7.0 CloudShell Execution Server over Linux

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Legal notice

Contents

Overview

CloudShell 7.0 supports Execution Server on Linux (CentOS 7). You can use the images provided in the CloudShell Execution Server over Linux Virtual Appliance to create a virtual machine (VM) that enables the execution of commands in a distributed fashion in a Linux environment. The CloudShell Execution Server application is packaged in the VM that is created using the procedures described in this document. The CloudShell Execution Server on Linux Virtual Appliance supports the running of commands.

This document describes how to download the solution pack and create VMs from the images that it provides.

Requirements

- vSphere (For Windows users)
- KVM (For Linux users)

Downloading the Linux Virtual Appliance Images

The installation files for CloudShell Linux Virtual Appliance are available from QualiSystems' Download Center.

To locate the installation files:

1. Open the header **CloudShell Version 7.0**.

   The installation files are available under **Virtual Appliances**.
2. Download the files into a temporary location on your local machine.

   Each folder contains an **.md5** file with a list of files in that folder and their md5 checksum.

   Note: Registration to the QualiSystems portal is required. If you have not registered, click this link to register New registration.

Installation Procedure

This chapter explains how to install **CloudShell Execution Server Linux Virtual Appliance**. Note that CloudShell Execution Server Linux Virtual Appliance does not support:

- The running of tests
- Shells from versions earlier than CloudShell 6.3
- Drivers that use shells from versions earlier than CloudShell 6.3. These should be recompiled with updated shells
- Commands like command shell and web services

To install and configure CloudShell Execution Server Linux Virtual Appliance:

1. Use the installation option that is suitable for your operating system:
    - For VMware vSphere users: Creating a VM using the OVF template (vSphere).
    - For Linux KVM users: Creating a VM using the qcow2 image file (KVM).
2. Perform the post installation procedures described here: Post installation.

Create VM using the OVF Template (vSphere)

Use the following steps to use vSphere to deploy the OVF template and create a VM.

To create a VM by deploying the OVF template:

1. In your local machine, login to vSphere with administrator credentials.
2. Click **File > Deploy OVF Template**.
3. In the **Deploy OVF Template** window, click **Browse** and navigate to the directory where the installation files are located.
4. In the **Deploy from a file or URL** field, select the required OVF file.
5. Click **Next**. View the summary of the OVF template. If the details are correct, click **Next**.

   The End User License Agreement page is displayed with the details of license agreements that are associated with the software that is installed in the OVF template.
6. You must accept the license agreements to deploy the OVF template. If no license agreements are associated with the installed software, this screen will not appear. Click **Next**.
7. Enter the name for the deployed OVF template.

The length of the name can be up to 80 characters long and should be unique within the VM folder. Names are case sensitive.

8. Select the folder location within the inventory for the virtual appliance. Click **Next**.
9. Specify Thin Provision. Click **Next**.
10. When the deployment has completed, click **Power On**.
11. Right-click the VM and select **Open Console**.
12. In the VM console window, check the **Settings Screen** to be sure that it uploaded without errors.

Create VM using the qcow2 Image File (KVM)

Use the following steps to create a VM on your Centos 7 machine.

