Charon VE License Server 2.4.2 Release Notes

Contents

Relevant Products

This document is applicable to version 2.4.2 of the Charon Virtual Environment (VE) License Server.

This document also contains information about older versions. However, please always also refer to the Release Notes of your specific software version for the most relevant information. In particular, the present document does not contain information about VE license server 2.2.x which is not a real predecessor of 2.4.x since both versions were branched off version 2.1.4 and then continued in parallel.

Host System Requirements and Supported Virtual Hardware

The VE License Server has certain requirements regarding the underlying Linux operating system. Please refer to the VE License Server User's Guide for details.

Charon Emulator Product Compatibility

The following table shows the compatibility between different Charon emulator product versions and VE license server versions. Please note that different aspects such as bug fixes may influence the selection beyond the mere compatibility question:

Charon-SSP versions	Special feature requirement	Compatible VE license server versions
5.5.5 and later (includes AutoVE and custom certificate support)	No	>= 1.0.35 (for 1.0.x) **or** >= 1.1.4
	AutoVE	>= 1.1.21
	Custom certificates	>= 2.1.4
5.3.8 and later (includes AutoVE support)	No	>= 1.0.35 (for 1.0.x) **or** >= 1.1.4
	AutoVE	>= 1.1.21
>= 4.2.5 (for 4.2.x) **>= 4.3.4** (for 4.3.x) **5.0.x and later**	n/a	>= 1.0.35 (for 1.0.x) **or** >= 1.1.4
< 4.2.5	n/a	< 1.0.35 (for 1.0.x) **or** < 1.1.4
Charon-PAR versions	**Special feature requirement**	**Compatible VE license server versions**
>=3.0.11	No	>= 1.1.19
	Custom certificates	>= 2.1.4
>= 3.0.6	n/a	>= 1.1.19
Charon-AXP/VAX versions (Linux only)	**Special feature requirement**	**Compatible VE license server versions**
>= 4.12	No	>= 1.1.19
	Custom certificates	>= 2.1.4

Please note: the term **n/a** (= not applicable) **in the table above** indicates that the versions in question do not support any of the special features.

New Features in Version 2.4.x

Virtual Environment (VE) license server 2.4 new features introduced since version 2.0.x:

- Starting with *version 2.1.3*: support for **user configurable certificates** for SSL communication between VE license server and license client (emulator). The new default certificates provide improved security, the user configurable certificates provide more flexibility to customers to adapt the license environment to their organization's requirements.
  Please note the **changed certificate names** (<u>old</u>: *ssp.crt* and *ssp.key*; <u>new</u>: *charon.crt* and *charon.key*) starting with Charon-SSP version 5.6.2 and *VE license server 2.3.1*. The new names reflect the new certificate support of additional emulator products.
  Please note that compatible emulator products are required. Support starts with Charon-SSP 5.5.5, Charon-PAR 3.0.11, and Charon-AXP/VAX for Linux 4.12. For non-compatible clients, the old certificates must be used.

- Starting with *version 2.1.4*: improvements for user configurable web-GUI certificate handling (including a sample script for custom certificate creation). **Please note that the name of the certificate changed**. This will require manual configuration steps when upgrading from a previous version – if a custom certificate was used there.

- *Version 2.3.3*: additional parameter support for Charon-PAR.

- *Version 2.4.1*: support for Amazon Linux 2023

- The license server RPM is now packaged with the end user license agreement (EULA) in a self-extracting **.sh** archive. The user must agree to the EULA before installing the license server software.

Known Caveats in Version 2.4.x

VE License Server

- A license update is required when upgrading to License Server 1.0.24 or newer from a version before 1.0.24.

- Due to the switch to a persistent VE license ID in License Server 1.0.27, a new license is required when upgrading to this or a newer version from a version before 1.0.27.

- A bugfix in version 1.0.35 and version 1.1.4 of the license server changed the protocol between license client and license server. For Charon-SSP VE 4.2, the matching change was implemented in version 4.2.5, for Charon-SSP VE 4.3.x and 5.x it was implemented in version 4.3.5. To avoid protocol mismatches, the VE license server software may have to be upgraded to the version provided with your Charon-SSP VE version when upgrading the Charon-SSP VE emulator software.

