

# Deployit Database Plugin Manual

Version 3.9.2

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## Preface

This document describes the functionality provided by the database plugin.

See the **Deployit Reference Manual** for background information on Deployit and deployment concepts.

## Overview

The database plugin is a Deployit plugin that supports deployment of SQL files and folders to a database client.

## Features

- Runs on Deployit 3.6 and up.
- Supports deployment to MySQL, Oracle, MS SQL and DB/2.
- Deploys and undeploys SQL files and folders.

## Requirements

- **Deployit requirements**
  - **Deployit:** version 3.9+
  - **Other Deployit Plugins:** None
- **Infrastructural requirements**
  - **User credentials** for accessing the database client executables on the host running the database.

## Plugin Concepts

### SQL Scripts

The [SqlScripts](#) CI encompasses a folder containing SQL scripts that are to be executed on a database. SQL scripts come in two flavors, namely installation scripts and rollback scripts. Installation scripts are used to execute changes on the database, such as creation of a table or inserting data. Each installation script is associated with a rollback script which undoes the actions performed by it's companion installation script. Rollback scripts **must** have the exact same name as the installation script they are associated with and have the moniker – `rollback` attached to it. Executing an installation script followed by the accompanying rollback script should leave the database in an unchanged state.

SQL scripts are ordered alphabetically based on their filename. This is an example of ordering of several installation scripts:

- 1-create-user-table.sql
- 1-create-user-table-rollback.sql
- 10-drop-user-index.sql
- 10-drop-user-index-rollback.sql
- 2-insert-user.sql
- 2-insert-user-rollback.sql
- ...
- 9-create-user-index.sql
- 9-create-user-index-rollback.sql

Note that in this example, the tenth script, *10-drop-user-index.sql* would be incorrectly executed after the first script, *1-create-user-table.sql*.

When upgrading a SqlScripts CI, only those scripts that were not present in the previous package version are executed. For example, if the previous SqlScripts folder contained script1.sql and script2.sql, and the new version of SqlScripts folder contains script2.sql and script3.sql, then only script3.sql will be executed as part of the upgrade.

When undeploying a SqlScripts CI, all rollback scripts are executed in reverse alphabetical order.

## Dependencies

It is also possible to include dependencies together with the SQL scripts. Dependencies are included in the package using sub-folders. Sub-folders that have the same name as the script (without the file extension) are uploaded with the scripts in the sub-folder along with the main script to the target machine. The main script can then execute the dependent scripts in the same connection.

Common dependencies can be included in a sub-folder called `common` and will be available to all scripts.

Take this folder with Oracle scripts as an example:

```
mysqlfolder
|
|__ 01-CreateTable.sql
|
|__ 02-CreateUser.sql
|
|__ 02-CreateUser
|
|__ create_admin_users.sql
|
|__ create_power_users.sql
|
|__ common
|
|__ some_other_util.sql
|
|__ some_resource.properties
```

The `02-CreateUser.sql` script can use its dependencies or common dependencies as follows:

```
--
-- 02-CreateUser.sql
--

INSERT INTO person2 (id, firstname, lastname) VALUES (1, 'xebialabs1', 'user1');
-- Execute a common dependency
@some_other_util.sql
-- Execute script-specific dependency: Create Admin Users
@create_admin_users.sql
-- Execute script-specific dependency: Create Power Users
@create_power_users.sql
COMMIT;
```

## SQL Client

The `SqlClient` CIs are containers to which `SqlScripts` can be deployed. The plugin ships with `SqlClient` for the following databases:

- MySQL
- Oracle
- MS SQL
- DB/2

When SQL scripts are deployed to an SQL client, each script to be executed is run against the SQL client in turn. The SQL client can be configured with a username and password that is used to connect to the database. The credentials can be overridden on each SQL script if required.

## Usage in Deployment Packages

The following is a manifest snippet that shows how SQL file and folder CIs can be included in a deployment package. The SQL scripts CI refers to a folder, `sql/`, in the deployment package.

```
Manifest-Version: 1.0
Deployit-Package-Format-Version: 1.3
CI-Application: PetClinic-ear
CI-Version: 2.0

Name: PetClinic-2.0.ear
```

CI-Type: jee.Ear
CI-Name: PetClinic
Name: sql
CI-Type: sql.SqlScripts
CI-Name: sql

## Using the deployables and deployed

The following table describes which deployable/container combinations are possible.

