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Description

The Charon Linux Toolkit includes a license expiration check utility that can send alert emails, and/or execute a custom script, a specified number of days before the license expires. This document describes how to install the license expiration utility alone, out of the [Toolkit](#) so that it can be used on servers running **Charon-AXP**, **Charon-VAX**, **Charon-SSP** or **Charon-PAR**.

This document relates to **license expiration utility version 2.6** dated 05 Jun 2023 .

Installation

 All described operations have to be performed on the Charon server and logged in as 'root' (no other user supported).

Prerequisites

Path

Before installing the license expiration check utility, please verify the `hasp_srm_view` executable path is known.

If Charon-AXP or Charon-VAX is installed, the PATH is already known thanks to the `/etc/profile.d/charon.sh` file. It usually contains:

```
PATH=$PATH:/opt/charon/bin:/opt/charon/cfg; export PATH
```

If Charon-SSP is installed, the PATH is not defined by default. This file must then be created manually with the following lines:

```
PATH=$PATH:/opt/charon-agent/ssp-agent/utils/license; export PATH
```

If Charon-PAR is installed, the PATH is not defined by default. This file must then be created manually with the following lines (example with Charon-HPA installed in `/opt` folder):

```
PATH=$PATH:/opt/charon/bin; export PATH
```

then the following command has to be executed:

```
# . /etc/profile.d/charon.sh
```

 This has to be done once. On next login, the file will be automatically executed and the path correctly set.

💡 To verify the path to `hasp_srm_view` is known, use the following command:

```
# which hasp_srm_view
```

If a file name is not returned with its full path:

- check the `$PATH` value contains the path to the `hasp_srm_view` executable file (this can be done by running `"echo $PATH"`) or
- execute the `charon.sh` file as mentioned [above](#).

Mail Transport Agent

The Mail service must have been configured. The Mail transfer agent can be postfix, sendmail, ...

Download

To download the utility, you must issue a request via email to the Stromasys support team (support@stromasys.com) or ask your reseller.

Setup

The utility is provided in a tar file that must be extracted into the `/opt/charon/utils` folder. If this folder does not exist, you can create it this way then copy the tar file to this folder:

```
# mkdir -p /opt/charon/utils
# cp /tmp/charon_expchk<version>.tar /opt/charon/utils
```

Extract the files from the tar file to the Charon installation directory, subdirectory 'utils':

```
# cd /opt/charon/utils
# tar -xf charon_expchk<version>.tar
```

Execute the installation script:

```
# ./setup
```

The setup script will:

- Verify the required packages are installed (`at`, `bc`, `lsusb`, ...),
- Create the crontab file and/or add the necessary entries: by default the expiration check is scheduled at 1 AM and 9 AM each day and will send an alert 15 days before expiration,
- Ask to fill the recipients list in case an alert has to be sent,
- Ask for the email mode, text or html (default),
- Ask if a test email has to be sent,
- Will display information on how to check the script is working correctly and how to force an alert

Optional setup

It is possible to:

- Add a footer to the email body when an alert is sent by adding any information you need in the `/etc/charon.d/CharonToolkit_check.mailfooter` file (one line or more),
- Change the name of the email sender (name only, not email address) by adding a single line containing the name of the sender in the `/etc/charon.d/CharonToolkit_check.mailfrom` file
- Create a custom script in `/opt/charon/utils` folder, named `charon_expchk.custom` to send alerts to a monitoring utility
 - It needs to be set to executable (`chmod u+x ...`).
 - If this script is defined, it is recommended to add the `"-nomail"` parameter to the script execution in the crontab file to avoid sending a custom alert and the email at the same time
 - Parameter 1 passed to this script is the alert level. Possible values, case sensitive, are: Informational, Minor, MAJOR, CRITICAL and EXPIRED
 - Parameter 2 passed to this script is a description of the alert containing the expiration date, license number and product affected