- Current VE license server versions are not backward compatible with older protocol versions that may be used by Charon license client systems. In addition, the license server cannot log a self-explanatory error message in case of a failed connection attempt by a client with a non-matching protocol version. The emulator log shows the correct error message.

- The server certificate included with the web-based management GUI is a self-signed certificate with Stromasys as the CA and a standard host name. This leads to a warning of the web browser. The user can override the warning. Customers can obtain a server certificate matching their environment. Please note: in versions before 2.1.4, an upgrade of the license server will overwrite the new certificate. Please back it up before upgrading.

- The redirection of the web-based management GUI from HTTP to HTTPS works only if the browser is pointed at port 80 of the VE license server host. This is incompatible with other software using TCP port 80. Currently, the license server cannot start if the web server for the management GUI cannot start due to an inaccessible port. Starting with version 1.1.25, redirection can be disabled thus allowing other applications to use TCP port 80.

- A system disk with the Btrfs file system is not supported by the VE license server. Trying to create a C2V file on such a system will fail with the error message that the file system is not supported.

- Starting with version 2.4.1, the v2c tool does not prompt for confirmation when updating the license. The problem will be resolved in version 2.4.5. In the meantime, to ensure that the new license has the correct content, **carefully review the text file you received with the V2C file before installing the license**.

Important Bug Fixes and Other Changes in Versions 2.4.x, 2.3.x, and 2.1.x

Version 2.4.2

Other changes and enhancements:
- The JRE version was updated.
- Improved license_viewer utility and web-based GUI when AutoVE is used.
- The Stromasys End User License Agreement (EULA) was updated.

Version 2.4.1

Bugs fixed:
- **v2c** tool printed invalid error message in case of problems with the contents of the .v2c file.

Version 2.3.4

Other changes and enhancements:
- **v2c** tool log improvements.
- **v2c** tool now prints the value of an invalid platform type.
- TLS 1.1 was disabled.
- Java script library updates for integrated web server of the VE license server.

Version 2.3.3

Bugs fixed:
- If a license with the same license ID as the already installed license was imported after running the emulator, this could cause vClock expired errors.

Version 2.3.2

Bugs fixed:
- The **c2v** command failed in some environments, because it could not read the serial number of the system disk (e.g., NVMe disks on Fedora).
- The license fingerprint displayed in the management web GUI was different from the one displayed by the license_viewer program.

Other changes and enhancements:
- Additional parameter for Charon-PAR.
- The emulator would log the misleading message "Failed to connect with the license server" when no license is installed at the license server (ID#1184).
- Various improvements in the **c2v** and **v2c** command-line tools. In particular, there are now more detailed error messages for error conditions associated with transferring a license.

Version 2.3.1

Other changes and enhancements:
- **c2v** tool can be used to erase local license.
- Change of the certificate names for the new certificates used to communicate with license clients, that is, emulators (old: *ssp.crt* and *ssp.key*; new: *charon.crt* and *charon.key*).
- Minor logging improvements.

Version 2.1.4

Bugs fixed:
- A wrong certificate path was used for AutoVE licenses. This bug fix causes an incompatibility when using the new certificates between Version 2.1.3 and 2.1.4.

Other changes and enhancements:
- Improvements for user configurable web-GUI certificate handling (including a sample script for custom certificate creation and new certificate names).
- Additional minor changes, including log message improvements for certificate handling.

Version 2.1.3

Other changes and enhancements:
- Support for user configurable certificates for SSL communication between VE license server and SSP license client (starting with Charon-SSP 5.5.5). Together with this feature, a new certificate format is being introduced. If it is activated, the license client (emulator) must also support it.

Version 2.1.2

Bugs fixed:
- After upgrading OpenSSL and libcurl the license server could not obtain a certificate on the GCP cloud.

Version 2.1.1

Other changes and enhancements:
- The license server now uses OpenSSL library version 1.1.1o.
- Dependency on external *shscript* utility was removed.
- Security improvements for the VE countdown license.