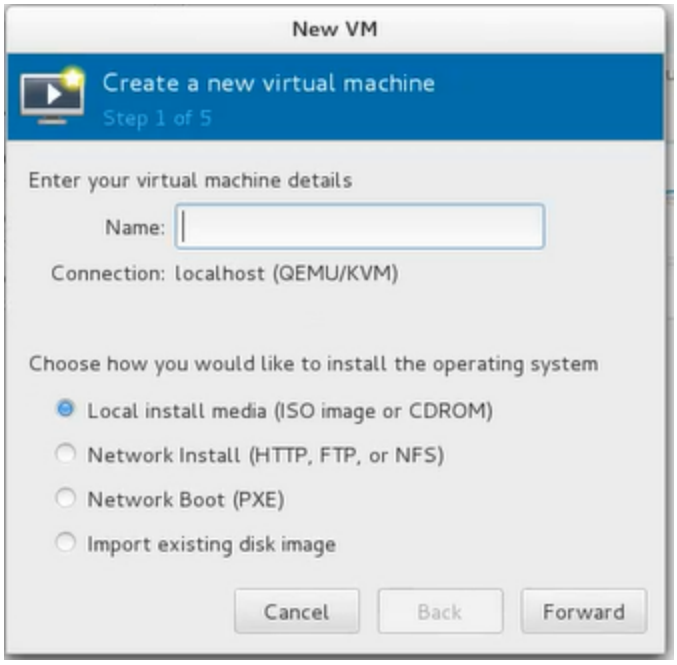
Note: Your CPU must have hardware virtualization support (Intel VT-x or AMD-V) to be able to use KVM.

To create a VM by deploying the OVF template:

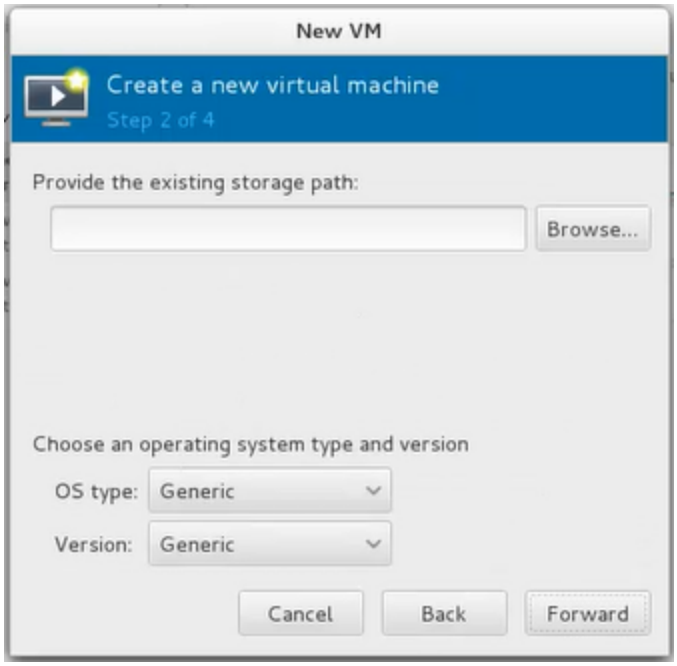
1. Login to your machine as root user.
2. Navigate to the directory where the installation files were downloaded. Create a backup copy of the `qcow2` image file.
3. Move the qcow2 image file to the directory where you want to place the VM.
4. In the Linux desktop, open Virt-manager 

and click **Create a new virtual**

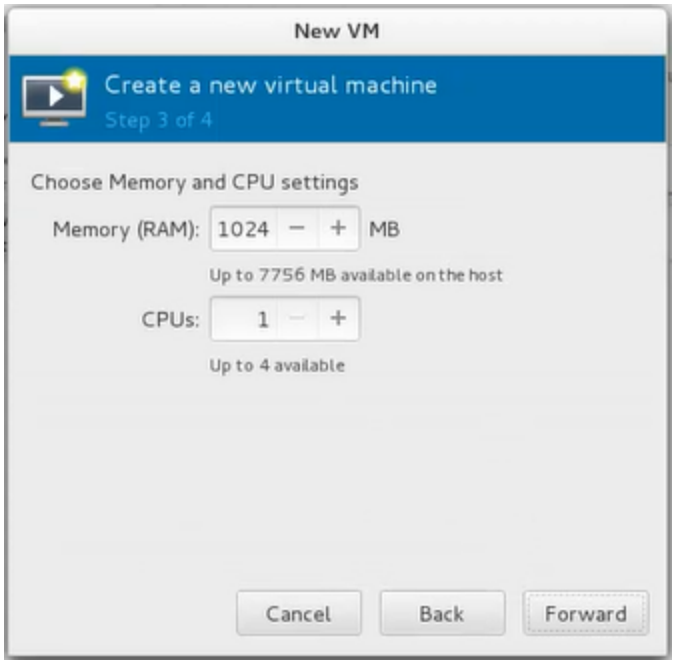
machine  .