### Deployable vs. Container table

Deployable	Container	Generated deployed
sql.SqlScripts	sql.OracleClient, sql.MySqlClient, sql.Db2Client	sql.ExecutedSqlScripts

The following table describes the effect a deployed has on it's container.

### Deployed Actions Table

Deployed	Actions performed for operations		
	Create	Destroy	Modify
sql.ExecutedSqlScripts	For each installation script in the folder (ordered alphabetically by name, ascending): <ul style="list-style-type: none"> <li>Run script through template engine</li> <li>Copy create script to container</li> <li>Execute script</li> </ul>	For each rollback script in the folder (ordered alphabetically by name, descending): <ul style="list-style-type: none"> <li>Run script through template engine</li> <li>Copy destroy script to container</li> <li>Execute script</li> </ul>	For each installation script in the folder that was not part of the deployment being upgraded (ordered alphabetically by name, ascending): <ul style="list-style-type: none"> <li>Run script through template engine</li> <li>Copy modify script to container</li> <li>Execute script</li> </ul>

## CI Reference

### Configuration Item Overview

#### Deployables

CI	Description
<a href="#">sql.SqlScripts</a>	Folder containing SQL scripts

#### Deployeds

CI	Description
<a href="#">sql.ExecutedSqlScripts</a>	SQL scripts executed on an SQL client

#### Containers

CI	Description
<a href="#">sql.Db2Client</a>	IBM DB2 client
<a href="#">sql.MsSqlClient</a>	Microsoft SQL Server client
<a href="#">sql.MySqlClient</a>	MySQL client
<a href="#">sql.OracleClient</a>	Oracle SQL*Plus client
<a href="#">sql.SqlClient</a>	Generic SQL client

### Other Configuration Items

CI	Description
<a href="#">sql.Db2Client</a>	IBM DB2 client
<a href="#">sql.ExecutedSqlScripts</a>	SQL scripts executed on an SQL client
<a href="#">sql.MsSqlClient</a>	Microsoft SQL Server client
<a href="#">sql.MySqlClient</a>	MySQL client
<a href="#">sql.OracleClient</a>	Oracle SQL*Plus client
<a href="#">sql.SqlClient</a>	Generic SQL client
<a href="#">sql.SqlScripts</a>	Folder containing SQL scripts


### Configuration Item Details

## sql.Db2Client

**Type Hierarchy** [sql.SqlClient](#) >> generic.Container >> generic.BaseGenericContainer >> udm.BaseContainer >> udm.BaseConfigurationItem

**Interfaces** udm.Taggable, udm.ConfigurationItem, udm.Container, generic.GenericContainer, overthere.HostContainer

IBM DB2 client

Parent
 <b>host</b> : <a href="#">CI&lt;overthere.Host&gt;</a> Host upon which the container resides

Hidden Properties	
<b>* clientWrapperScript</b> : <b>STRING</b> = <b>sql/Db2Client</b>	The OS-specific wrapper script that calls the SQL client
<b>* restartOrder</b> : <b>INTEGER</b> = <b>90</b>	The order of the restart container step in the step list.
<b>* startOrder</b> : <b>INTEGER</b> = <b>90</b>	The order of the start container step in the step list.
<b>* startWaitTime</b> : <b>INTEGER</b> = <b>0</b>	The time to wait in seconds for a container start action.
<b>* stopOrder</b> : <b>INTEGER</b> = <b>10</b>	The order of the stop container step in the step list.
<b>* stopWaitTime</b> : <b>INTEGER</b> = <b>0</b>	The time to wait in seconds for a container stop action.
<b>inspectClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the inspect script.
<b>inspectScript</b> : <b>STRING</b>	Classpath to the script used to inspect the generic container.
<b>inspectTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the inspect script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>password</b> : <b>STRING</b>	If set, the password to use if none is set on the deployed <code>sql.ExecutedSqlScripts</code>
<b>restartClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the restart script.
<b>restartScript</b> : <b>STRING</b>	Classpath to the script used to restart the generic container.
<b>restartTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the restart script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>restartWaitTime</b> : <b>INTEGER</b> = <b>0</b>	The time to wait in seconds for a container restart action.
<b>startClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the start script.
<b>startScript</b> : <b>STRING</b>	Classpath to the script used to start the generic container.
<b>startTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the start script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>stopClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the stop script.
<b>stopScript</b> : <b>STRING</b>	Classpath to the script used to stop the generic container.
<b>stopTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the stop script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>username</b> : <b>STRING</b>	If set, the user name to use if none is set on the deployed <code>sql.ExecutedSqlScripts</code>

