

Unica Docker V12.0 Implementation Guide for Apache Tomcat



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Chapter 1. Docker, Kubernetes, and Helm

In this release, we have implemented Unica using Docker, Kubernetes, and Helm.

The following topics provide an overview of the mentioned technologies:

- For an overview on Docker, see [Docker overview \(on page 1\)](#).
- For an overview on Kubernetes, see [Kubernetes overview \(on page 1\)](#).
- For an overview on Helm, see [Helm overview \(on page 2\)](#).
- For an overview on Helm Chart, see [Helm charts overview \(on page 2\)](#).

Docker overview

Docker is an open source software that makes it easy to create, deploy, and manage virtualized applications using containers.

You can use containers to package applications with the necessary components to run the applications, like libraries and other dependencies. Because a container has all the components requires for its execution, it is not dependent on other containers and can run in an isolated manner.

The software that hosts the containers is called a Docker Engine. The Docker Engine creates containers on top of an operating system and automates application deployment on the container.

Docker-based architecture also offers standardization. With standardization of service infrastructure, every team member can work on a production parity environment.

For more information on Docker, its prerequisites, and the minimum system requirements, see <https://docs.docker.com/>.

Kubernetes overview

Kubernetes is an open source container orchestration system that provides a platform to automate deployment, scaling, and management of application containers across clusters of hosts.

If you have a cluster containing groups of hosts running Linux containers, you can use Kubernetes to manage the clusters efficiently. These clusters can span hosts across public, private, or hybrid clouds. This makes Kubernetes an ideal platform for hosting cloud-native applications that require rapid scaling.

For more information on Kubernetes, its prerequisites, and the minimum system requirements, see <https://kubernetes.io/docs/home/>.

Helm overview

Helm is a package manager for Kubernetes that can be used by developers and operators to easily package, configure, and deploy applications and services onto Kubernetes clusters

Helm can:

- install and upgrade software
- automatically install software dependencies
- configure software deployments
- fetch software packages from repositories

Helm packages are called charts and they contain a few YAML files and templates that are rendered into the Kubernetes manifest files.

For more information on Helm, its prerequisites, and the minimum system requirements, see <https://helm.sh/>.

Helm charts overview

Helm Charts are packaging formats. A chart is a collection of files that describe a related set of Kubernetes resources.

You can use a single chart to deploy something simple, like a [memcached pod](#), or something complex, like a full web application stack with HTTP servers, databases, caches, etc.

Charts are created as files laid out in a specific directory tree, and you can package charts into versioned archives for deployment.

Chapter 2. Unica Docker support matrix

Before installation or upgrade, please ensure that the systems meet the recommended requirements.

- To check the recommended hardware requirements, see [Minimum hardware requirements \(on page 3\)](#).
- To check the recommended software requirements, see [Software requirements \(on page 3\)](#).
- To download the Unica Docker image, see [Download Unica Docker image \(on page 4\)](#).

Minimum hardware requirements

The minimum hardware requirements for Unica Docker are as follows:

Memory	64 GB RAM
Storage	150 GB Hard disk drive
CPU	8 CPU machines

Software requirements

The recommended software requirements for Unica Docker are as follows:

Software type	Recommended requirement
Operating System	HCL Unica Docker supports: <ul style="list-style-type: none">• CentOS version 7• RHEL version 7.3
Database	HCL Unica Docker supports: <ul style="list-style-type: none">• Oracle• DB2

Software type	Recommended requirement
Application Server	HCL Unica Docker supports: <ul style="list-style-type: none"> • JBOSS EAP 7.1.0 • Apache Tomcat
Other Software	<ul style="list-style-type: none"> • Apache ActiveMQ 5.15.8 • Docker Enterprise version 19.xx.x • Kubernetes • Helm

Download Unica Docker image

You should download the required image from FNO. By default, the chart uses Unica Docker image.



Note:

1. Although Unica Docker images are CentOS-based or RHEL-based, it may work on any Unix-based operating systems. HCL Software will provide support only for CentOS and RHEL operating system. HCL will not provide support for any other operating systems.
2. Although Oracle drivers are bundled with Unica Docker images, HCL Software will not provide support for any issues related to third-party software or third-party drivers bundled with Unica Docker images.

Chapter 3. Pre-installation configurations

Before installing Unica Docker or upgrading to Unica Docker, you should complete some configurations.

The list of pre-installation or pre-upgrade configurations are as follows:

- Configure the resources for containers. For more information, see [.Minimum required resources for containers \(on page 5\)](#)
- Ensure that you have installed Docker Enterprise version 19.xx.x. For more information, see [Docker documentation](#).
- Ensure that you have installed Kubernetes. For more information, see [Kubernetes documentation](#).
- Verify if:
 - you have configured a Kubernetes cluster.
 - the Kubernetes environment has the appropriate image enforcement policy to allow access to the required repositories.
 - the database is setup. For more information, see [Database setup \(on page 7\)](#).
 - the application server is setup. For more information, see [Application server setup \(on page 6\)](#)
- Ensure that you have installed Helm. For more information, see [Helm documentation](#).

Minimum required resources for containers

The following table lists the minimum resources required by each container.

Table 1. Resources Required by Each Container

Resource Name	Resource Value
CPU	2000m (2000 millicpu per container).
Memory	2048 MB.
Storage	Requires a persistent volume.

Table 1. Resources Required by Each Container (continued)

Resource Name	Resource Value
	If the containers fail and restart, the installation and the database data persist. However, setups and JDBC drivers are not packaged with the solution and they need to be placed at the mount point.



Note: The configuration will impact the minimum hardware requirements. It is recommended that you use a configuration that is slightly higher than the minimum requirements. If a container does not get the required resources, it might hang.

Avoiding timeout issues

To avoid timeout issues, perform the following steps.

1. Access the path `/home/unica/helm/<chart-name>/omnix-unica/`.
2. Open the file `values.yaml`.
3. Add the following lines of code in the annotations section within ingress.

```

nginx.ingress.kubernetes.io/proxy-connect-timeout: "30"
nginx.ingress.kubernetes.io/proxy-read-timeout: "1800"
nginx.ingress.kubernetes.io/proxy-send-timeout: "1800"
nginx.ingress.kubernetes.io/proxy-body-size: 50m
ingress.kubernetes.io/proxy-body-size: 50m

```

4. Save the changes.

Application server setup

Unica Docker supports Apache Tomcat and JBOSS application servers.

You do not have to set up the Apache Tomcat application server as it is embedded in the Unica Docker image.

Database setup

You need to set up the database before you begin installation.

You can setup the database in one of the following ways.

- Use your database Docker image
- Connect to an external database system

If your database resides in an external system, the configuration of the following parameters, in Unica Helm chart, is mandatory.

- Database Users
- Tablespace Users
- Operating System Users

The database can reside within Kubernetes cluster. If the database resides within the Kubernetes cluster, use any available database image and edit the Unica Helm chart. Ensure that user creation is complete before the Unica solution starts.

For example, to use Tomcat, within the cluster or external DB, complete the following steps.

1. Download Unica Docker images and Helm Chart.
2. Create **Databases** and **Users** and enter those details in the Unica Helm Chart.

If you set the Database as a sub-chart in Unica chart, you can completely automate data import using Shell scripts. For import, data should be available on the Database container mount point. You can also place the data after the container starts. Ensure that Database configuration and user creation activity is completed before running the Unica chart.

Chapter 4. Helm chart configuration

Before you start the installation or upgrade of Unica Docker, you should configure a few configMap YAML files.

The list of configMap YAML files, which you should configure, are as follows:

- `common-configMap.yaml`. For more information, see [Common configurations \(on page 8\)](#).
- `assetpicker-configMap.yaml`. For more information, see [Asset Picker configurations \(on page 12\)](#).
- `birt-configMap.yaml`. For more information, see [Birt Reports configurations \(on page 13\)](#).
- `campaign-configMap.yaml`. For more information, see [Campaign configurations \(on page 15\)](#).
- `interact-configMap.yaml`. For more information, see [Interact configurations \(on page 19\)](#).
- `offer-configMap.yaml`. For more information, see [Offer configurations \(on page 27\)](#).
- `plan-configMap.yaml`. For more information, see [Plan configurations \(on page 29\)](#).
- `platform-configMap.yaml`. For more information, see [Platform configurations \(on page 32\)](#).



