

SUSE YES System Certification Kit 9.0

SUSE Linux Enterprise –

Third-Party Hypervisor Test Suite



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About This Guide

The Third Party Hypervisor Yes Certification Test Kit for SUSE® Linux contains a procedure manual and all test tools necessary to test the SUSE® products used in the SUSE Yes Certified™ system certification process. The manual explains how to install the software and set up hardware and software configurations.

Audience

This manual is intended for users who have experience with computers, networking, Linux, and Microsoft Windows.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please contact your SUSE partner contact for feedback.

Documentation Updates

For the most recent version of the System Test Tools and documentation, visit System Test Tools for SUSE LINUX <https://www.suse.com/partners/ihv/yes/system-test-tools-for-suse-linux.html>

Additional Information

For more Information on YES Certification, see:

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1 Configuring Third-Party Hypervisor

Testing Third-Party Hypervisor is for companies who have their own hypervisor and would like to test and YES Certify SLES as a guest on their hypervisor. A YES Certification bulletin can be issued for Third-Party Hypervisors.

1.1 VM Test Project Setup

1. On the TC, start TestConsole and click **New** to create a new project.
2. Choose **Third-Party Hypervisor Virtualization Test Suite** project.
3. Click **Select**.
4. Edit the default project file name to give it a unique name and click **Save**.

Note: Do not use spaces, control characters or html specific characters in the project name. The filename character size limit is 58 characters.

2 VM Maximum (VMM) Test Suite

The first tests to be run are with a single SLES guest configured with maximum resources, CPU and memory. This maximum resource SLES VM will be referred to as our VMM guest.

2.1 Install SLES VMM Guest

1. Create a SLES VM with the maximum resources, CPU and memory, available, while leaving the minimum needed by the third-party hypervisor.

Note: Please refer to the product release notes for the SLES release you will be installing and testing. Part of the release notes documents the various limits which exist in our recent kernels and utilities (e.g., maximum logical CPUs, maximum RAM). For reference, here are the kernel limits for SLES 12 SP5, SLES 15 SP5 & SLES 15 SP6:

https://www.suse.com/releasenotes/x86_64/SUSE-SLES/12-SP5/index.html#all-architecture-kernel-limits

https://www.suse.com/releasenotes/x86_64/SUSE-SLES/15-SP5/index.html#kernel-limits



https://www.suse.com/releasenotes/x86_64/SUSE-SLES/15-SP6/index.html#kernel-limits

2. Install SLES <version: 12,15>, with latest available service pack) as the guest OS.
-

Note: Configure the user **root** with the password **suse**. No other user is required for testing.

3. Boot the SLES VMM guest and log in as root.
4. In the VMM guest, in a terminal type **yast2 lan** <ENTER> and configure the virtual network device with a static IP address.
5. Test the network connectivity from the guest VM to the TC using ping.
(e.g. **ping -c3 10.1.1.16**)
6. On the TC, in TestConsole, change the IP address of the TC and VMM guest if needed.

2.2 VMM SCK Install and Verify

1. In TestConsole, double-click **VMM SCK Install** and click **Continue**.
 2. In TestConsole, double-click **VMM Component Check Test** then click Yes.
 3. Important: Click the **Edit Product/Report** button to open the Product & Report Information window.
-

Note: Any changes made to VMM guest (hardware, drivers, BIOS/firmware updates) after this test is run will remove any tests previously run. Make sure this information is complete and accurate prior to running any tests past the Component Check!

2.3 VMM Stress Tests

VMM stress test will run for 4 hours. All tests need to be run concurrently.

1. In TestConsole, double-click **VMM Stress Tests** and click **Continue**.
 2. After stress testing has completed, verify that no tests received a FAIL test result before continuing.
-

Note: A **FAIL** test result indicates that the tested configuration has failed the testing requirements. There are many possible reasons. This may be due to improper



configuration or steps missed during installation, setup, or testing. Please refer to the [Server_Extended_SCK](#) documentation, section **3 SLES Tests**, for troubleshooting tips.

3. In TestConsole, when stress tests have finished, double-click **Get VMM Config Test Logs** and run to completion. This gathers the logs of the VMM guest.
4. Shutdown the VMM guest.
5. In TestConsole, **Save** the Test Project, to save testing progress.