## sql.ExecutedSqlScripts

<b>Type Hierarchy</b>	generic.ExecutedFolder >> generic.AbstractDeployed >> udm.BaseDeployed >> udm.BaseConfigurationItem
<b>Interfaces</b>	udm.EmbeddedDeployedContainer, udm.Artifact, udm.Deployed, udm.ConfigurationItem, udm.DerivedArtifact

SQL scripts executed on an SQL client

Parent
<p>✱ <b>container</b> : <code>CI&lt;udm.Container&gt;</code> The container on which this deployed runs.</p>



Hidden Properties	
<b>* commonScriptFolderName</b> : <b>STRING</b> = <b>common</b>	Common folder that should be uploaded to the working directory.
<b>* createOptions</b> : <b>SET_OF_STRING</b> = [uploadArtifactData, uploadClasspathResources, uploadTemplateClasspathResources]	Options for the create step (1 or more of: none,uploadArtifactData,uploadClasspathResources,uploadTemplateClasspathResources).
<b>* createOrder</b> : <b>INTEGER</b> = <b>50</b>	The order of the step in the step list for the create operation.
<b>* createVerb</b> : <b>STRING</b> = <b>Run</b>	Create Verb
<b>* destroyOptions</b> : <b>SET_OF_STRING</b> = [uploadArtifactData, uploadClasspathResources, uploadTemplateClasspathResources]	Options for the destroy step (1 or more of: none,uploadArtifactData,uploadClasspathResources,uploadTemplateClasspathResources).
<b>* destroyOrder</b> : <b>INTEGER</b> = <b>40</b>	The order of the step in the step list for the destroy operation.
<b>* destroyVerb</b> : <b>STRING</b> = <b>Rollback</b>	Destroy Verb
<b>* executorScript</b> : <b>STRING</b> = <b>`\${deployed.container.clientWrapperScript}`</b>	Name of the executor script that will be executed for each script found in the folder.
<b>* modifyOptions</b> : <b>SET_OF_STRING</b> = [uploadArtifactData, uploadClasspathResources, uploadTemplateClasspathResources]	Options for the modify step (1 or more of: none,uploadArtifactData,uploadClasspathResources,uploadTemplateClasspathResources).
<b>* modifyOrder</b> : <b>INTEGER</b> = <b>50</b>	The order of the step in the step list for the modify operation.
<b>* modifyVerb</b> : <b>STRING</b> = <b>Modify</b>	Modify Verb
<b>* noopOptions</b> : <b>SET_OF_STRING</b> = [uploadArtifactData, uploadClasspathResources, uploadTemplateClasspathResources]	Options for the noop step (1 or more of: none,uploadArtifactData,uploadClasspathResources,uploadTemplateClasspathResources).
<b>* noopOrder</b> : <b>INTEGER</b> = <b>50</b>	The order of the step in the step list for the noop operation.
<b>* noopVerb</b> : <b>STRING</b> = <b>Modify</b>	Noop Verb
<b>* rollbackScriptPostfix</b> : <b>STRING</b> = <b>-rollback.sql</b>	A script's associated rollback script is derived by using the 1st group identified by the scriptRecognitionRegex and then appending this postfix to it. e.g give name '01-myscript.sql', regex '([0-9]*-*)\.sql' and rollback script postfix '-rollback.sql', we can derive the name of the associated rollback script to be '01-myscript-rollback.sql'
<b>* rollbackScriptRecognitionRegex</b> : <b>STRING</b> = <b>[0-9]*-(.*)-rollback\.sql</b>	Regular expression used to identify a rollback script in the folder. A successful match should returns a single group, ie the logical script name. e.g. [0-9]*-.*-rollback\.sql
<b>* scriptRecognitionRegex</b> : <b>STRING</b> = <b>(?!.*-rollback\.sql)([0-9]*-*)\.sql</b>	Regular expression used to identify a script in the folder. A successful match should returns a single group to which the rollbackScriptPostfix can be appended in order to find the associated rollback script or the script's dependent subfolder. e.g.([0-9]*-*)\.sql
<b>classpathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the script.
<b>inspectClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the inspect script.
<b>inspectScript</b> : <b>STRING</b>	Classpath to the script used to inspect the generic container.
<b>inspectTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the inspect script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>restartRequired</b> : <b>BOOLEAN</b> = <b>false</b>	The generic container requires a restart for the action performed by this deployed.

