

Name	Type	Description	Required
Environment Properties	String	Provide related MobileFirst Platform Foundation Operational Analytics image properties as comma-separated	No
Expose HTTP?	Boolean	Expose HTTP Port. Accepted values are Y or N	No
Expose HTTPS?	Boolean	Expose HTTPS Port. Accepted values are Y or N	No
Maximum Log File Size	String	Maximum Log File Size	No
Maximum Log Files	String	Maximum number of log files to maintain before overwriting	No
SSH Key	String	SSH Key to be injected into the container	No
Server Memory	String	Assign a memory size limit to the container in megabytes (MB)	Yes
Trace Specification	String	Trace specification to be applied	No

4.1.7 Start Analytics Container Group

Start the MobileFirst Platform Foundation Operational Analytics Container Group on Bluemix, based on the configurations provided. This uses the image tag from the Bluemix image registry to create the container group.

Table 4-7: Input properties for the Start Analytics Container Group step

Name	Type	Description	Required
Analytics Container Group Desired	String	Analytics Container Group desired number of nodes	Yes
Analytics Container Group Domain	String	Analytics Container Group Domain	Yes
Analytics Container Group Host	String	Hostname for the Container Group to be created	Yes
Analytics Container Group Maximum	String	Analytics Container Group maximum number of nodes	Yes
Analytics Container Group Minimum	String	Analytics Container Group minimum number of nodes	Yes
Analytics Container Group Name	String	Name of the Container Group to be created	Yes
Analytics Data Directory	String	Specify the directory to be used for storing analytics data.	No
Analytics Data Volume Name	String	Specify name of the volume to be created and mounted for analytics data.	No
Analytics Image Tag	String	Tag to be used for tagging the analytics image	Yes
Bluemix API URL	String	Bluemix API endpoint. (https://api.ng.bluemix.net)	Yes
Bluemix CCS Host	String	IBM Containers Cloud Service Host (https://containers-api.ng.bluemix.net/v3)	Yes
Bluemix Org	String	Bluemix Organization to be used	Yes
Bluemix Password	Password	Password for Bluemix login	Yes
Bluemix Space	String	Bluemix Space to be used	Yes
Bluemix User	String	Bluemix user ID or email address	Yes
Container Artifacts Folder	String	Container Artifacts un-zipped location	Yes

Name	Type	Description	Required
Enable Analytics Data Volume?	Boolean	Enable mounting volume for analytics data.	No
Enable Volume?	Boolean	Enable mounting volume for container logs	No
Environment Properties	String	Provide related MobileFirst Platform Foundation Operational Analytics image properties as comma-separated	No
Maximum Log File Size	String	Maximum Log File Size	No
Maximum Log Files	String	Maximum number of log files to maintain before overwriting	No
Server Memory	String	Assign a memory size limit to the container in megabytes (MB)	Yes
Trace Specification	String	Trace specification to be applied to MobileFirst Platform Foundation	No

4.1.8 Create Server Container (Create database, Prepare, Push and Start Container)

Deploy the MobileFirst Server container on Bluemix as a single step, which includes: Create the administrative and runtime databases; Prepare the image; Push the image to the Bluemix container image registry; and Start the container.

Table 4-8: Input properties for the Create Server Container (Create database, Prepare, Push and Start Container) step

Name	Type	Description	Required
Admin Schema Name	String	Database schema name (defaults to WLADMIN)	No
Bluemix API URL	String	Bluemix API endpoint. (https://api.ng.bluemix.net)	Yes
Bluemix Application Name	String	The Bluemix application name that should be bound to the container	Yes
Bluemix CCS Host	String	IBM Containers Cloud Service Host (https://containers-api.ng.bluemix.net/v3)	Yes
Bluemix Org	String	Bluemix Organization to be used	Yes
Bluemix Password	Password	Password for Bluemix login	Yes
Bluemix Space	String	Bluemix Space to be used	Yes
Bluemix User	String	Bluemix user ID or email address	Yes
Container Artifacts Folder	String	Container Artifacts un-zipped location	Yes
DB Service Name	String	Bluemix database service instance name	Yes
DB Service Plan	String	Bluemix database service plan	Yes
DB Type (sqldb or cloudbantNoSQLDB)	String	Type of the DB for IBM MobileFirst Platform Foundation to use - sqldb or cloudbantNoSQLDB are accepted	Yes
Enable SSH?	Boolean	Enable SSH for the container. Accepted values are Y or N	No
Enable Volume?	Boolean	Enable mounting volume for container logs	No