3 Multiple VM (MVM) Test Suite

The second part of the testing is going done with multiple SLES guest running and sharing the hypervisors resources. A minimum, and default, of 3 SLES guests will be running. If you would like 4 SLES guests listed on the YES CERTIFIED bulletin, you'll have the option to enable a fourth SLES guest.

Note: All MVM guests should be configured on separate network segments, matching those configured on the TC, if available.

3.1 Install SLES MVM Guests

1. Install multiple SLES guests splitting the CPU and memory resources evenly between the guests. By default, the TestConsole will test 3 VM guests, but you can choose to install a 4th and it can be tested and listed on the YES CERTIFIED bulleting also.
2. Install SLES <version: 12,15>, with latest available service pack) as the guest OSs.

Note: Configure the user **root** with the password **suse**. No other user is required for testing.

3. Boot the SLES MVM guests and log in as root.
4. In each of the MVM guests, in a terminal type **yast2 lan** <ENTER> and configure the virtual network device with a static IP address.
5. Test the network connectivity from the guest VM to the TC using ping.
(e.g. **ping -c3 10.1.1.2** or **ping -c3 10.1.2.2** or **ping -c3 10.1.3.2**)
6. In TestConsole, if testing with 4 SLES guests, double-click **Enable VM4 Testing**.



7. In TestConsole, change the **TC IP Address** for each VM if needed. Also change the **VMx IP Address** as needed.

3.2 Install Test Kit to MVM Guests and Verify

Note: If you choose to run the "MVM System Cert Kit (SCK) Installs" as a test group, there is an issue with the "Install Kit on VMs" tests and the "MVM SCK Install Check" tests running concurrently. This can cause the "MVM SCK Install Check" tests to fail. You can either choose to run these tests serially or you can choose to re-run the "MVM SCK Install Check" tests again once the "Install Kit on VMs" has successfully run and completed on each of the guest VMs.

1. In TestConsole, expand the **MVM System Cert Kit (SCK) Installs** folder by clicking on the **+**.
2. Double-click **Install Kit On VMs** then click **Continue**.

Note: Install Kit can be run on all VM guests simultaneously or it can be run on each VM serially.

3. If prompted, on the TC, enter the root password for each VM guest, **suse**.
4. On the TC, an xterm window will be started that shows the install progress. If it seems to be stopped, review the messages, and interact with the install as needed. Sometimes the install gets stuck trying to remove repos and it prompts for interaction.

Note: Warning: a pop-up may occur on VM guest instead of the TestConsole; if the install is not proceeding, open the VM guest and check for pop-ups, if the pop-up is on the VM guest, follow steps on VM.

5. Follow prompts, verify VM IP addresses, press **C** to continue.
6. Press <Enter> in each terminal window when prompted to complete each test.
7. In TestConsole, double-click **MVM SCK Install Checks** then click **Continue**.

3.3 MVM Component Check and Verify Setup Tests

1. In TestConsole, double-click **MVM Component Check Tests** then click **Continue**.
2. In TestConsole, double-click **Verify MVM Setups** then click **Continue**.



3.4 Optical Drive Configuration

1. Insert readable optical media into the optical media device on the host.
2. Using the Third-Party Hypervisor documentation, mount optical media to VM2.

3.5 MVM Stress Tests

MVM stress tests will run for 12 hours. All tests need to be run concurrently.

Note: Each TC IP Address for VMx and the VMx IP Address should be on the same network segment.

1. In TestConsole, double-click **MVM Stress Tests (12h)** then click **Continue**.
2. After stress testing has completed, verify that no tests received a FAIL test result before continuing.

Note: A **FAIL** test result indicates that the tested configuration has failed the testing requirements. There are many possible reasons. This may be due to improper configuration or steps missed during installation, setup, or testing. Please refer to the **Server_Extended_SCK** documentation, section **3 SLES Tests**, for troubleshooting tips.

3. In TestConsole, when stress tests have finished, double-click **Get MVM Test Logs** and run to completion. This gathers test logs from all MVM guests.
4. In TestConsole, **Save** the Test Project, to save testing progress.