Note: Helm Charts will be rolled out after the customer specifies the offering related details and requirements.

Common configurations

To configure the common configurations, make the necessary modifications to the `common-configMap.yaml` file.

To access the `common-configMap.yaml` file, navigate to `/unica/templates/` in the Unica charts folder. Open the file and make modifications to the following parameters:

Table 2. Data Parameters

Parameter name	Parameter description
WAIT_TIME	Idle wait time in minutes.
VERSION	Version number of Unica.
HOME_DIR	Home directory of docker.
JAVA_HOME	The location of Java Development Kit on the system.
CERTIFICATE_IMPORT_DIR	The location of the Unica certificates.
TYPE	Specify if it is a new installation or an upgrade. Valid values are <code>INSTALL</code> or <code>UP-GRADE</code> .
APPLICATION_DOMAIN	The application domain.
HOST	Host ID of the Docker host.
HOST_NAME	Host name of the Docker host.
DEFAULT_LOCALE	The default locale to be used.
DOCKER_JAVA_HOME	The path of the Docker Java Home.
MODE	Specify the products that you will install on the Docker environment. The abbreviated values for each product are as follows: <ul style="list-style-type: none"> • Platform – PLT • Campaign – CMP • Optimize – OPT • Director – DIR

Table 2. Data Parameters (continued)

Parameter name	Parameter description
	<ul style="list-style-type: none"> • Plan – PLN • Interact – INT • Offer - • BIRT - <p>If you want to install all products you should provide the value as follows:</p> <p>PLT_CMP_INT_PLN_OPT_DIR</p> <p>If your database is MariaDB, Director will not work on MariaDB. In this case, you must provide the following value:</p> <p>PLT_CMP_INT_PLN_OPT</p>
SERVER_TYPE	The application server installed.
IS_UNICODE	Set <code>TRUE</code> if Unica is installed to support Unicode. Set <code>FALSE</code> if Unica is installed without support for Unicode
JRE_HOME	The path of the Docker Java Runtime Environment.
SUPPORTED LOCALES	<p>The supported locales. Valid values are:</p> <ul style="list-style-type: none"> • en_US • zh_TW • fr_FR • de_DE • ja_JP • ko_KR • pt_BR • es_ES

Table 2. Data Parameters (continued)

Parameter name	Parameter description
	<ul style="list-style-type: none"> • zh_CN • it_IT •

Table 3. Miscellaneous Parameters

Parameter name	Parameter description
DB_TYPE	The name of the database used in the system. For example, <code>Oracle</code> .
DB_TYPE_UTILS	The name of the database utilities used in the system. For example, <code>Oracle</code> .
DB_DRIVER_CLASS	The class name of the database drivers.
DIALECT	
DB_DRIVER_JAR	The location of the database driver <code>JAR</code> file.
REPLACE_CONNECTION_URL_PREFIX	
JDBC_DRIVER_JAR_LOCATION	The location of the JDBC driver <code>JAR</code> file.
TABLE_SPACE	The table space name for the database.
DB_ROOT_USER	The database root username.
DB_ROOT_PASSWORD	The database root password.
DB_HOST_NAME	The host name of the database system.
DB_PORT	The port number of the database system.
DB2INST1_PASSWORD	The password for the DB2 instance.
LICENSE	<code>ACCEPT</code> if you accept the license or <code>DECLINE</code> if you do not accept the license.

Table 3. Miscellaneous Parameters (continued)

Parameter name	Parameter description
DB_PLAT	The database name for Platform.
DB_PLAN_HOST	The host details of the database in the Plan system.
DB_PLAN_HOST_NAME	The database host name of the Plan system.
DB_PLAN_PORT	The database port number of the Plan system.
DB_PLAN	The database name for Plan.
DB_DRIVER	The database driver file name.
PROTOCOL	The protocol used. For example, HTTP or HTTPS.

Asset Picker configurations

To configure Asset Picker for Docker, make the necessary modifications to the `assetpicker-configMap.yaml` file.

To access the `assetpicker-configMap.yaml` file, navigate to `/unica/templates/` in the Unica charts folder. Open the file and make modifications to the following parameters:

Table 4. Application server-related parameters of Asset Picker

Parameter name	Parameter description
ASSET_HOST_NAME	The system host name of Asset Picker.
ASSET_MANAGEMENT_PORT	The management port number for the Asset Picker system.

Table 4. Application server-related parameters of Asset Picker (continued)

Parameter name	Parameter description
ASSET_MANAGEMENT_HTTPS_PORT	The management HTTPS port number for the Asset Picker system.
ASSET_AJP_PORT	The AJP port number for the Asset Picker system.
ASSET_HTTP_PORT	The HTTP port number for the Asset Picker system.
ASSET_HTTPS_PORT	The HTTPS port number for the Asset Picker system.
ASSET_RECOVERY_ENV_PORT	The recovery environment port number of the Asset Picker system.
ASSET_STATUS_MANAGER_PORT	The status manager port number of the Asset Picker system.
PRODUCT_OPTS_ASSET	Product specific options for Asset Picker.

Birt Reports configurations

To configure BIRT reports for Docker, make the necessary modifications to the `birt-configMap.yaml` file.

To access the `birt-configMap.yaml` file, navigate to `/unica/templates/` in the Unica charts folder. Open the file and make modifications to the following parameters:

Update the following configurations:

- configurations at Affinium | Plan | umoConfiguration | reports.
- `reportsAnalysisSectionHome` -> Plan/Affinium Plan
- `reportsAnalysisTabHome` -> Plan/Affinium Plan - Object Specific Reports

After updating the configurations, restart the pods for Plan and Birt reports.

Table 5. Common BIRT parameters

Parameter name	Parameter description
BIRT_PRODUCT_NAME	The name assigned for BIRT reports.
BIRT_WAR_NAME	The name of the WAR file.
BIRT_APPLICATION_NAME	The name of the main application. For example, <i>Unica</i> .
BIRT_DOMAIN_USERNAME	The domain username for BIRT reports.
BIRT_DOMAIN_PASSWORD	The domain password for BIRT reports.
PRODUCT_OPTS_BIRT	Product specific options for BIRT reports.

Table 6. Application server-related BIRT parameters

Parameter name	Parameter description
BIRT_HOST_NAME	The system host name of BIRT.
BIRT_MANAGEMENT_PORT	The management port number for the BIRT system.
BIRT_MANAGEMENT_HTTPS_PORT	The management HTTPS port number for the BIRT system.
BIRT_AJP_PORT	The AJP port number for the BIRT system.
BIRT_HTTP_PORT	The HTTP port number for the BIRT system.
BIRT_HTTPS_PORT	The HTTPS port number for the BIRT system.
BIRT_RECOVERY_ENV_PORT	The recovery environment port number of the BIRT system.

Table 6. Application server-related BIRT parameters (continued)

Parameter name	Parameter description
BIRT_STATUS_MANAGER_PORT	The status manager port number of the BIRT system.
BIRT_MIN_HEAP	The minimum heap size allocated for BIRT.
BIRT_MAX_HEAP	The maximum heap size allocated for BIRT.

Campaign configurations

To configure Campaign for Docker, make the necessary modifications to the `campaign-configMap.yaml` file.

To access the `campaign-configMap.yaml` file, navigate to `/unica/templates/` in the Unica charts folder. Open the file and make modifications to the following parameters:

Table 7. Common Campaign parameters

Parameter name	Parameter description
CAMPAIGN_JNDI_NAME	JNDI name for Campaign.
CAMPAIGN_POOL_NAME	Pool name for Campaign.
PRODUCT_OPTS_CAMPAIGN	Product specific options for Campaign.
CAMPAIGN_PRODUCT_NAME	The name assigned for Campaign.
CAMPAIGN_WAR_NAME	The name of the WAR file.
CAMPAIGN_APPLICATION_NAME	The name of the main application. For example, <i>Unica</i> .
CAMPAIGN_DOMAIN_USERNAME	The domain username for Campaign.
CAMPAIGN_DOMAIN_PASSWORD	The domain password for Campaign.