Information about Version 2.0.x

New Features in Version 2.0.x since Version 1.0.x

Virtual Environment (VE) license server 2.0 new features since version 1.0.x:
- Support added for IBM cloud and VMware environments
- Support for Nutanix AHV *(version 1.1.15)*
- Per-product-section passphrase authentication between license client and server *(version 1.1.2)*
- License transfer between license servers *(version 1.1.3)*
- Configurable TCP port settings for client/server communication and web GUI *(version 1.1.11)*; configuration option to enable/disable HTTP to HTTPS redirection. If it is disabled other applications can use TCP port 80 (*version 1.1.25*).
- New grace period implementation *(version 1.1.12)*. Stromasys can define a customer-specific grace period on a license that specifies how long an emulator can continue to run after the available licenses have become unavailable.
- New web manager replacing the web GUI of previous versions (version 1.1.13). In addition to other changes, it now includes user management and the option to update the license. A command-line password change option for the web admin user (charon) was added in version 1.1.14.
- VE license server support for physical systems *(version 1.1.7)*
- Improved license_viewer (version 1.1.11: self-explanatory parameter names; version 1.1.13: display of connected clients; version 1.1.23: display license utilization)
- Improved logging of license server and utilities
- AutoVE feature: this feature allows an instance created from a cloud-specific automatic licensing (AL) marketplace image to use a private, customer-operated license server in their cloud environment instead of the public, Stromasys-operated license server *(version 1.1.21)*. Currently supported on AWS, OCI, GCP, and Azure with AL marketplace images for Charon-SSP 5.3.8.
- Charon-PAR support (starting with VE version 1.1.19 and Charon-PAR version 3.0.6).

Important Bug Fixes and Other Changes in Version 2.0.x

Version 2.0.1

Other changes and enhancements:
* Initial 2.0 version based on version 1.1.25.

Information about Version 1.1.x

Important Bug Fixes and Other Changes in Version 1.1.x

Version 1.1.25

Bugs fixed:
* Fix for lseek error that may be shown when starting the license server from the command-line and connecting with at least one emulator. The license server continues to work in such cases.

Other changes and enhancements:
* The file */opt/license-server/config.ini* offers a new parameter (**http_redirect**). It can be used to disable or enable HTTP to HTTPS redirection. Access to TCP port 80 is required to enable redirection.

Version 1.1.24

Bugs fixed:
* Webpage redirect problem on HTTP 80 port when the license server was behind a NAT server. If a problem with redirection seems to persist, clear your browser cache.
* The VE license server tools C2V and V2C produced a segmentation fault on Azure Cloud after several disks had been added to the instance.

Version 1.1.23

Bugs fixed:
* C2V file creation failed on RHEL, CentOS, Oracle Linux, and Rocky Linux 8.5.
* vCenter username in web-GUI is now accepted correctly when using the format `domain\user`.
* The licensed.service logged *Unknown value* for *StartLimitIntervalSec* and *StartLimitBurst* in journalctl. Normal operation was not impacted.

Other changes and enhancements:
* Improvement to **license_viewer** tool: can display license utilization, and optionally write output as CSV file.
* Improvement to **v2c** tool: displays the difference between the already imported license and the new license.
* The special IAM role is no longer required for running a VE license server on an AWS cloud instance.

Version 1.1.22

Bugs fixed:
* An instance created from an AL (Automatic Licensing) marketplace image could not register to an AutoVE license server running on the same instance.
* C2V file creation failed in the OCI cloud if Rocky Linux was used as the host operating system.
* Changing the default port of the web-based management GUI did not work.

Other changes and enhancements:
* Log improvement: DNS resolution failures are now logged correctly.

Version 1.1.21

Bugs fixed:
- Inconsistent output of `license_server –status`. Under certain conditions, the command erroneously showed that no license was installed even though a valid license existed.

Other changes and enhancements:
- Improved database synchronization mechanism between two AutoVE servers.

Version 1.1.20

Bugs fixed:
- VE license server on VMware: currently the emulated LSI Logic Parallel SCSI controller is not fully supported by the Linux kernel (see https://kb.vmware.com/s/article/76401). In particular dynamically adding and removing disks is not properly recognized by Linux. This problem caused the **esxi_bind** command and the license server not to recognize the addition and removal of a test disk, which in turn caused **esxi_bind** and the license server to fail.

