

Release Charon-PAR v3.0.18 build 23400-2cf28838

Engineering release notes contains confidential information. Do not distribute!

User release notes

TODO!

Release Notes

The maintenance and product improvements release.

1. E1000 fixes
2. 82596 fixes
3. Network configuration scripts
4. Re-worked DIT run-time
5. BUG fix

HPPA Kit

- HPPA Kit storage: `kvm.gva.masq:/storage/Projects/Charon-PAR/KITS/charon-par-3.0.18-23400-2cf28838`
- Release version for RHEL 7, CentOS 7.x:

```
charon-par-3.0.18-23400-2cf28838.el7.sh
```

- Release version for RHEL 8, Rocky Linux 8.x, CentOS 8.x:

`charon-par-3.0.18-23400-2cf28838.el8.sh`

- Release version for RHEL 9, Rocky Linux 9.x:

`charon-par-3.0.18-23400-2cf28838.el9.sh`

Note: debug info package is optional, not required for normal operation

New features, enhancements and fixed issues

- ~~ticket:100157~~ Enable HP-UX 10.20
- ~~ticket:100346~~ Crash at kellogg
- ~~ticket:100376~~ Bugcheck in iomap.cpp
- ~~ticket:100377~~ vCPU hangs on rendezvous
- ~~ticket:100390~~ Do lan configuration scripts
- ~~ticket:100391~~ E1000 disgnostocs noise
- ~~ticket:100392~~ E1000 TSO issue
- ~~ticket:100395~~ 82596 received an illegal sized frame

Known issues

- ~~ticket:100029~~ Complete the insn mnemonics tests (64bits)
- ~~ticket:100100~~ Extend instruction verification procedures
- ~~ticket:100118~~ HP-UX 11.11, btlan: Invalid connection type in SROM
- ~~ticket:100130~~ Virtual tape errors/timeouts when restoring large backup. (has workaround)
- ~~ticket:100196~~ Refactoring of Astro/IKE/Pluto chipsets.
- ~~ticket:100227~~ improve precision of 53c8xxx emulation
- ~~ticket:100228~~ Implement PSW/TLB O-bit functionality
- ~~ticket:100254~~ Passing HP-UX 10.20 offline diagnostics/smok32-lasi-diag
- ~~ticket:100258~~ Add SCSI support for disks larger than 2TB.
- ~~ticket:100331~~ DIT2 with LLVM DIT2 (llvm compiler)

- **ticket:100350** GSL check fails
- **ticket:100375** Adding superIO option crashes emulator
- **ticket:100396** Refactoring DIT1 floating prior to DIT2
- **ticket:100245** Add PDC facility for setting console path and port parameters
- **ticket:100247** DIAG 9.05 fails
- **ticket:100298** rp7400 (IKE chipset): unable to use PCI buses under the second IKE
- **ticket:100299** Assertion in diva_serial.cpp triggered on Linux
- **ticket:100304** Direct file transfer between host and guest
- **ticket:100314** VE license fails if run not under root
- **ticket:100318** dec21x4x failed on system startup
- **ticket:100321** System reset operation incomplete
- **ticket:100337** Performance degradation of 11.23, 11.31 against 11.11
- **ticket:100338** HPUX stuck on intensive IO
- **ticket:100357** UTurn chipset models (K580)
- **ticket:100360** Memory leak suspicion
- **ticket:100386** Add support for iov to the network subsystem
- **ticket:100393** TG3 network card
- **ticket:100394** OpenCISS controller
- **ticket:100397** Unstable rendezvous
- **ticket:100359** Remove asserts in PDC code
- **ticket:100372** Ethernet subsystem refactoring

Configuration changes

Network scripts

MACVTAP interface have to be created and configured before emulator launch. Proper method for modern Linuxes is setup on the system level. NetworkManager? have a facility for MACVTAP interfaces configuration. But depending on version it may not work properly.

So we decided to provide a script to create and configure MACVTAP interface: **/opt/charon/bin/macvtap.sh**

Script may be run manually, or called in the systemd service file:

```
ExecStartPre=/opt/charon/bin/macvtap.sh
```

Parameters should be set by the user:

```
# Host ethernet interface dedicated to the emulator  
HOST_IFACE="enp180s0f3"  
# Host side MTU according to the LAN requirements  
# Set empty if need no change  
HOST_MTU=""  
# MACVTAP side interface name  
MACVTAP_NAME="emu0"  
# MACVTAP side MTU according to the guest OS settings  
MACVTAP_MTU="1500"  
# User running emulator  
# Set empty for root  
EMU_USER=""
```

Bug fix

See list of tickets closed.

Automated tests

64bit guest operating systems included in tests:

- Linux Debian 10 (latest installation),
- HP-UX 11.00
- HP-UX 11.11
- HP-UX 11.23
- HP-UX 11.31
- MPE

32bit guest operating systems included in tests:

- Linux Debian 10 (latest installation),
- HP-UX 9.07, 10.20, 11.00
- Gentoo Linux installer
- Open BSD 6.6 installer

PA-RISC offline diagnostics environment (ODE):

- for various chipsets and CPU(s)

Functional tests:

- Install, boot OS without OS errors
- Network file transfer test
- OS stress tests

Instruction conformance test:

- The Yury Blokhin test data [comparison over PA8800 (Mako) 9000/800/rp3440]
- The Yury Blokhin insn mnemononic tests [comparison over PA8800 (Mako) 9000/800/rp3440]

MPE

MPE build used in tests:

```
HP3000  Release: C.75.00   User Version: C.75.00   TUE, SEP 10, 2019,  7:54 PM
MPE/iX  HP31900 C.45.05   Copyright Hewlett-Packard 1987.  All rights reserved.
```

It is the disk image with MPE installed + updates including support for system configurations up to 8 CPUs.

Other MPE builds supports up to 6 CPUs.

Performance Numbers

<http://trac.gva.masq/charon-perf/report-2cf28838.html>

Last modified on Oct 15, 2024, 11:47:14 AM