Table 7. Common Campaign parameters (continued)

Parameter name	Parameter description
USER_DB2_HOST_NAME	The host name of the DB2 user.

Table 8. Database-related parameters for Campaign

Parameter name	Parameter description
CAMPAIGN_DATABASE_HOST	Host system details of the system hosting the Campaign database.
CAMPAIGN_DATABASE_PORT	Port number of the Campaign database.
CAMPAIGN_DATABASE_NAME	Name of the Campaign database.
CAMPAIGN_DATABASE_USERNAME	Username to access the Campaign database.
CAMPAIGN_DATABASE_PASSWORD	Password to access the Campaign database.
DB2_CLIENT_INSTALL_COMMAND	Command to install the db2 client on listener pod.
DB2_CLIENT_INSTALL_COMMAND_SCRIPT	
DB2_SETUP_FILE	Path of the <code>tar/gz</code> file of client
DB2_RESPONSE_FILE	Path of response file to install client.
LD_LIB_PATH	
SETENV_COMMAND1	
SETENV_COMMAND2	
SETENV_COMMAND3	
CAMPAIGN_DS_INITIAL_SIZE	

Table 8. Database-related parameters for Campaign (continued)

Parameter name	Parameter description
CAMPAIGN_DS_MIN_IDLE	
CAMPAIGN_DS_MAX_IDLE	
CAMPAIGN_DS_MAX_TOTAL	
CAMPAIGN_DS_STATEMENT_CACHE_SIZE	

Table 9. Application Server-related parameters for Campaign

Parameter name	Parameter description
CAMPAIGN_URL	The URL to access Campaign
CAMP_HOST_NAME	The system host name of Campaign.
CAMP_MANAGEMENT_PORT	The management port number for the Campaign system.
CAMP_MANAGEMENT_HTTPS_PORT	The management HTTPS port number for the Campaign system.
CAMP_AJP_PORT	The AJP port number for the Campaign system.
CAMP_HTTP_PORT	The HTTP port number for the Campaign system.
CAMP_HTTPS_PORT	The HTTPS port number for the Campaign system.
CAMP_RECOVERY_ENV_PORT	The recovery environment port number of the Campaign system.
CAMP_STATUS_MANAGER_PORT	The status manager port number of the Campaign system.

Table 9. Application Server-related parameters for Campaign (continued)

Parameter name	Parameter description
CAMP_MIN_HEAP	The maximum heap size allocated for Campaign.
CAMP_MAX_HEAP	The maximum heap size allocated for Campaign.

Table 10. Listener-related parameters for Campaign

Parameter name	Parameter description
LISTENER_HOST_NAME	The hostname of the Listener.
LISTENER_PORT	The port number of the Listener.
LISTENER_TYPE	Specify the type of Listener.
CLUSTER_DOMAIN	Define the cluster domain. For example, <code>listener.default.svc.cluster-.local</code> .
SSL_FOR_PORT2	SSL server port 2.
SERVER_PORT2	Server port 2.
MASTER_LISTENER_PRIORITY	Define the Listener priority.
LOAD_BALANCE_WEIGHT	The load balance weight of the Listener.
CAMP_HOSTNAME	The host name of the Campaign system.
CAMP_PORT	The deployment port for Campaign.
CLUSTER_DEPLOYMENT	Set <code>TRUE</code> if clustered deployment is supported or <code>FALSE</code> if clustered deployment is not supported.

Interact configurations

To configure Interact for Docker, make the necessary modifications to the `interact-configMap.yaml` file.

To access the `interact-configMap.yaml` file, navigate to `/unica/templates/` in the Unica charts folder. Open the file and make modifications to the following parameters:

Table 11. Common parameters for Interact

Parameter name	Parameter description
CONTEXT_ROOTS	
INTERACT_PROD_JNDI_NAME	JNDI name for Interact production.
INTERACT_PROD_POOL_NAME	Pool name for Interact production.
INTERACT_TEST_JNDI_NAME	JNDI name for Interact test.
INTERACT_TEST_POOL_NAME	Pool name for Interact test.
INTERACT_LEARNING_JNDI_NAME	JNDI name for Interact learning.
INTERACT_LEARNING_POOL_NAME	Pool name for Interact learning.
INTERACT_CHRH_JNDI_NAME	JNDI name for Interact CHRH.
INTERACT_CHRH_POOL_NAME	Pool name for Interact CHRH.
INTERACT05_JNDI_NAME	JNDI name for Interact05.
INTERACT05_POOL_NAME	Pool name for Interact05.
INTERACTATM_JNDI_NAME	JNDI name for Interact ATM.
INTERACTATM_POOL_NAME	Pool name for Interact ATM.
INTERACTCALLCNTR_JNDI_NAME	JNDI name for Interact Call Center.
INTERACTCALLCNTR_POOL_NAME	Pool name for Interact Call Center.
INTERACTWEB_JNDI_NAME	JNDI name for Interact Web.

Table 11. Common parameters for Interact (continued)

Parameter name	Parameter description
INTERACTWEB_POOL_NAME	Pool name for Interact Web.
PRODUCT_OPTS_INTERACT	Product specific options for Interact.
TERM	The database host name.
INTERACT_PRODUCT_NAME	The name assigned for Interact.
INTERACT_WAR_NAME	The name of the WAR file.
INTERACT_APPLICATION_NAME	The name of the main application. For example, <i>Unica</i> .
INTERACT_DOMAIN_USERNAME	The domain username for Interact.
INTERACT_DOMAIN_PASSWORD	The domain password for Interact.

Table 12. Platform server-related parameters of Interact

Parameter name	Parameter description
INTERACTATM_PLATFORM_DATA-BASE_HOST	Host system details of the system hosting the Platform-Interact ATM database.
INTERACTATM_PLATFORM_DATA-BASE_PORT	Port number of the Platform-Interact ATM database.
INTERACTATM_PLATFORM_DATA-BASE_USERNAME	Username to access the Platform-Interact ATM database.
INTERACTATM_PLATFORM_DATA-BASE_PASSWORD	Password to access the Platform-Interact ATM database.
INTERACTATM_PLATFORM_DATA-BASE_NAME	Name of the Interact Platform-Interact database.
INTERACTATM_PLATFORM_DS_-INITIAL_SIZE	

Table 12. Platform server-related parameters of Interact (continued)

Parameter name	Parameter description
INTERACTATM_PLATFORM_DS_MIN_IDLE	
INTERACTATM_PLATFORM_DS_MAX_IDLE	
INTERACTATM_PLATFORM_DS_MAX_TOTAL	
INTERACTATM_PLATFORM_DS_STATEMENT_CACHE_SIZE	

Table 13. Server group-related database parameters of Interact

Parameter name	Parameter description
INTERACTATM_DATABASE_HOST	Host system details of the system hosting the Interact ATM database.
INTERACTATM_DATABASE_PORT	Port number of the Interact ATM database.
INTERACTATM_DATABASE_USERNAME	Username to access the Interact ATM database.
INTERACTATM_DATABASE_PASSWORD	Password to access the Interact ATM database.
INTERACTATM_DATABASE_NAME	Name of the Interact ATM database.
INTERACTATM_DS_INITIAL_SIZE	
INTERACTATM_DS_MIN_IDLE	
INTERACTATM_DS_MAX_IDLE	
INTERACTATM_DS_MAX_TOTAL	

Table 13. Server group-related database parameters of Interact (continued)

Parameter name	Parameter description
INTERACTATM_DS_STATEMENT_- CACHE_SIZE	
INTERACTWEB_DATABASE_HOST	Host system details of the system hosting the Interact Web database.
INTERACTWEB_DATABASE_PORT	Port number of the Interact Web database.
INTERACTWEB_DATABASE_USERNAME	Username to access the Interact Web database.
INTERACTWEB_DATABASE_PASSWORD	Password to access the Interact Web database.
INTERACTWEB_DATABASE_NAME	Name of the Interact Web database.
INTERACTWEB_DS_INITIAL_SIZE	
INTERACTWEB_DS_MIN_IDLE	
INTERACTWEB_DS_MAX_IDLE	
INTERACTWEB_DS_MAX_TOTAL	
INTERACTWEB_DS_STATEMENT_- CACHE_SIZE	
INTERACTCALLCNTR_DATABASE_HOST	Host system details of the system hosting the Interact Call Center database.
INTERACTCALLCNTR_DATABASE_PORT	Port number of the Interact Call Center database.
INTERACTCALLCNTR_DATABASE_- USERNAME	Username to access the Interact Call Center database.