4 Generating and Uploading Test Results

We refer to the test results .zip file as the bulletin submission file. The bulletin submission file is used to create the YES Certification Bulletin in the SUSE Bulletin System (SBS). The steps in this section will create the bulletin submission (.zip) file which you will read into SBS to create the YES Certification Bulletin.

4.1 Creating the Bulletin Submission File

1. Open the project file. If the project file is already opened, skip to step 2.



Note: If the project file is already open and you have just completed the tests, save the project before creating the bulletin submission (.zip) file.

- a. Click the **TestConsole** icon on the desktop
 - b. Click **Project > Open Test Project > Existing**.
 - c. Select the appropriate project
 - d. Click **Select** to open the project.
 2. Create the bulletin submission (.zip) file.
 - a. Click **Edit Product/Report**.
 - b. Click **Report**.
-

Important: If the Report Error window appears, continue to step 3. If not, proceed to step 4.

3. Report errors.
 - a. Click on the **x** in the upper right corner of the Report Error window to close the window.
 - b. Click **Verify**.
 - c. Click an exception in the scroll window.
 - d. Click **Edit Explanation**.
 - e. Enter the explanation.
 - f. Click **OK** in the explain exception window.
 - g. Repeat steps c through f until all unresolved exceptions are explained.
 - h. Click **OK** in the Exception Information window.
 - i. Click **Report**. If the screen appears stuck, then click on the terminal screen at the bottom then click back inside the screen.
 4. Complete the creation of bulletin submission (.zip) file.
 - a. We recommend keeping the existing project filename; however another filename can be used.
-

Note: Do not put spaces in the file name.

- b. Click **Save** to generate the bulletin submission (.zip) file.
 - c. Click **Finish** or **View Report Summary** to view the reported information in a browser.
 - d. If a browser window is opened to view the **Report Summary**, then close it.
 - e. Click **OK** to exit the Product and Report Information window.



5. Copy the bulletin submission (.zip) file from the /opt/suse/testKits/system/results directory to a USB Flash drive or CD or Network. For example: if copying the bulletin submission (.zip) file to a USB thumb drive, at a terminal prompt on TC type:
cp <bulletin submission (.zip) file> /media/usb<Tab> <Enter>.

4.2 Submitting the Bulletin Submission File into SBS

We use a database called the SUSE Bulletin System (SBS) to generate and manage the SUSE Yes Certification Bulletins. The steps below will help you to read the bulletin submission .zip file into SBS and begin the bulletin creation process.

1. Open the SUSE Bulletin System (SBS) by pointing a web browser to:
<https://www.suse.com/nbswebapp/yesCert.jsp>
2. Login into SBS.
3. Read the bulletin submission file (.zip) into SBS.
 - a. Click on **New Submission**, then browse to your bulletin submission file (.zip).
 - b. Click **Upload**. The bulletin is now in the SBS system. There is still work to do on the bulletin submission while in SBS.

4.3 Move Submission from Open to Review State

1. Verify the product name is correct at the top of the summary.
2. Verify that the Product Description is correct.
3. Verify the Tested Configuration.
4. Add Configuration Notes as needed from our existing configuration notes.
5. Verify the Adapters and Drivers section is accurate.
6. Move the submission to Review state.

Note: For additional information, please refer to the **SBS Users Guide** and review section **2 Bulletin State and Instructions**.



5 Revision History

Date	Description
March 2024	Updated for SLE 15 SP6 and SCK 9.0 release.
June 2023	Updated for SLE 15 SP5 and SCK 8.8 release.
September 2022	Added a note in section 3.2 for possible failure with “MVM SCK Install Check” test. (bsc# 1199952).
June 2022	Updated for SLE 15 SP4 and SCK 8.7 release. Migrated to new template.
June 2021	Updated for SLE 15 SP3 and SCK 8.6 release.
May 2020	Updated for SLE 15 SP2 release. Migrated to new template.
December 2019	Updated in preparation for SLES 12 SP5 and the 8.4 SCK.
April 2019	Updated in preparation for SLES 15 SP1 and the 8.3 SCK.
September 2018	Updated in preparation for SLES 12 SP4 and the 8.2 SCK.
July 2018	First release of this document.