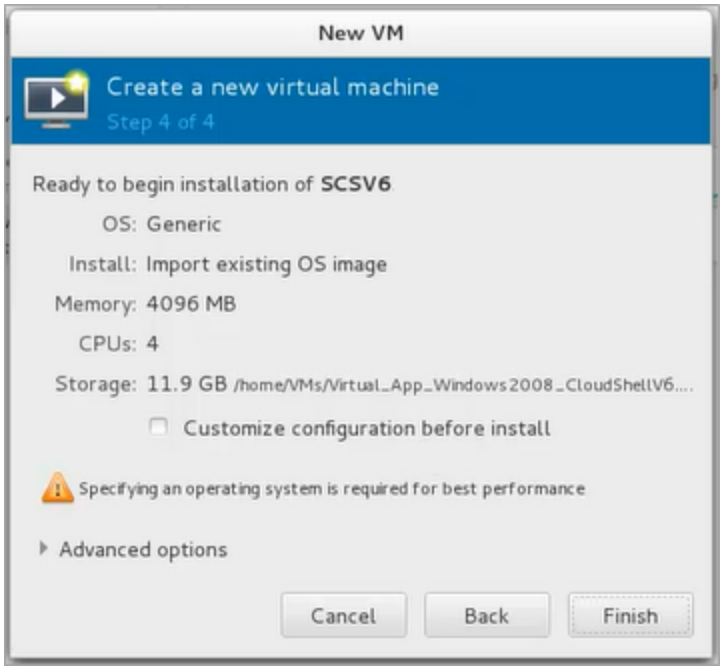
5. In the **New VM** window, in the **Name** field, enter a name for the VM.
6. Select **Import existing disk image** and click **Forward**.



7. Click **Browse** and navigate to the path of the `qcow2` image file. Select the image file and click **Open**. Click **Forward**.

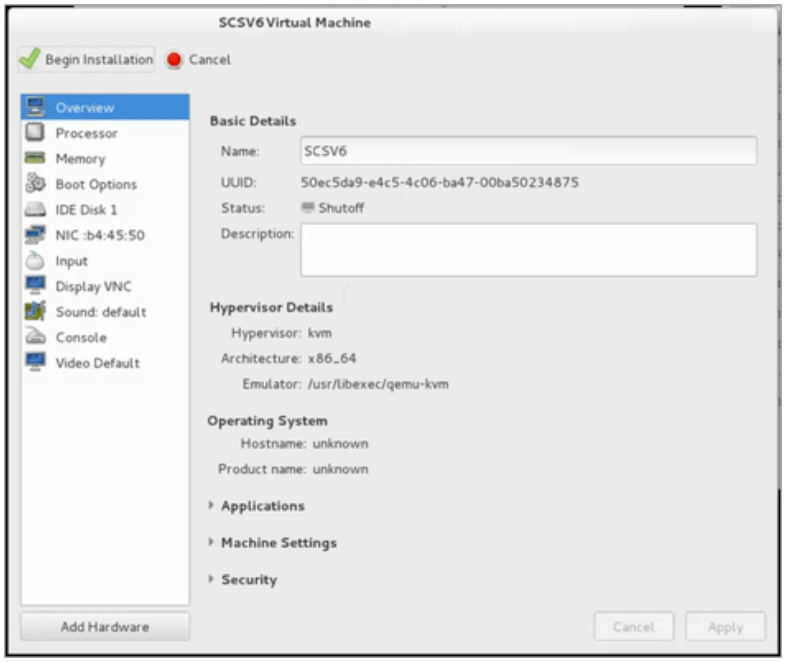


8. For memory and CPU settings, specify values that match your system. For the purposes of this procedure, the values 4 GB RAM (4096 MB) and 4 CPUs are used. Click **Forward**.