Table 13. Server group-related database parameters of Interact (continued)

Parameter name	Parameter description
INTERACTCALLCNTR_DATABASE_PASSWORD	Password to access the Interact Call Center database.
INTERACTCALLCNTR_DATABASE_NAME	Name of the Interact Call Center database.
INTERACTCALLCNTR_DS_INITIAL_SIZE	
INTERACTCALLCNTR_DS_MIN_IDLE	
INTERACTCALLCNTR_DS_MAX_IDLE	
INTERACTCALLCNTR_DS_MAX_TOTAL	
INTERACTCALLCNTR_DS_STATEMENT_CACHE_SIZE	

Table 14. Server-related database parameters of Interact

Parameter name	Parameter description
INTERACT_PROD_DATABASE_HOST	Host system details of the system hosting the Interact Production database.
INTERACT_PROD_DATABASE_PORT	Port number of the Interact Production database.
INTERACT_PROD_DATABASE_NAME	Username to access the Interact Production database.
INTERACT_PROD_DATABASE_USERNAME	Password to access the Interact Production database.
INTERACT_PROD_DATABASE_PASSWORD	Name of the Interact Production database.
INTERACT_PROD_DS_INITIAL_SIZE	

Table 14. Server-related database parameters of Interact (continued)

Parameter name	Parameter description
INTERACT_PROD_DS_MIN_IDLE	
INTERACT_PROD_DS_MAX_IDLE	
INTERACT_PROD_DS_MAX_TOTAL	
INTERACT_PROD_DS_STATEMENT_- CACHE_SIZE	
INTERACT_TEST_DATABASE_HOST	Host system details of the system hosting the Interact Test database.
INTERACT_TEST_DATABASE_PORT	Port number of the Interact Test database.
INTERACT_TEST_DATABASE_NAME	Username to access the Interact Test database.
INTERACT_TEST_DATABASE_USERNAME	Password to access the Interact Test database.
INTERACT_TEST_DATABASE_PASSWORD	Name of the Interact Test database.
INTERACT_TEST_DS_INITIAL_SIZE	
INTERACT_TEST_DS_MIN_IDLE	
INTERACT_TEST_DS_MAX_IDLE	
INTERACT_TEST_DS_MAX_TOTAL	
INTERACT_TEST_DS_STATEMENT_- CACHE_SIZE	
INTERACT_LEARNING_DATABASE_- HOST	Host system details of the system hosting the Interact Learning database.

Table 14. Server-related database parameters of Interact (continued)

Parameter name	Parameter description
INTERACT_LEARNING_DATABASE_PORT	Port number of the Interact Learning database.
INTERACT_LEARNING_DATABASE_NAME	Username to access the Interact Learning database.
INTERACT_LEARNING_DATABASE_USERNAME	Password to access the Interact Learning database.
INTERACT_LEARNING_DATABASE_PASSWORD	Name of the Interact Learning database.
INTERACT_LEARNING_DS_INITIAL_SIZE	
INTERACT_LEARNING_DS_MIN_IDLE	
INTERACT_LEARNING_DS_MAX_IDLE	
INTERACT_LEARNING_DS_MAX_TOTAL	
INTERACT_LEARNING_DS_STATEMENT_CACHE_SIZE	
INTERACT_CHRH_DATABASE_HOST	Host system details of the system hosting the Interact CHRH database.
INTERACT_CHRH_DATABASE_PORT	Port number of the Interact CHRH database.
INTERACT_CHRH_DATABASE_NAME	Username to access the Interact CHRH database.
INTERACT_CHRH_DATABASE_USERNAME	Password to access the Interact CHRH database.
INTERACT_CHRH_DATABASE_PASSWORD	Name of the Interact CHRH database.

Table 14. Server-related database parameters of Interact (continued)

Parameter name	Parameter description
INTERACT_CHRH_DS_INITIAL_SIZE	
INTERACT_CHRH_DS_MIN_IDLE	
INTERACT_CHRH_DS_MAX_IDLE	
INTERACT_CHRH_DS_MAX_TOTAL	
INTERACT_CHRH_DS_STATEMENT_- CACHE_SIZE	
INTERACT05_DATABASE_HOST	Host system details of the system hosting the Interact05 database.
INTERACT05_DATABASE_PORT	Port number of the Interact05 database.
INTERACT05_DATABASE_NAME	Username to access the Interact05 database.
INTERACT05_DATABASE_USERNAME	Password to access the Interact05 database.
INTERACT05_DATABASE_PASSWORD	Name of the Interact05 database.
INTERACT05_DS_INITIAL_SIZE	
INTERACT05_DS_MIN_IDLE	
INTERACT05_DS_MAX_IDLE	
INTERACT05_DS_MAX_TOTAL	
INTERACT05_DS_STATEMENT_CACHE_- SIZE	

Table 15. Application server-related parameters of Interact

Parameter name	Parameter description
INT_HOST_NAME	The system host name of Interact.
INT_MANAGEMENT_PORT	The management port number for the Interact system.
INT_MANAGEMENT_HTTPS_PORT	The management HTTPS port number for the Interact system.
INT_AJP_PORT	The AJP port number for the Interact system.
INT_HTTP_PORT	The HTTP port number for the Interact system.
INT_HTTPS_PORT	The HTTPS port number for the Interact system.
INT_RECOVERY_ENV_PORT	The recovery environment port number of the Interact system.
INT_STATUS_MANAGER_PORT	The status manager port number of the Interact system.
INT_MIN_HEAP	The maximum heap size allocated for Interact.
INT_MAX_HEAP	The maximum heap size allocated for Interact.

Offer configurations

To configure Centralized Offer Management for Docker, make the necessary modifications to the `offer-configMap.yaml` file.

To access the `offer-configMap.yaml` file, navigate to `/unica/templates/` in the Unica charts folder. Open the file and make modifications to the following parameters:

Table 16. Application server-related parameters of Centralized Offer Management

Parameter name	Parameter description
COM_HOST_NAME	The system host name of Centralized Offer Management.
COM_MANAGEMENT_PORT	The management port number for the Centralized Offer Management system.
COM_MANAGEMENT_HTTPS_PORT	The management HTTPS port number for the Centralized Offer Management system.
COM_AJP_PORT	The AJP port number for the Centralized Offer Management system.
COM_HTTP_PORT	The HTTP port number for the Centralized Offer Management system.
COM_HTTPS_PORT	The HTTPS port number for the Centralized Offer Management system.
COM_RECOVERY_ENV_PORT	The recovery environment port number of the Centralized Offer Management system.
COM_STATUS_MANAGER_PORT	The status manager port number of the Centralized Offer Management system.
COM_MIN_HEAP	The minimum heap size allocated for Centralized Offer Management.
COM_MAX_HEAP	The maximum heap size allocated for Centralized Offer Management.

Table 17. Common parameters of Centralized Offer Management

Parameter name	Parameter description
PRODUCT_OPTS_COM	Product specific options for Centralized Offer Management.
COM_PRODUCT_NAME	The name assigned for Centralized Offer Management.
CENTRALIZED_OFFERS_WAR_NAME	The name of the WAR file.
COM_APPLICATION_NAME	The name of the main application. For example, <i>Unica</i> .
COM_DOMAIN_USERNAME	The domain username for Centralized Offer Management.
COM_DOMAIN_PASSWORD	The domain password for Centralized Offer Management.