/opt/charon/utils/charon_expchk.custom - Example

```
#!/bin/sh
#-----
# charon_expchk.custom
#-----
ZABSEND=/usr/bin/zabbix_sender
ZABCONF=/etc/zabbix/zabbix_agentd.conf

if test -x ${ZABSEND}
then
  if test -s ${ZABCONF}
  then
    case "$1"
    in
      Informational)  LVL="INFORMATION";;
      Minor)          LVL="WARNING";;
      MAJOR)          LVL="AVERAGE";;
      CRITICAL)      LVL="HIGH";;
      EXPIRED)       LVL="DISASTER";;
      *)              LVL="NEUTRAL";;
    esac
    ${ZABSEND} -c ${ZABCONF} -k charon_expchk -o "${LVL};$2" >/dev/null
  else
    echo "The Zabbix agent configuration file is missing. Cannot send alert!"
  fi
fi
```

root's crontab update example:

```
0 1 * * * /opt/charon/utils/charon_expchk 15 -nomail
```

Examples

Interactive session with license expiring soon:

```
STROMASYS - Midrange System Emulation V2.6
License expiration check

Licenses found on this server:
- USB dongles: 0
- Software licenses (SL): 1

Product Name                               Expiration                               Vers.  AlertLvl
-----
License: 7002166 (HASP/Software)
Served by: this host
CHARON-AXP                                08-Jun-2023                             4.12  MAJOR
CHARON-VAX                                08-Jun-2023                             4.12  MAJOR
CHARON-AXP/SMA VAR all Signatures for Windows 08-Jun-2023                             2.3   MAJOR
CHARON-SSP/4M, CHARON-SSP/4U, CHARON-SSP/4U+, 08-Jun-2023                             5.6   MAJOR
Charon-PA9-32-L1                          08-Jun-2023                             3.1   MAJOR
Charon-PA9-64-L5                          08-Jun-2023                             3.1   MAJOR
Charon-PA3-L4                             08-Jun-2023                             3.1   MAJOR
```

Alert email:

[CHARON-AXPVAX-7] License expiration check ([REDACTED])

This message was sent with High importance.

CM Charon Monitoring
To: [REDACTED] Mon 05-Jun-23 11:04

Error alert

Time of event: 05-Jun-2023 11:03:54
Hostname: [REDACTED]
Alert requested 7 days before expiration

License: 7002166 (HASP/Software)
Served by: [REDACTED] (this host)
Product: CHARON-AXP, Expiration date: 08-Jun-2023 (3 days remaining), severity **MAJOR**
Product: CHARON-VAX, Expiration date: 08-Jun-2023 (3 days remaining), severity **MAJOR**
Product: CHARON-AXP/SMA VAR all Signatures for Windows and Linux x64, Expiration date: 08-Jun-2023 (3 days remaining), severity **MAJOR**
Product: CHARON-SSP/4M, CHARON-SSP/4U, CHARON-SSP/4U+, CHARON-SSP/4V, CHARON-SSP/4V+ for Linux x64, Expiration date: 08-Jun-2023 (3 days remaining), severity **MAJOR**
Product: Charon-PA9-32-L1, Expiration date: 08-Jun-2023 (3 days remaining), severity **MAJOR**
Product: Charon-PA9-64-L5, Expiration date: 08-Jun-2023 (3 days remaining), severity **MAJOR**
Product: Charon-PA3-L4, Expiration date: 08-Jun-2023 (3 days remaining), severity **MAJOR**

Please contact your reseller or support@stromasys.com

Additional parameters

- Number of days before the license expires that will generate an alert → specify a number of days (default = 7)
- Prevent from sending default email → `-nomail` . This option is useful when a custom script is created to send alerts
- Force the expiration date for sending an alert/debugging → `-expdat=<DD-MMM-YYYY>` where DD = day of the month, MMM = month (3 characters, 1st letter uppercase), YYYY = year (⚠️ format of the date must be respected)

Example:

```
# /opt/charon/utis/charon_expchk 15 -nomail -expdat=08-Jun-2023
```

Related articles

- [How-to install Charon license expiration check on a Linux server](#)
- [CHARON on Windows - Charon License Utility](#)
- [CHARON on Windows - Charon License Utility - Release Notes](#)
- [CHARON on Windows - Automated License Expiration Check](#)
- [How to read a HASP key over RDP on Windows](#)