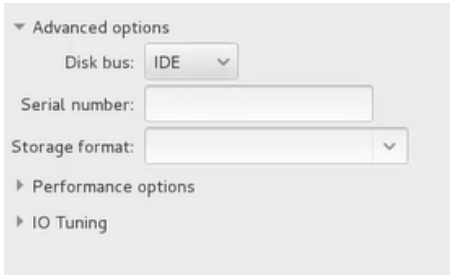


9. Select **Customize configuration before install**. Click **Finish**.

   The details of the VM to be created are displayed.



10. From the left pane, select **IDE Disk 1**. Click **Advanced** options.



11. Ensure that IDE is selected in the **Disk bus** field.
12. In the **Storage format** field, select qcow2. Click **Apply**.
13. Click Begin Installation.

    The VM is created.

Post Installation

After installing the VM, perform the post installation steps in the order described in this section.

Log into the VM

To start and login to the new VM:

- Power on the new VM and login as root user.

  The default credentials are:

  Username**: root**

  Password: **qs1234**

Apply the Execution Server license

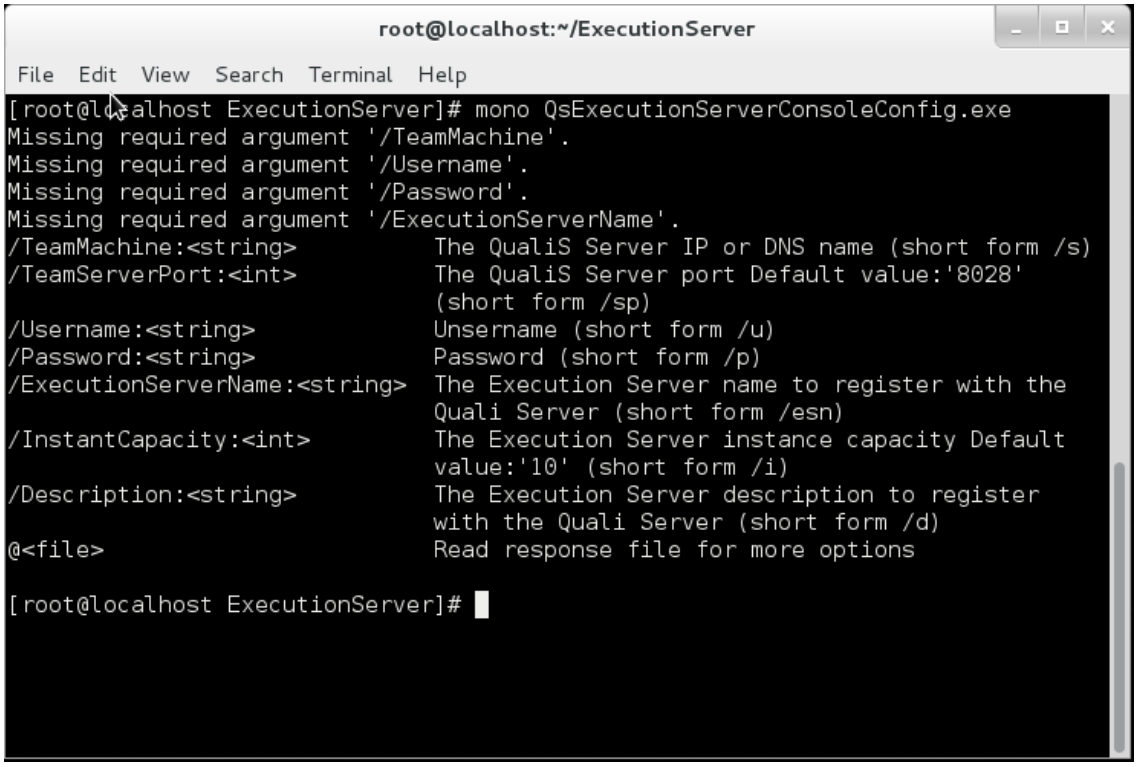
CloudShell Server over Linux VA executes Driver Commands and therefore Execution Server does not require a license.