**restartRequiredForNoop** : **BOOLEAN** = false

The generic container requires a restart for the NOOP action performed by this deployed.

**templateClasspathResources** : **SET\_OF\_STRING**

Additional template classpath resources that should be uploaded to the working directory before executing the script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.

## sql.MsSqlClient

**Type Hierarchy** [sql.SqlClient](#) >> generic.Container >> generic.BaseGenericContainer >> udm.BaseContainer >> udm.BaseConfigurationItem

**Interfaces** udm.Taggable, udm.ConfigurationItem, udm.Container, generic.GenericContainer, overthere.HostContainer

Microsoft SQL Server client

### Parent

\* **host** : [CI<overthere.Host>](#)

Host upon which the container resides

Hidden Properties	
<b>* clientWrapperScript</b> : <b>STRING</b> = <b>sql/MsSqlClient</b>	The OS-specific wrapper script that calls the SQL client
<b>* restartOrder</b> : <b>INTEGER</b> = <b>90</b>	The order of the restart container step in the step list.
<b>* startOrder</b> : <b>INTEGER</b> = <b>90</b>	The order of the start container step in the step list.
<b>* startWaitTime</b> : <b>INTEGER</b> = <b>0</b>	The time to wait in seconds for a container start action.
<b>* stopOrder</b> : <b>INTEGER</b> = <b>10</b>	The order of the stop container step in the step list.
<b>* stopWaitTime</b> : <b>INTEGER</b> = <b>0</b>	The time to wait in seconds for a container stop action.
<b>inspectClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the inspect script.
<b>inspectScript</b> : <b>STRING</b>	Classpath to the script used to inspect the generic container.
<b>inspectTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the inspect script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>restartClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the restart script.
<b>restartScript</b> : <b>STRING</b>	Classpath to the script used to restart the generic container.
<b>restartTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the restart script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>restartWaitTime</b> : <b>INTEGER</b> = <b>0</b>	The time to wait in seconds for a container restart action.
<b>startClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the start script.
<b>startScript</b> : <b>STRING</b>	Classpath to the script used to start the generic container.
<b>startTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the start script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>stopClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the stop script.
<b>stopScript</b> : <b>STRING</b>	Classpath to the script used to stop the generic container.
<b>stopTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the stop script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.

## sql.MySqlClient

**Type Hierarchy** [sql.SqlClient](#) >> [generic.Container](#) >> [generic.BaseGenericContainer](#) >> [udm.BaseContainer](#) >> [udm.BaseConfigurationItem](#)

**Interfaces** [udm.Taggable](#), [udm.ConfigurationItem](#), [udm.Container](#), [generic.GenericContainer](#), [overthere.HostContainer](#)

MySQL client

Parent	
<b>* host</b> : <code>CI&lt;overthere.Host&gt;</code>	Host upon which the container resides
Public Properties	
<b>* databaseName</b> : <code>STRING</code>	The name of the MySQL database to connect to
<b>* mySqlHome</b> : <code>STRING</code>	The directory that contains the MySQL installation
<b>envVars</b> : <code>MAP_STRING_STRING</code>	Environment variables for container
<b>password</b> : <code>STRING</code>	If set, the password to use if none is set on the deployed <code>sql.ExecutedSqlScripts</code>
<b>tags</b> : <code>SET_OF_STRING</code>	If set, only deployables with the same tag will be automatically mapped to this container.
<b>username</b> : <code>STRING</code>	If set, the user name to use if none is set on the deployed <code>sql.ExecutedSqlScripts</code>