Plan configurations

To configure Plan for Docker, make the necessary modifications to the `plan-configMap.yaml` file.

To access the `plan-configMap.yaml` file, navigate to `/unica/templates/` in the Unica charts folder. Open the file and make modifications to the following parameters:

Table 18. Common parameters of Plan

Parameter name	Parameter description
PRODUCT_OPTS_PLAN	Product specific options for Plan.
PLAN_JNDI_NAME	JNDI name for Plan.
PLAN_POOL_NAME	Pool name for Plan.
PLAN_PRODUCT_NAME	The name assigned for Plan.

Table 18. Common parameters of Plan (continued)

Parameter name	Parameter description
PLAN_WAR_NAME	The name of the WAR file.
PLAN_APPLICATION_NAME	The name of the main application. For example, <i>Unica</i> .
PLAN_DOMAIN_USERNAME	The domain username for Plan.
PLAN_DOMAIN_PASSWORD	The domain password for Plan.

Table 19. Application server-related parameters of Plan

Parameter name	Parameter description
PLAN_HOST_NAME	The system host name of Plan.
PLAN_MANAGEMENT_PORT	The management port number for the Plan system.
PLAN_MANAGEMENT_HTTPS_PORT	The management HTTPS port number for the Plan system.
PLAN_AJP_PORT	The AJP port number for the Plan system.
PLAN_HTTP_PORT	The HTTP port number for the Plan system.
PLAN_HTTPS_PORT	The HTTPS port number for the Plan system.
PLAN_RECOVERY_ENV_PORT	The recovery environment port number of the Plan system.
PLAN_STATUS_MANAGER_PORT	The status manager port number of the Plan system.
PLAN_MIN_HEAP	The minimum heap size allocated for Plan.

Table 19. Application server-related parameters of Plan (continued)

Parameter name	Parameter description
PLAN_MAX_HEAP	The maximum heap size allocated for Plan.
PLAN_URL	The URL to access Plan.

Table 20. Database-related parameters for Plan

Parameter name	Parameter description
PLAN_PORT	The port number to access the Plan system.
PLAN_HOST	The host name of the Plan system.
DB_PLAN	The database name for Plan.
DB_PLAN_HOST	The host details of the database in the Plan system.
DB_PLAN_PORT	The database port number of the Plan system.
DB_PLAN_HOST_NAME	Host name of the system hosting the Plan database.
PLAN_DATABASE_HOST	Host system details of the system hosting the Plan database.
PLAN_DATABASE_PORT	Port number of the Plan database.
PLAN_DATABASE_NAME	Name of the Plan database.
PLAN_DATABASE_USERNAME	Username to access the Plan database.
PLAN_DATABASE_PASSWORD	Password to access the Plan database.
PLAN_DS_INITIAL_SIZE	
PLAN_DS_MIN_IDLE	

Table 20. Database-related parameters for Plan (continued)

Parameter name	Parameter description
PLAN_DS_MAX_IDLE	
PLAN_DS_MAX_TOTAL	
PLAN_DS_STATEMENT_CACHE_SIZE	

Platform configurations

To configure Platform for Docker, make the necessary modifications to the `platform-configMap.yaml` file.

To access the `platform-configMap.yaml` file, navigate to `/unica/templates/` in the Unica charts folder. Open the file and make modifications to the following parameters:

Table 21. Common parameters of Platform

Parameter name	Parameter description
PLATFORM_JNDI_NAME	JNDI name for Platform.
PLATFORM_POOL_NAME	Pool name for Platform.
PRODUCT_OPTS_BASE	Base options for all products of Unica.
PRODUCT_OPTS_PLATFORM	Product specific options for Platform.
FORCE_INIT_WEBLOGIC	Set whether you want to force initialize WebLogic. <code>TRUE</code> to activate for initialization and <code>FALSE</code> to deactivate force initialization.
JAVA_HOME_WEBLOGIC	Location of Java Home on your system.
PLATFORM_PRODUCT_NAME	The name assigned for Platform.
PLATFORM_WAR_NAME	The name of the WAR file.

Table 21. Common parameters of Platform (continued)

Parameter name	Parameter description
PLATFORM_APPLICATION_NAME	The name of the main application. For example, <i>Unica</i> .
PLATFORM_DOMAIN_USERNAME	The domain username for Platform.
PLATFORM_DOMAIN_PASSWORD	The domain password for Platform.

Table 22. Database-related parameters of Platform

Parameter name	Parameter description
PLATFORM_DATABASE_HOST	Host system details of the system hosting the Platform database.
PLATFORM_DATABASE_PORT	Port number of the Platform database.
PLATFORM_DATABASE_USERNAME	Username to access the Platform database.
PLATFORM_DATABASE_PASSWORD	Password to access the Platform database.
PLATFORM_DATABASE_NAME	Name of the Platform database.
DB_PLAT	The database name for Platform.
PLATFORM_DS_INITIAL_SIZE	
PLATFORM_DS_MIN_IDLE	
PLATFORM_DS_MAX_IDLE	
PLATFORM_DS_MAX_TOTAL	
PLATFORM_DS_STATEMENT_CACHE_SIZE	

Table 23. Application server-related parameters of Platform

Parameter name	Parameter description
MANAGER_URL	The URL to access Manager.
PLAT_HOST_NAME	The system host name of Platform.
PLAT_MANAGEMENT_PORT	The management port number for the Platform system.
PLAT_MANAGEMENT_HTTPS_PORT	The management HTTPS port number for the Platform system.
PLAT_AJP_PORT	The AJP port number for the Platform system.
PLAT_HTTP_PORT	The HTTP port number for the Platform system.
PLAT_HTTPS_PORT	The HTTPS port number for the Platform system.
PLAT_RECOVERY_ENV_PORT	The recovery environment port number of the Platform system.
PLAT_STATUS_MANAGER_PORT	The status manager port number of the Platform system.
PLAT_MIN_HEAP	The minimum heap size allocated for Platform.
PLAT_MAX_HEAP	The maximum heap size allocated for Platform.

Table 24. Apache Tomcat-specific parameters

Parameter name	Parameter description
TOMCAT_INSTALLER_TARGZ	The name of the Apache Tomcat installer TARGZ file.

Table 24. Apache Tomcat-specific parameters (continued)

Parameter name	Parameter description
TOMCAT_INSTALLER_UNZIP_DIRNAME	The location extract the Apache Tomcat installer TARGZ file.
TOMCAT_INSTALL_LOCATION	The location to install Apache Tomcat.
TOMCAT_INSTALL_CHECK_LOCATION	
FORCE_INIT_TOMCAT	Set whether you want to force initialize Apache Tomcat. <code>TRUE</code> to activate for initialization and <code>FALSE</code> to deactivate force initialization.
TOMCAT_SHUTDOWN_PORT	
TOMCAT_MAX_EXECUTOR_THREADS	
TOMCAT_MIN_EXECUTOR_THREADS	
TOMCAT_REDIRECT_PORT	

Sub-chart configuration in Helm charts

To run a DB container as a sub-chart, the database must reside within the cluster. Sub-charts have their own configMap for configurations.



Note: Unica Docker does not own the database.

Chapter 5. Installation and verifying the installation

The following topics provide information related to installation and verification of installation.

- [Installation \(on page 36\)](#)
- [Verifying the chart \(on page 36\)](#)
- [Log files \(on page 37\)](#)

Installation

You can install Unica using helm charts. Override the following Helm chart values using `--set name=value`.

- Ensure that configMaps in the helm chart are correctly configured. For more information, see Helm chart configuration (on page).
- Verify all the configurations and ensure that the mount location does not have any Unica-related installation files.