Name	Type	Description	Required
Environment Properties	String	IBM MobileFirst Platform Foundation properties as comma-separated key:value pairs	No
Expose HTTP?	Boolean	Expose HTTP Port. Accepted values are Y or N	No
Expose HTTPS?	Boolean	Expose HTTPS Port. Accepted values are Y or N	No
Maximum Log File Size	String	Maximum size of a log file	No
Maximum Log Files	String	Maximum number of log files to maintain before overwriting	No
SSH Key	String	SSH Key to be injected into the container	No
Server Container Name	String	Name of the MobileFirst Server container to be created	Yes
Server IP	String	IP address that the MobileFirst Server container should be bound to	Yes
Server Image Tag	String	Tag to be used for tagging the IBM MobileFirst Platform Foundation image	Yes
Server Memory	String	Assign a memory size limit to the container in megabytes (MB)	Yes
Trace Specification	String	Trace specification to be applied to IBM MobileFirst Platform Foundation	No

4.1.9 Create Server Container Group (Create database, Prepare, Push and Start Container Group)

Deploy the MobileFirst Server container group on Bluemix as a single step, which includes: Create the admin and runtime databases; Prepare the image; Push the image to the Bluemix container image registry; and Start the container group.

Table 4-9: Input properties for the Create Server Container Group (Create database, Prepare, Push and Start Container Group) step

Name	Type	Description	Required
Admin Schema Name	String	Database schema name (defaults to WLADMIN)	No
Bluemix API URL	String	Bluemix API endpoint. (https://api.ng.bluemix.net)	Yes
Bluemix Application Name	String	The Bluemix application name that should be bound to the container	Yes
Bluemix CCS Host	String	IBM Containers Cloud Service Host (https://containers-api.ng.bluemix.net/v3)	Yes
Bluemix Org	String	Bluemix Organization to be used	Yes
Bluemix Password	Password	Password for Bluemix login	Yes
Bluemix Space	String	Bluemix Space to be used	Yes
Bluemix User	String	Bluemix user ID or email address	Yes
Container Artifacts Folder	String	Container Artifacts un-zipped location	Yes
DB Service Name	String	Bluemix database service instance name	Yes
DB Service Plan	String	Bluemix database service plan	Yes
DB Type (sqldb or cloudbantNoSQLDB)	String	Type of the DB for IBM MobileFirst Platform Foundation to use - sqldb or cloudbantNoSQLDB are accepted	Yes
Enable Volume?	Boolean	Enable mounting volume for container logs	No

Name	Type	Description	Required
Environment Properties	String	MobileFirst Platform Foundation properties as comma-separated key:value pairs	No
Maximum Log File Size	String	Maximum size of a log file	No
Maximum Log Files	String	Maximum number of log files to maintain before overwriting	No
Server Container Group Desired	String	The desired number of instances	Yes
Server Container Group Domain	String	The domain name of the route	Yes
Server Container Group Host	String	The host name of the route	Yes
Server Container Group Maximum	String	The maximum number of instances	Yes
Server Container Group Minimum	String	The minimum number of instances.	Yes
Server Container Group Name	String	Name of the MobileFirst Server container group	Yes
Server Image Tag	String	Tag to be used for tagging the IBM MobileFirst Platform Foundation image	Yes
Server Memory	String	Assign a memory size limit to the container in megabytes (MB)	Yes
Trace Specification	String	Trace specification to be applied to IBM MobileFirst Platform Foundation	No

4.1.10 Deploy Apps and Adapters

From the artifacts folder `/usr/projects`, iteratively deploy all apps and adapters to the running MobileFirst Platform Foundation container runtime.

Table 4-10: Input properties for the Deploy Apps and Adapters step

Name	Type	Description	Required
Certificate Directory	String	Directory which stores the certificate bundle to verify	No
Container Artifacts Folder	String	Container Artifacts un-zipped location	Yes
Server Admin Password	Password	Password of IBM MobileFirst Platform Foundation administrator	Yes
Server Admin Root	String	Admin context path of the IBM MobileFirst Platform Foundation (worklightadmin)	No
Server Admin Username	String	User name of IBM MobileFirst Platform Foundation administrator	Yes
Server IP	String	IP address that the MobileFirst Server container	Yes
Server Port (HTTPS)	String	Server Port (HTTPS)	Yes

4.1.11 Remove Existing Container

Removes the existing MobileFirst Platform Foundation single node container (existing in any state).