Hidden Properties	
<b>* clientWrapperScript</b> : <b>STRING</b> = <b>sql/MySqlClient</b>	The OS-specific wrapper script that calls the SQL client
<b>* restartOrder</b> : <b>INTEGER</b> = <b>90</b>	The order of the restart container step in the step list.
<b>* startOrder</b> : <b>INTEGER</b> = <b>90</b>	The order of the start container step in the step list.
<b>* startWaitTime</b> : <b>INTEGER</b> = <b>0</b>	The time to wait in seconds for a container start action.
<b>* stopOrder</b> : <b>INTEGER</b> = <b>10</b>	The order of the stop container step in the step list.
<b>* stopWaitTime</b> : <b>INTEGER</b> = <b>0</b>	The time to wait in seconds for a container stop action.
<b>inspectClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the inspect script.
<b>inspectScript</b> : <b>STRING</b>	Classpath to the script used to inspect the generic container.
<b>inspectTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the inspect script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>restartClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the restart script.
<b>restartScript</b> : <b>STRING</b>	Classpath to the script used to restart the generic container.
<b>restartTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the restart script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>restartWaitTime</b> : <b>INTEGER</b> = <b>0</b>	The time to wait in seconds for a container restart action.
<b>startClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the start script.
<b>startScript</b> : <b>STRING</b>	Classpath to the script used to start the generic container.
<b>startTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the start script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>stopClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the stop script.
<b>stopScript</b> : <b>STRING</b>	Classpath to the script used to stop the generic container.
<b>stopTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the stop script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.

## sql.OracleClient

**Type Hierarchy** [sql.SqlClient](#) >> [generic.Container](#) >> [generic.BaseGenericContainer](#) >> [udm.BaseContainer](#) >> [udm.BaseConfigurationItem](#)

**Interfaces** [udm.Taggable](#), [udm.ConfigurationItem](#), [udm.Container](#), [generic.GenericContainer](#), [overthere.HostContainer](#)

Oracle SQL\*Plus client

Parent
<p>* <b>host</b> : <code>CI&lt;overthere.Host&gt;</code> Host upon which the container resides</p>
Public Properties
<p>* <b>oraHome</b> : <code>STRING</code> The directory that contains the Oracle installation</p>
<p>* <b>sid</b> : <code>STRING</code> The Oracle SID to connect to</p>
<p><b>envVars</b> : <code>MAP_STRING_STRING</code> Environment variables for container</p>
<p><b>password</b> : <code>STRING</code> If set, the password to use if none is set on the deployed <code>sql.ExecutedSqlScripts</code></p>
<p><b>tags</b> : <code>SET_OF_STRING</code> If set, only deployables with the same tag will be automatically mapped to this container.</p>
<p><b>username</b> : <code>STRING</code> If set, the user name to use if none is set on the deployed <code>sql.ExecutedSqlScripts</code></p>

Hidden Properties	
<b>* clientWrapperScript</b> : <b>STRING</b> = <b>sql/OracleClient</b>	The OS-specific wrapper script that calls the SQL client
<b>* restartOrder</b> : <b>INTEGER</b> = <b>90</b>	The order of the restart container step in the step list.
<b>* startOrder</b> : <b>INTEGER</b> = <b>90</b>	The order of the start container step in the step list.
<b>* startWaitTime</b> : <b>INTEGER</b> = <b>0</b>	The time to wait in seconds for a container start action.
<b>* stopOrder</b> : <b>INTEGER</b> = <b>10</b>	The order of the stop container step in the step list.
<b>* stopWaitTime</b> : <b>INTEGER</b> = <b>0</b>	The time to wait in seconds for a container stop action.
<b>inspectClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the inspect script.
<b>inspectScript</b> : <b>STRING</b>	Classpath to the script used to inspect the generic container.
<b>inspectTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the inspect script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>restartClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the restart script.
<b>restartScript</b> : <b>STRING</b>	Classpath to the script used to restart the generic container.
<b>restartTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the restart script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>restartWaitTime</b> : <b>INTEGER</b> = <b>0</b>	The time to wait in seconds for a container restart action.
<b>startClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the start script.
<b>startScript</b> : <b>STRING</b>	Classpath to the script used to start the generic container.
<b>startTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the start script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>stopClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the stop script.
<b>stopScript</b> : <b>STRING</b>	Classpath to the script used to stop the generic container.
<b>stopTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the stop script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.