Version 1.1.19

Bugs fixed:
- License transfer problem (AutoVE related).
- License server would enter an endless loop if the message payload was not received (AutoVE related).
- The command **license_server –status** returned the wrong error code.
- Under some circumstances, the **esxi_bind** command failed to detect the added test disk.

Other changes and enhancements:
- If a connected client does not provide information about the number of CPUs and/or the size of memory, the corresponding fields in the client list now contain a "-" character.

Version 1.1.18

Bugs fixed:
- A vClock expired error was caused by importing the same license as the currently active one into the license server.
- The **esxi_bind** command or the **license server** itself may fail to connect to the vCenter/ESXi server.

Version 1.1.17

Bugs fixed:
- If a vCenter Server manages more than 99 VMs, **esxi_bind** may fail and report that the VM it runs on cannot be found on the vCenter Server.

Other changes and enhancements:
- Improvements for synchronization between license server peers (AutoVE related).
- **esxi_bind**: improved log messages when the UUID of the VM on which **esxi_bind** runs cannot be found on the vCenter or ESXi server.

Version 1.1.16

Other changes and enhancements:
- Improved license server logging to include peer license server status (AutoVE related).

Version 1.1.15

Other changes and enhancements:
- Registered cloud instances can be displayed in web GUI (AutoVE related).
- The VE server is now supported on Nutanix AHV.
- Web-based management GUI rework for compliance reasons.

Version 1.1.14

Bugs fixed:
- Default username/password did not work after upgrade from previous version with old GUI.
- Memory leak in web-based management GUI.
- When a COUNTDOWN license was used, the number of unclosed file descriptors would increase.

Other changes and enhancements:
- Web-based management GUI: the password of user charon can now be changed from the command-line (`license_server -p`).
- The **license_viewer** tool can now list connected client systems (new `-r` option).
- The web-based management GUI now performs an automatic redirect to https.

Version 1.1.13

Other changes and enhancements:
- Improved grace period support.
- The **license_viewer** tool can now list connected client systems (new `-c` option).
- Completely new web-based management GUI. Among other changes, it now allows license updates.

Version 1.1.12

Other changes and enhancements:
- Improved error logging for license servers running in ESXi/vCenter environments.
- New license parameter *grace period*. Allows Stromasys to define per license how long an emulator is allowed to run after the license has been lost.

Version 1.1.11

Other changes and enhancements:
- Initial experimental support for AutoVE licensing.
- The TCP ports used by the license server for client/server, server/server, and web GUI communication can now be selected by the user.
- The name of the license server log directory changed from *license_log* to *log*.
- The output of the *license_viewer* utility now shows self-explanatory parameter names.

Version 1.1.10

Bugs fixed:
- The license server failed to check the IAM role in the AWS us-gov-east-1 and us-gov-west-1 regions.

Version 1.1.9

Other changes and enhancements:
- AWS RSA public certificates were updated for the us-gov-east-1 and us-gov-west-1 regions.
- C2V file content changed, but changes should not affect end-user.
- Improved logging to provide more information about permission problems.

Version 1.1.8

Other changes and enhancements:
- Updated license content for future Charon-PAR support.

Version 1.1.7

Other changes and enhancements:
- VE license server support for physical hosts.

Version 1.1.6

Other changes and enhancements:
- The licensed service is now stopped cleanly before exiting when an exception is detected. This avoids repeated restarts.

Version 1.1.5

Bugs fixed:
- The **–password** option of esxi_bind did not work.

Other changes and enhancements:

- New log message when a license server client tries to login with the wrong passphrase.
- Check that a supported ESXi/vCenter version is used when running the VE license server in a VMware environment.

Version 1.1.4

Other changes and enhancements:
- Improved license transfer feature.

Version 1.1.3

Other changes and enhancements:
- First introduction of the license transfer feature.

Version 1.1.2

Other changes and enhancements:
- Introduced per product-section passphrase.

Version 1.1.1

Other changes and enhancements:
- Initial introduction of the passphrase authentication between license server and client.