Table 4-11: Input properties for the Remove Existing Container step

Name	Type	Description	Required
Bluemix API URL	String	Bluemix API endpoint. (https://api.ng.bluemix.net)	Yes
Bluemix CCS Host	String	IBM Containers Cloud Service Host (https://containers-api.ng.bluemix.net/v3)	Yes
Bluemix Org	String	Bluemix Organization to be used	Yes
Bluemix Password	Password	Password for Bluemix login	Yes
Bluemix Space	String	Bluemix Space to be used	Yes
Bluemix User	String	Bluemix user ID or email address	Yes
Container Name	String	Name of the MobileFirst Platform Foundation container to be removed	Yes

4.1.12 Remove Existing Container Group

Removes the existing MobileFirst Platform Foundation container group (existing in any state).

Table 4-12: Input properties for the Remove Existing Container Group step

Name	Type	Description	Required
Bluemix API URL	String	Bluemix API endpoint. (https://api.ng.bluemix.net)	Yes
Bluemix CCS Host	String	IBM Containers Cloud Service Host (https://containers-api.ng.bluemix.net/v3)	Yes
Bluemix Org	String	Bluemix Organization to be used	Yes
Bluemix Password	Password	Password for Bluemix login	Yes
Bluemix Space	String	Bluemix Space to be used	Yes
Bluemix User	String	Bluemix user ID or email address	Yes
Container Group Name	String	Name of the MobileFirst Platform Foundation container group	Yes

4.1.13 Remove Server Runtime

Removes a specified runtime from a MobileFirst Server container running on Bluemix. It can also delete the runtime database, if selected.

Table 4-13: Input properties for the Remove Server Runtime step

Name	Type	Description	Required
Bluemix API URL	String	Bluemix API endpoint. (https://api.ng.bluemix.net)	Yes
Bluemix Application Name	String	The Bluemix application name that is bound to the container	Yes
Bluemix Org	String	Bluemix Organization to be used	Yes
Bluemix Password	Password	Password for Bluemix login	Yes
Bluemix Space	String	Bluemix Space to be used	Yes
Bluemix User	String	Bluemix user ID or email address	Yes
Certificate Directory	String	Direcotory which stores the certificate bundle to verify	No
Container Artifacts Folder	String	Container Artifacts un-zipped location	Yes
DB Service Name	String	Bluemix database service instance name	No
Delete Runtime Data?	Boolean	Confirmation to delete the project-related data	No
Liberty Admin Password	Password	Password of the Liberty administrator role	Yes
Liberty Admin Username	String	User name of the Liberty administrator role	Yes
Runtime Name	String	The name of the runtime to be removed	Yes
Runtime Schema Name	String	Runtime Schema Name	No
Server Admin Password	Password	Password of IBM MobileFirst Platform Foundation administrator	Yes
Server Admin Root	String	Admin context path of the IBM MobileFirst Platform Foundation (worklightadmin)	No

Name	Type	Description	Required
Server Admin Username	String	User name of IBM MobileFirst Platform Foundation administrator	Yes
Server IP	String	The IP address the MobileFirst Platform Foundation container is bound to.	Yes
Server Port (HTTPS)	String	The HTTPS port number exposed on the MobileFirst Platform Foundation container.	Yes

4.1.14 Un-Deploy Apps and Adapters from a Runtime

Apps and adapters provided with comma separated, are undeployed from the specified runtime, in the running MobileFirst Foundation Platform container.

Table 4-14: Input properties for the Un-Deploy Apps and Adapters from a Runtime step

Name	Type	Description	Required
Adapters (, separated)	String	List of adapters to be un-deployed with , separated	No
Apps (, separated)	String	List of apps to be un-deployed with , separated	No
Certificate Directory	String	Direcotory which stores the certificate bundle to verify	No
Server Admin Password	Password	Password of IBM MobileFirst Platform Foundation administrator	Yes
Server Admin Root	String	Admin context path of the IBM MobileFirst Platform Foundation (worklightadmin)	No
Server Admin Username	String	User name of IBM MobileFirst Platform Foundation administrator	Yes
Server IP	String	IP address that the MobileFirst Platform Foundation container	Yes
Server Port (HTTPS)	String	Server Port (HTTPS)	Yes
Server Runtime Name	String	Runtime that need to be modified	Yes

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