1. `kubectl apply -f ./omnix-unica/extra-configs/local-pv.yaml`
2. `helm install --name nginx stable/nginx-ingress -f ./omnix-unica/extra-configs/nginx-conf.yaml`
3. `helm install --name unica -f ./omnix-unica/values-local.yaml omnix-unica --set service.hostname=kubernetes.nonprod.hclpnp.com --set service.applicationDomain='nonprod.hclpnp.com' --set ingress.enabled=true`

Verifying the chart

Follow the instructions after the completion of Helm installation for chart verification. The chart generates an output for all the resources it creates.

1. To confirm if a chart has generated output for all the resources, run the following command:

```
helm ls
```

2. To view the installed helm release, run the following command:

```
helm status unica
```

3. To view the Unica Kubernetes pods, run the following command:

```
kubectl get pods
```

Log files

Confirm if the required containers are up and running. Upon confirmation, check the logs for all the running services.

- **Installation log files:**

The installation log files are placed in the logs folder at the mount point. For example, `$HOME_DIR/logs`.

- **Product log files:**

Log files are persisted out of the containers at the mount location. The log files for the products are placed in their respective install location folders. For example, if the product is Campaign and the mount location is `/docker/unica`, the Campaign log files will be available within the `/docker/unica/Campaign/logs/` location.

Campaign Log Files

To enable the ETL, Engage, and UBX logs within the Campaign logs folder, provide the absolute path in the `$CAMPAIGN_HOME/conf/campaign_log4j.properties` file.

Example

```
log4j.appender.ETL.File=/docker/unica/Campaign/logs/ETL.log
log4j.appender.ENGAGE_ETL.File=/docker/unica/Campaign/logs/EngageETL.log
log4j.appender.UBX.File=/docker/unica/Campaign/logs/UBX.log
```

Interact Log Files

For Interact, the log files are present in the following path:

Table 25. Log File Location in Application Servers

Stack Name	Location
TomcatDB2	<code>/opt/***/***/bin/</code>

Chapter 6. Post installation configurations

The following topics contain details about post installation configurations related to the products of Unica.

- [Configurations for Interact \(on page 39\)](#)
- [Avoiding timeout issues \(on page 6\)](#)
- [Configurations for Director \(on page \)](#)
- [Configurations for Optimize \(on page \)](#)
- [Configurations for Platform \(on page 39\)](#)
- [Configurations for Campaign \(on page 42\)](#)

Configurations for Interact

For Gateway configurations to work, perform the following step.

1. Add the required JAR files and the configuration files to the mount location.
2. On JMX console, use the CentOS desktop and the VNC viewer to view the individual pod consoles. Enable port forwarding on different ports.

Configurations for Platform

For Director and Campaign History tab, you should configure the Platform settings.

To configure Platform settings, complete the following steps:

1. Log in to Marketing Software.
2. Select **Settings > Configuration**.
3. On the left pane, select **IBM Marketing Platform > Security > API management > IBM Marketing Platform**.
4. On the left pane, select **Authentication** and in the right pane click **Edit settings**. The value for the fields should be:

Field name	Value
API URI	<code>/authentication/login</code>
Block API access	Disabled
Secure API access over HTTPS	Enabled
Require authentication for API access	Disabled

5. On the left pane, select **User** and in the right pane click **Edit settings**. The value for the fields should be:

Field name	Value
API URI	<code>/usr/partitions/*</code>
Block API access	Disabled
Secure API access over HTTPS	Disabled
Require authentication for API access	Enabled

6. On the left pane, select **Policy** and in the right pane click **Edit settings**. The value for the fields should be:

Field name	Value
API URI	<code>/policy/partitions/*</code>
Block API access	Disabled
Secure API access over HTTPS	Disabled
Require authentication for API access	Enabled

7. On the left pane, select **Configurations** and in the right pane click **Edit settings**. The value for the fields should be:

Field name	Value
API URI	<code>/datasource/config</code>

Field name	Value
Block API access	Disabled
Secure API access over HTTPS	Disabled
Require authentication for API access	Enabled

8. On the left pane, select **Datasource** and in the right pane click **Edit settings**. The value for the fields should be:

Field name	Value
API URI	<code>/datasource</code>
Block API access	Disabled
Secure API access over HTTPS	Disabled
Require authentication for API access	Enabled

9. On the left pane, select **Login** and in the right pane click **Edit settings**. The value for the fields should be:

Field name	Value
API URI	<code>/authentication/v1/login</code>
Block API access	Disabled
Secure API access over HTTPS	Disabled
Require authentication for API access	Disabled

10. On the left pane, select **Unica Campaign > Campaign REST API Filter** and in the right pane click **Edit settings**. The value for the fields should be:

Field name	Value
API URI	<code>/rest/v1/*</code>
Block API access	Disabled
Secure API access over HTTPS	Disabled

Field name	Value
Require authentication for API access	Enabled

11. On the left pane, select **Unica Campaign > Campaign REST API V2 Filter** and in the right pane click **Edit settings**. The value for the fields should be:

Field name	Value
API URI	<code>/rest/v2/*</code>
Block API access	Disabled
Secure API access over HTTPS	Disabled
Require authentication for API access	Enabled

Configurations for Campaign

To add user database in Campaign, complete the following steps:

1. Connect to the Listener pod.
2. Add the user database.
3. In the application, navigate to **Campaign > Configuration**.
4. Add an entry for Datasources.

Chapter 7. Upgrading on-premise applications to Docker

You can upgrade an on-premise version of Unica to the Docker version. The Docker will be deployed on the application server.

The prerequisite for the upgrade are as follows:

- Take a backup of your existing database.
- Copy the file system of the previous version to the mount location.
- Provide appropriate values the database parameters of all Unica components. For more information, see Helm chart configuration (*on page*).
- For Interact fast upgrade, the schema name in the target setup should be the same as the one in the base setup.
- Manually map the tables and restart the Campaign Pod.

In the `common-configMap.yaml` file, provide values for the following fields.

Table 26. Configurable Parameters to Perform an Upgrade

Parameter Name	Example Value
BASE_FOLDER	"OLDINSTALL/HCLUnica_86"
FROM	"8.6.0"
TO	"12.0.0"
SOURCE_SCHEMA	"CAMP86"
TARGET_SCHEMA	"CAMP86"
AC_VERSION	"8.6.x"
ACI_UNICODE	"y"
CONFIGURE_ON_ERROR_PROMPT	"n"
LOCALE	"en_US"

Table 26. Configurable Parameters to Perform an Upgrade (continued)

Parameter Name	Example Value
TYPE	UPGRADE
DATABASE_EXPORT_DIR	/DBBACKUP/
ISEXTERNALDB	false
DB_IMPORT_WAIT_TIME	1050
DB_PRE_IMPORT_WAIT_TIME	1050
IS_UNICODE	false
UPGRADE_FROM_TO	11.1+To12.0
LISTENER_HOST_NAME	{{ .Release.Name }}-omnix-uni- ca-listener
SOURCE_SCHEMA_RT	camp86
TARGET_SCHEMA_RT	camp86
DB_DRIVER_CLASS_RT	com.ibm.db2.jcc.DB2Driver
SOURCE_SCHEMA_PROD	intpr86
TARGET_SCHEMA_PROD	intpr86
DB_DRIVER_CLASS_PROD	com.ibm.db2.jcc.DB2Driver
SOURCE_SCHEMA_LRN	intl86
TARGET_SCHEMA_LRN	intl86
DB_DRIVER_CLASS_LRN	com.ibm.db2.jcc.DB2Driver
SOURCE_SCHEMA_RUN	intr86
TARGET_SCHEMA_RUN	intr86
DB_DRIVER_CLASS_RUN	com.ibm.db2.jcc.DB2Driver

Add the JVM Option `-DFAST_UPGRADE_VERSION=<BASE_VERSION>`. For example:

```
JAVA_OPTIONS="{JAVA_OPTIONS} -DFAST_UPGRADE_VERSION=8.6.x."
```

Supported versions in the fast upgrade are as follows:

8.6.x	<code>-DFAST_UPGRADE_VERSION=8.6.x</code>
9.0.x	<code>-DFAST_UPGRADE_VERSION=9.0.x</code>
9.1.x.x (9.1.x, 9.1.1.x and 9.1.2.x)	<code>-DFAST_UPGRADE_VERSION=9.1.x</code>
10.0.x	<code>-DFAST_UPGRADE_VERSION=10.0.x</code>
10.1.x	<code>-DFAST_UPGRADE_VERSION=10.1.x</code>
11.0.x	<code>-DFAST_UPGRADE_VERSION=11.0.x</code>
11.0.1	<code>-DFAST_UPGRADE_VERSION=11.0.1.x</code>

The mount location should contain the old version of the Unica file system. The database upgrade and the file system updates will be managed by Unica Docker containers.

