Installing Database Support for the APP VMware Controller

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# Overview

This setup creates the database for the VMware Controller. The following tasks are executed during the setup:

* A PostgreSQL database is created
* Data is imported via CSV files
* A Glassfish Datasource is created

# Preparing the Setup

Extract the file **vmware-controller-database.zip**, to a separate temporary directory on the system from where you want to install the database.

In the following sections, this directory will be referred to as <setup\_dir>.

# Configuring the Setup

Open the file <setup\_dir>\db.properties in an editor and change the database settings.

# Setting up the Database

To create the database and the schema, proceed as follows:

1. Make sure that the database server is running.
2. Open the command prompt (Windows) or a terminal session (UNIX/Linux).
3. Create the database by executing the build-db.xml file in <setup\_dir> as follows:

<ANT\_HOME>/bin/ant -f build-db.xml setupDatabase

If the setup of the database fails with errors, proceed as follows:

1. Check and correct the configuration files.
2. Execute the build-db.xml file as follows:

<ANT\_HOME>/bin/ant -f build-db.xml dropAll

<ANT\_HOME>/bin/ant -f build-db.xml setupDatabase

# Data Import

Before the data is loaded into the database the data must be prepared. The csv files are described in the following chapters. After the csv files have been created the data can be loaded into the database by running the following command:

<ANT\_HOME>/bin/ant -f build-db.xml importAll

Instead of importing all at once the import can be split by running the following commands in the order that they are listed here:

<ANT\_HOME>/bin/ant -f build-db.xml importVCenter

<ANT\_HOME>/bin/ant -f build-db.xml importCluster

<ANT\_HOME>/bin/ant -f build-db.xml importVLAN

<ANT\_HOME>/bin/ant -f build-db.xml importDomain

<ANT\_HOME>/bin/ant -f build-db.xml importIPPool

If there is an error during the import fix the problem and start from scratch by running the following commands:

<ANT\_HOME>/bin/ant -f build-db.xml dropAll

<ANT\_HOME>/bin/ant -f build-db.xml setupDatabase

<ANT\_HOME>/bin/ant -f build-db.xml importAll

# The CSV File Format

The CSV files must be UTF-8 encoded.

## vCenter

A vCenter is a VMware vSphere Server installation. The vCenters are listed in the file

<setup\_dir>/csv/vcenter.csv

The CSV file contains the following columns.

|  |  |
| --- | --- |
| **Column Name** | **Description** |
| TKey | The technical key must be a unique number |
| Name | The name of the vCenter where the VMware vSphere Server is installed |
| Identifier | The vCenter id can be part of the generated hostname of a virtual machine |
| URL | The URL for accessing the vSphere API |
| UserId | The userid for accessing the vSphere API |
| Password | The password for accessing the vSphere API |

For each vCenter a sequence is created for generating unique identifiers. This identifier is used in instancename and hostname generation. To create a sequence for each site manually, execute the following statement (replace <vcenter identifier> first).

CREATE SEQUENCE vmwareuser.vcenter\_<vcenter identifier>\_seq

INCREMENT 1

MINVALUE 1

MAXVALUE 9223372036854775807

START 1

CACHE 1

CYCLE;

ALTER TABLE vmwareuser.vcenter\_<vcenter identifier>\_seq

OWNER TO vmwareuser;

## Datacenters

Datacenters are entities on a vSphere Server. One vCenter can contain many datacenters. One datacenter can contain many clusters. The datacenters are listed in the file

<setup\_dir>/csv/datacenter.csv

The CSV file contains the following columns.

|  |  |
| --- | --- |
| **Column Name** | **Description** |
| VCenter | The name of the vCenter |
| Datacenter | The name of the datacenter |
| DatacenterId | An identifier that can be used when generating vSphere instance names |

## Clusters

Clusters are entities in a vSphere Server. One datacenter can contain many clusters. Clusters contain virtual machines. The clusters are listed in the file

<setup\_dir>/csv/cluster.csv

The CSV file contains the following columns.

|  |  |
| --- | --- |
| **Column Name** | **Description** |
| VCenter | The name of the site where the cluster is located |
| Datacenter | The name of the datacenter that the cluster is associated with |
| Clustername | The name of the cluster |

## VLANs

VLANs are network adapters. They are associated to clusters.

The VLANs are listed in the file

<setup\_dir>/csv/vlan.csv

The CSV file contains the following columns.

|  |  |
| --- | --- |
| **Column Name** | **Description** |
| VCenter | The name of the vCenter that the cluster is assigned to |
| Datacenter | The name of the datacenter that the cluster is associated with |
| Cluster | The name of the cluster that the IP address is assigned to |
| Name | The name of the VLAN |
| Gateway | The IP address of the gateway |
| SubnetMask | The subnet mask |
| Enabled | If the VLAN is not enabled it is not available for associating it to a virtual machine |

## IPPools

An IP pool is a list of IP addresses that are associated to a VLAN.

The IP addresses are listed in the file

<setup\_dir>/csv/ippool.csv

The CSV file contains the following columns.

|  |  |
| --- | --- |
| **Column Name** | **Description** |
| VCenter | The name of the vCenter that the cluster is assigned to |
| Datacenter | The name of the datacenter that the cluster is associated with |
| Cluster | The name of the cluster that the IP address is assigned to |
| VLAN | The name of the VLAN the IP addess is assigned to |
| IPAddress | The IP address |

## Domain Settings (DNS settings)

Domain settings and DNS settings are listed in the file

<setup\_dir>/csv/domain.csv

The CSV file contains the following columns.

|  |  |
| --- | --- |
| **Column Name** | **Description** |
| Domain | The domain name |
| DNSServer | The IP address of the DNS server. More than one IP address can be separated by comma. |
| DNSSuffix | The DNS search suffix. More than one DNS suffix can be separated by comma. |

# Setting up the Application Server Resource

The VMware Controller requires a data source in the application server. This data source is created manually by executing the asadmin command.

Open the file glassfish-resources.xml and change the property **ServerName** to the hostname where the database is running on. Then open a command line and execute the following command:

asadmin -p 8848 add-resources glassfish-resources.xml

# vSphere API Access

Three items are necessary for contacting the vSphere API.

1. A URL
2. UserId
3. Password

## URL

This information is stored in the database table **vcenter.** Each vCenter (vSphere server) has a different URL.

Example:

https://estvcenterdev1/sdk/vimService?wsdl

## UserId and Password

This information is stored in the database table **vcenter**. Each vCenter might have different credentials for authentication. The technical user must have the following vSphere privileges.

* Virtual machine/\*
* Resource/Assign virtual machine to resource pool
* Datastore/Allocate space
* Network/Assign network