## sql.SqlClient

### Virtual Type

**Type Hierarchy** generic.Container >> generic.BaseGenericContainer >>  
udm.BaseContainer >> udm.BaseConfigurationItem

**Interfaces** udm.Taggable, udm.ConfigurationItem, generic.GenericContainer,  
udm.Container, overthere.HostContainer

Generic SQL client

Parent
<b>* host</b> : <code>CI&lt;overthere.Host&gt;</code> Host upon which the container resides
Public Properties
<b>clientWrapperScript</b> : <code>STRING</code> The OS-specific wrapper script that calls the SQL client
<b>envVars</b> : <code>MAP_STRING_STRING</code> Environment variables for container
<b>password</b> : <code>STRING</code> If set, the password to use if none is set on the deployed <code>sql.ExecutedSqlScripts</code>
<b>tags</b> : <code>SET_OF_STRING</code> If set, only deployables with the same tag will be automatically mapped to this container.
<b>username</b> : <code>STRING</code> If set, the user name to use if none is set on the deployed <code>sql.ExecutedSqlScripts</code>



Hidden Properties	
<b>* restartOrder</b> : <b>INTEGER</b> = 90	The order of the restart container step in the step list.
<b>* startOrder</b> : <b>INTEGER</b> = 90	The order of the start container step in the step list.
<b>* startWaitTime</b> : <b>INTEGER</b> = 0	The time to wait in seconds for a container start action.
<b>* stopOrder</b> : <b>INTEGER</b> = 10	The order of the stop container step in the step list.
<b>* stopWaitTime</b> : <b>INTEGER</b> = 0	The time to wait in seconds for a container stop action.
<b>inspectClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the inspect script.
<b>inspectScript</b> : <b>STRING</b>	Classpath to the script used to inspect the generic container.
<b>inspectTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the inspect script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>restartClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the restart script.
<b>restartScript</b> : <b>STRING</b>	Classpath to the script used to restart the generic container.
<b>restartTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the restart script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>restartWaitTime</b> : <b>INTEGER</b> = 0	The time to wait in seconds for a container restart action.
<b>startClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the start script.
<b>startScript</b> : <b>STRING</b>	Classpath to the script used to start the generic container.
<b>startTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the start script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.
<b>stopClasspathResources</b> : <b>SET_OF_STRING</b>	Additional classpath resources that should be uploaded to the working directory before executing the stop script.
<b>stopScript</b> : <b>STRING</b>	Classpath to the script used to stop the generic container.
<b>stopTemplateClasspathResources</b> : <b>SET_OF_STRING</b>	Additional template classpath resources that should be uploaded to the working directory before executing the stop script. The template is first rendered and the rendered content copied to a file, with the same name as the template, in the working directory.

## sql.SqlScripts

<b>Type Hierarchy</b>	generic.Folder >> udm.BaseDeployableFolderArtifact >> udm.BaseDeployableArtifact >> udm.BaseDeployable >> udm.BaseConfigurationItem
<b>Interfaces</b>	udm.Taggable, udm.Deployable, udm.SourceArtifact, udm.Artifact, udm.DeployableArtifact, udm.ConfigurationItem, udm.FolderArtifact

Folder containing SQL scripts

Public Properties
<b>checksum</b> : <b>STRING</b> The checksum used to detect differences on the artifact. If not provided, it will be calculated by Deployit.
<b>excludeFileNamesRegex</b> : <b>STRING</b> Regular expression that matches file names that must be excluded from scanning
<b>password</b> : <b>STRING</b> The password to connect to the database
<b>placeholders</b> : <b>SET_OF_STRING</b> Placeholders detected in this artifact
<b>scanPlaceholders</b> : <b>BOOLEAN</b> = <b>true</b> Whether to scan this artifact for placeholders when it is imported
<b>tags</b> : <b>SET_OF_STRING</b> If set, this deployable will only be mapped automatically to containers with the same tag.
<b>username</b> : <b>STRING</b> The username to connect to the database
Hidden Properties
<b>* textFileNamesRegex</b> : <b>STRING</b> = <b>.\.(cfg   conf   config   ini   properties   props   txt   asp   aspx   htm   html   jsf   jsp   xht   xhtml   sql   xml   xsd   xsl   xslt)</b> Regular expression that matches file names of text files
<b>delimiters</b> : <b>STRING</b> = <b>{{ }}</b> The delimiters used indicate placeholders, defaults to '{{ }}'. This is a 5 character string with a space in the middle, the first two are the leading delimiter, the last two are the closing delimiter