1. To perform the upgrade, run the following command.

```
helm install --name unica omnix-unica --set
service.hostname=<kubernetes.nonprod.hclpnp.com --set
service.applicationDomain='nonprod.hclpnp.com' --set ingress.enabled=true
```

2. Access the upgrade logs from the mount location.

Configuring Marketing Platform post upgrade

For a fast upgrade of Marketing Platform, complete the following steps:

1. Marketing Platform application URL will point to the old base environment. Change the navigation URL using the SQL script from the Platform system database.
2. Manually change the URL of the start page, which appears when you log in to Unica Marketing Software products, from the `USM_PERSONALIZATION` table.

3. Copy the following properties files from the source environment to the destination environment. Ensure that all the URLs mentioned in the files are also updated to the destination environment.

- `Platform_Admin_URL.properties`
- `Platform_Admin_View_Priv.properties`
- `Platform_Admin_URL.properties`
- `Platform_Admin_Scheduler_Scripts.properties`
- `Platform_Admin_Scheduler_API.properties`

Chapter 8. Scaling Unica containers

Scaling a deployment ensures creation and scheduling of new Pods. Scaling increases the number of Pods to the new required state. Kubernetes also supports autoscaling of Pods.

For Multicast, perform the configurations on Kubernetes host to support it. For example, weave supports multicast and can be configured for multicast support.

The following topics provide information on scaling the containers of Unica:

- For details related to scaling Listener containers, see [Scaling Listener containers \(on page 47\)](#).
- For details related to scaling Interact containers, see [Scaling Interact containers \(on page 50\)](#).

Scaling Listener containers

Listeners are defined as StatefulSets in Kubernetes. Each Pod in a StatefulSet derives its hostname from the name of the StatefulSet and the ordinal of the Pod.

The Pod domain is managed by the service and it takes the following form:

```
$(service name).$(namespace).svc.cluster.local.
```

For example, the listener pod entry is registered as follows:

```
listener-0.listener.default.svc.cluster.local
```

These can be configured in the Helm chart in the `campaign-configMap.yaml` file.

Like a Deployment, a StatefulSet manages the Pods that are based on identical container specifications. Unlike a Deployment, a StatefulSet maintains a sticky identity for each of their Pods.

The location of Campaign shared home is `$HOME_DIR/Campaign`.

For the scaled instances of StatefulSet, `listener-0`, `listener-1`, `listener-2`, .. `listener-n`, each instance has a file system mapped on the mount location. For example, `$HOME_DIR/listener/listener-0`.

Ordered scale up and scale down

1. Ordered and graceful deployment and scaling.

If you want to scale up the Listener pod, run the following command:

```
kubectl scale StatefulSets listener --replicas=2
```

2. First instance gets deleted in the end.

If you want to scale down the Listener pod, run the following command:

```
kubectl scale StatefulSets listener --replicas=1
```

Listener-Optimize merge

1. Single scalable deployment in Kubernetes.
2. Configuration and license driven `config.xml`.
3. [Listener integration \(on page 49\)](#)

Cluster mode

1. To enable scaling, by default, cluster mode must be `TRUE`.

Also perform the following listener-related scaling activities:

- [Load balancing \(on page 48\)](#)
- [Listener integration \(on page 49\)](#)

Load balancing

For load balancing, there is a single listener that executes commands related to Campaign flowchart and Optimize sessions. In comparison to Campaign flowchart, an Optimize session requires a significantly better hardware configuration, which exceeds the minimum recommendation, for successful execution.

This newly introduced single listener helps the master listener to decide the node on which it should send the execution of the flowcharts or sessions, considering the `loadBalanceWeight`. We recommend you to avoid executing Optimize sessions on a node,

configured to execute campaign flowcharts. Similarly, we recommend you to avoid setting up a node with a significantly higher configuration of hardware for executing flowcharts. Using the new flag, the master listener can utilize the available resources in an appropriate way.

Choose an appropriate `listenerType` during installation based on the hardware, or configuration, or your requirements.

Listener integration

Prior to Unica 12.0 release, Campaign and Optimize were separate products. Users having both Campaign and Optimize had to run separate listeners. The Campaign listener `unica_aclsnr` to run flowcharts and Optimize listener `unica_acolsnr` to run the Optimize session.

Campaign-Optimize merged scenario

With text-based license for v12, the listener image expects a license file at mount point.

If both listener host name txt (`listener-0.txt` ...) and `opt.instance` file exist, it will create only the Optimize listener. If listener host name txt contains the first listener, it creates the listener as `LISTENER_TYPE 3`, which means it is for both Campaign and Optimize, otherwise it creates the listener as `LISTENER_TYPE 2` indicating that it is only for Optimize.

If the listener host name txt, `listener-0.txt` and so on, exists and the `opt.instance` file not exist, it creates the listener as `LISTENER_TYPE 3`, which indicates that it is for both Campaign and Optimize.

Listener types

- **CAMPAIGN_ONLY (TYPE 1)** - This listener can handle commands for Campaign or flowchart only.
- **OPTIMIZE_ONLY (TYPE 2)** - This listener can handle commands for Optimize session only.
- **ALL ((TYPE 3)**- This listener can handle commands for Campaign or Flowchart or Optimize session.

The Type option is available in the following locations:

- **Settings > Configuration > Campaign > unicaACLListener**
- **Settings > Configuration > Campaign > unicaACOLListener**

Scaling Interact containers

Each existing Interact machine runs a Kubernetes Interact deployment. If you have set the **hostNetwork** to `TRUE`, the existing network, which already supports multicast, can be used as it is without changing any settings. You can also use the existing load balancers over the Kubernetes Interact deployments.

To scale Interact pods for multiple server groups, refactor the helm chart to add services and deployments per server group. Each Server Group should point to a different Platform Instance. For example, if there are three RT server groups, there will be three Platform instances (three services and three deployments for Platform and Interact).

The **CONTEXT_ROOTS** variable, in the **interact_configMap.yaml** file drives:

- the context roots for Interact and Platform.
- PLT and RT database details per server group.

If you want to scale pods for a server group, run the following command:

```
kubectl scale deployment hcl-unica-interact --replicas=2
```

If the Interact POD crashes, or if you manually delete the pod, manually delete an entry from the configuration using the following command:

```
./configTool.sh -d -p 'Affinium|Campaign|partitions|partition1|Interact  
|serverGroups|interactatm|instanceURLs|$1' -o "
```

In the earlier command \$1 refers to the Interact POD name that crashed or was manually deleted.

Monitoring the scaled instances



Note: Ensure that VNC viewer exists on the host machine to monitor instances.

You can perform JMX monitoring for each of the scaled instances using port forwarding.

For POD1, run the following command:

```
kubectl port-forward --address 0.0.0.0  
pod/unica-omnix-unica-interact-84d7b47f59-d2rsl 9998:9998 &
```

For POD2, run the following command:

```
kubectl port-forward --address 0.0.0.0  
pod/unica-omnix-unica-interact-84d7b47f59-d2rsl 9999:9998 &
```

Chapter 9. Deployment monitoring

The Kubernetes Dashboard is a web-based user interface to monitor deployments.