Configure the Execution Server

The steps described in this section need only be applied once. The only mandatory values that are required for the configuration of the Execution Server (ES) are:

- TeamMachine
- Username
- Password
- Execution Server Name

However, you can optionally use other configuration parameters that are provided. You can use their default values or modify them. You may use as many of the configuration parameters as needed. Each of these parameters has a short form as well. To display the usage of the `QsExecutionServerConsoleConfig.exe` file, enter it at the command prompt, as depicted in the following image:



Note: Python drivers and scripts run on the Python installation that is provided by CloudShell at: `/usr/local/bin/python`.

Example: How to Run the configuration File

- In the `/root/ExecutionServer` folder, run the following command:

  ```
  mono QsExecutionServerConsoleConfig.exe /s:ServerAddress /u:User /p:Pass /esn:ESName
  ```

  For example:

  ```
  mono QsExecutionServerConsoleConfig.exe /s:192.168.30.56 /u:admin /p:admin /esn:ESName
  ```

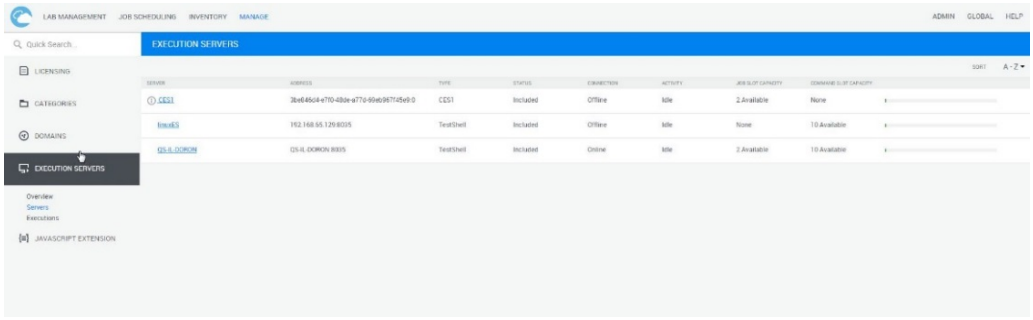
Start the Execution Server

To start the Execution Server:

1. Navigate to the following folder:
   `/root/ExecutionServer`
2. Run the following command:

`./ex`

The execution server is displayed in the CloudShell portal, as depicted in the following image:



Known limitations

This section lists known limitations.

- The time zone cannot be automatically detected when running CloudShell Authoring commands on execution servers over Linux. Therefore, when using TestShell API in a driver, add the `SetServerConnectionTimeZone` function to the driver (after the Logon function). Alternatively, to set the time zone for all drivers on a specific execution server, set the `ClientTimeZoneId` configuration key in the `customer.config` file of the Linux execution server's installation directory.
- When using file system library, the file location syntax in use must match that used by the Linux directory structure.
- The Excel file extensions that are not supported are listed in the following table:

Method/Format	XLS	XLSX	XLSM
Read		X	X
Write	X	X	X
GetSheetNames		X	X

- Drivers cannot contain any of the following components:
  - Ranorex
  - Command shell (PowerShell)
  - TestShell Spy
  - exe assets (that is, an exe called from an exe)
  - Web service asset
  - ActiveX asset
  - VISA tool
  - Cisco OS
  - GUI Automator
  - VMware vSphere libraries are not supported.
- The following solution packs are not supported:
  - Virtualization
  - Layer 2 VLAN

    - Nagios
- SNMP library is not supported.
- The Jason Editor convert to XML method is not supported.
- The XML Editor validate with XSD method is not supported.

Revision History

CloudShell Version	Doc revision number	Description
7.0 EA	1.0	Creating a VM using the qcow2 image file (KVM): fixed steps Known limitations: fixed/expanded timezone in TS drivers note