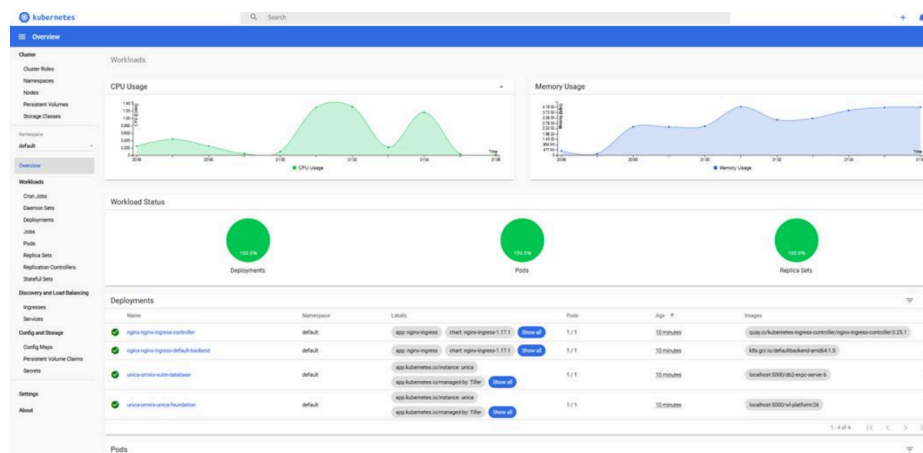
Use the Kubernetes Dashboard to to:

- deploy containerized applications to a Kubernetes cluster
- troubleshoot your containerized applications
- managing cluster resources

You can also use the Dashboard to get an overview of the applications running on your cluster, as well as for creating or modifying individual Kubernetes resources.

The Dashboard also provides information on the state of Kubernetes resources in your cluster and on any errors that may have occurred.

Figure 1. Kubernetes dashboard



Deploying the dashboard user interface

The Dashboard user interface is not deployed by default.

To deploy the Dashboard user interface, run the following command.

```
kubectl apply -f https://raw.githubusercontent.com/kubernetes/dashboard/v2.0.0-beta4/aio/deploy/recommended.yaml
```


Chapter 10. Product utilities

You can execute all the utilities of the Unica products in their assigned pods.

The following table lists the Unica products and their assigned pods for running the product-specific utilities.

Table 27. Unica products and their assigned pods for running the utilities

Unica Product Name	Pod Name	List of utilities
Unica Campaign	<code>Listener</code>	For the list of Campaign utilities, see Unica Campaign (on page 53) .
Unica Platform	<code>Platform</code>	For the list of Platform utilities, see Unica Platform (on page 54) .
Unica Plan	<code>Plan</code>	For the list of Plan utilities, see Unica Plan (on page 54) .

Unica Campaign

You can access all the utilities of Campaign from the location `CAMPAIGN_HOME/bin`.

Access the location and run the required utility. For more information on utilities, see Unica Campaign Administrator's Guide.

Following is the list of utilities available in Campaign.

- Campaign advanced search utility (`advSrchUtil`)
- Campaign advanced search agent (`advSrchAgent`)
- Campaign listener shutdown utility (`svrstop`)
- Campaign Server Manager (`unica_svradm`)
- Campaign session utility (`unica_acsesutil`)

- Campaign cleanup utility
- Campaign report generation utility (`unica_acgenrpt`)

Unica Platform

You can access all the utilities of Platform from the location `Platform/tools/bin`. Access the location and run the required utility. For more information on utilities, see Unica Platform Administrator's Guide.

Following is the list of utilities available in Platform.

- `alertConfigTool`
- `configTool`
- `datafilteringScriptTool`
- `encryptPasswords`
- `encryptTomcatDBPasswords`
- `partitionTool`
- `populated`
- `restoreAccess`

Unica Plan

You can access all the utilities of Plan from the location `MarketingOperations/tools/bin`. Access the location and run the required utility. For more information on the utilities, see Unica Plan Installation Guide.

Following is the list of utilities available in Plan.

- `umodbsetup`
- `configTool`

Chapter 11. FAQs and troubleshooting

This section covers the frequently asked questions and troubleshooting issues.

To view the list of FAQs, see [Frequently Asked Questions \(on page 55\)](#)

For information related to Troubleshooting, see [Troubleshooting Issues \(on page 57\)](#)

Frequently Asked Questions

This topic contains the list of FAQs related to Unica Docker release.

The list of FAQs are as follows:

- [Question 1 \(on page 55\)](#)
- [Question 2 \(on page 55\)](#)
- [Question 3 \(on page 56\)](#)
- [Question 4 \(on page 56\)](#)
- [Question 5 \(on page 57\)](#)
- [Question 6 \(on page 57\)](#)

Question 1

How do I configure Campaign Docker image to support non-ASCII data?

To configure non-ASCII data support for the Campaign Docker image, execute the same steps used for configuring non-ASCII data support on On-premise Campaign. For more details, see the topic **Non-ASCII data in Campaign** in the Unica Campaign Administrator's Guide.

Question 2

How to install products on locations other than default location mentioned in the `common-configMap.yaml` file?

To install products on location other than the default location configured in the `common-configMap.yaml` file, complete the following steps.

1. Mount the directory.
2. Open the `common-configMap.yaml` file and update the default path to the required path.
3. Ensure that the JDBCDrivers folder exists in the provided path.

Question 3

Why has Unica Docker installed JRE9 and JDK8 on my system?

Unica Docker is bundled with JRE9 and JRE8. In the `common-configMap.yaml` file:

- Provide the path of JRE9 for the parameter **DOCKER_JAVA_HOME**. Unica Docker uses JRE9 for installation tasks.
- Provide the path of JDK8 for the parameter **JAVA_HOME**. The products of Unica uses JDK8.

Question 4

Should the passwords in the `jdbc.properties` file be encrypted?

Yes. The passwords in the `jdbc.properties` file should be encrypted. Configure the passwords using the helm commands similar to configuring the host name. You do not have to store the passwords anywhere for reuse. Once you configure the passwords, it will be set in the application.

For Unica Docker, the `jdbc.properties` file is available in the following locations:

- `/Interact/PatternStateETL/bin/jdbc.properties`
- `/Interact/tools/bin/jdbc.properties`
- `/ContactOptimization/install/jdbc.properties`
- `/Platform/tools/bin/jdbc.properties`
- `/install/jdbc.properties`
- `/Campaign/bin/jdbc.properties`
- `/Campaign/eMessage/conf/jdbc.properties`
- `/Campaign/install/jdbc.properties`

Question 5

List the default JDBC drivers provided with the Listener container.

On the Listener container, the JDBC drivers exist in the following path: `Docker_Home/JdbcDrivers/`. The list of default JDBC drivers available with the Listener container are as follows:

- `db2jcc4.jar`
- `mariadb-java-client-2.4.1.jar`
- `ojdbc8_docker.jar`

Question 6

What should I do to make `/ACOOptAdmin.sh` work?

For `/ACOOptAdmin.sh` to work, update the following parameters in the `/ACOOptAdmin.sh` file:

- `JAVA_HOME`
- `OPTIMIZE_HOME`
- `JDBCDRIVER_CLASSPATH`

Troubleshooting Issues

This topic contains the list of Troubleshooting issues related to Unica Docker release.

The list of FAQs are as follows:

- [Question 1 \(on page 57\)](#)
- [Question 2 \(on page 58\)](#)
- [Question 3 \(on page 58\)](#)

Question 1

Stopping and Restarting an Application Server

Sometimes, you might have to stop and restart the application server. For example, if you have modified some settings and these modified settings require restarting the application server.

Question 2

Cannot select supported locales for Marketing Operations.

When installing Marketing Operations using Docker, you cannot select specific supported locales from the available list of supported locales. The system will automatically accept all available locales as the supported locales.

Question 3

ActiveMQ URL does not work.

The `ActiveMQ` URL `http://unica-omnix-unica-activemq:8161/admin/queues.jsp`, which provides information about the flowchartInfo-campaign events count, will not work. This is a Known Issue and will be fixed in the next release.

Chapter 12. Uninstalling the chart

1. To uninstall or delete the my-release deployment, run the following command.

```
helm delete --purge <releasename>
```

2. Delete the persistent volumes.
3. Delete the file systems.

If required, clean the persisted data of the database.