TEST REPORT

Table of Contents

Test reports

Tests common for virtu-ci1

Test ID	Tests	Results
SEAPATH-00078	no paging error	PASS
SEAPATH-00079	no rcu stall	PASS
SEAPATH-00080	no backtraces	PASS
SEAPATH-00075	kernel is PREEMPT RT	PASS
SEAPATH-00076	kernel is realtime	PASS
SEAPATH-00081	kernel is >= 4.19.106	PASS
SEAPATH-00083	syslog-ng service is running	PASS
SEAPATH-00084	syslog-ng is configured to send log on network	PASS

- number of tests: 9
- number of failures: 0

Tests common_security for virtu-ci1

Test ID	Tests	Results
SEAPATH-00197	Only official apt repositories configured	PASS
SEAPATH-00198	No unrecognized packages installed	PASS
SEAPATH-215	auditd service is active	PASS
SEAPATH-216	auditd is configured to output in syslog	PASS
SEAPATH-217	insmod call is logged	PASS
SEAPATH-217	kmod call is logged	PASS
SEAPATH-217	modprobe call is logged	PASS
SEAPATH-217	rmmod call is logged	PASS
SEAPATH-218	modification in /etc/ is logged	PASS
SEAPATH-219	mount/umount call is logged	PASS
SEAPATH-220	ioperm call is logged	PASS
SEAPATH-220	prctl call is logged	PASS
SEAPATH-220	ptrace call is logged	PASS
SEAPATH-221	file deletion is logged	PASS
SEAPATH-222	open monitoring is logged	PASS
SEAPATH-222	openat monitoring is logged	PASS
SEAPATH-222	unlink monitoring is logged	PASS
SEAPATH-00106	Check /etc/shadow permissions	PASS
SEAPATH-00107	Check /etc/passwd permissions	PASS
SEAPATH-00108	Check /etc/syslog-ng/cert.d/clientkey.pem permissions	PASS

Test ID	Tests	Results
SEAPATH-00049	Check /etc/ssh/ssh_host_ed25519_key permissions	PASS
SEAPATH-00090	Check /etc/ssh/ssh_host_rsa_key permissions	PASS
SEAPATH-00192	All files have a known owner and group	PASS
SEAPATH-00193	All directories writable by all users have the sticky bit	PASS
SEAPATH-00194	All directories writable by all users are owned by root	PASS
SEAPATH-00195	Ceph OSD are owned by ceph	PASS
SEAPATH-00196	No unexpected file has setuid/setgid enabled	PASS
SEAPATH-00088	root password was randomized at boot	PASS
SEAPATH-00089	root password is randomized at each boot	PASS
SEAPATH-00091	root password is encrypted with a cryto at least equivalent as sha512	PASS
SEAPATH-00092	bash timeout is set read-only to 300s	PASS
SEAPATH-00093	sshd forbids setting environment variables	PASS
SEAPATH-00094	sshd server time-out is set to 300s of client inactivity	PASS
SEAPATH-00095	shadow encrypts passwords with SHA512 by default	PASS
SEAPATH-00096	shadow encryption uses at least 65536 rounds	PASS
SEAPATH-00097	pam password authentication uses sha512 with 65536 rounds or yescrypt	PASS
SEAPATH-00098	password set to expire after 90 days	PASS
SEAPATH-00099	*su* is denied	PASS
SEAPATH-00100	/etc/securetty is empty	PASS
SEAPATH-00101	PAM securetty module is active in *login* policy	PASS
SEAPATH-00202	grub root superuser is set in /boot/grub/grub.cfg	PASS
SEAPATH-00203	grub root superuser is password protected	PASS
SEAPATH-00204	main menuentry is unrestricted in /boot/grub/grub.cfg	PASS
SEAPATH-00205	TMPDIR env var is defined and readonly	PASS
SEAPATH-00206	TMPDIR is set with 700 mode and root as owner and group	PASS
SEAPATH-00050	Linux kernel *hardening* : SECURITY_YAMA is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : DEBUG_WX is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : SECURITY_DMESG_RESTRICT is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : PAGE_TABLE_ISOLATION is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : RETPOLINE is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : LEGACY_VSYSCALL_NONE is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : SLAB_FREELIST_RANDOM is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : SLAB_FREELIST_HARDENED is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : HARDENED_USERCOPY is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : FORTIFY_SOURCE is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : PAGE_POISONING is enabled	PASS
SEAPATH-00170	Wipe slab and page allocations enabled on cmdline	PASS
SEAPATH-00174	Randomize kstack offset in on	PASS
SEAPATH-00175	Disable slab usercopy fallback	PASS
SEAPATH-00201	LSM Yama is enabled	PASS

Test ID	Tests	Results
SEAPATH-00210	MCE is disabled	PASS
SEAPATH-00211	rng_core.default_quality is set to 500	PASS
SEAPATH-00163	sudo policy is installed for group ansible (ansible)	PASS
SEAPATH-00164	sudo requires password for group operator (operator)	PASS
SEAPATH-00165	sudo requires password for group maintenance-N1 (maint-n1)	PASS
SEAPATH-00166	sudo requires password for group maintenance-N3 (maint-n3)	PASS
SEAPATH-00167	sudo requires password for group administrator (admincluster)	PASS
SEAPATH-00168	sudo requires password for group super-administrator (adminsys)	PASS
SEAPATH-00169	sudo requires password for group ansible (ansible)	PASS
SEAPATH-00103	/usr/bin/sudo exists	PASS
SEAPATH-00104	/usr/bin/sudo belongs to group privileged	PASS
SEAPATH-00105	/usr/bin/sudo has permissions 4750	PASS
SEAPATH-00148	/etc/sudoers include env_reset directive	PASS
SEAPATH-00150	/etc/sudoers all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers /etc/sudoers is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/ansible all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/ansible EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/ansible rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/ansible commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/ansible no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/ansible /etc/sudoers.d/ansible is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/admin all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/admin EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/admin rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/admin commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/admin no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/admin /etc/sudoers.d/admin is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/virtu all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/virtu EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/virtu rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/virtu commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/virtu no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/virtu /etc/sudoers.d/virtu is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/Debian-snmp all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/Debian-snmp EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/Debian-snmp rules are not defined by negation	PASS

Test ID	Tests	Results
SEAPATH-00154	/etc/sudoers.d/Debian-snmp commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/Debian-snmp no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/Debian-snmp /etc/sudoers.d/Debian-snmp is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/ceph-osd-smartctl all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/ceph-osd-smartctl EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/ceph-osd-smartctl rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/ceph-osd-smartctl commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/ceph-osd-smartctl no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/ceph-osd-smartctl /etc/sudoers.d/ceph-osd-smartctl is owned by root:root with 0440 permissions	PASS
SEAPATH-00171	Check coredumps are disabled	PASS
SEAPATH-00172	Check kexec is disabled	PASS
SEAPATH-00173	Check binfmt_misc is disabled	PASS
SEAPATH-00176	Check kptr_restrict is set to 2	PASS
SEAPATH-00177	Check dmesg_restrict is set to 1	PASS
SEAPATH-00178	Check pid_max is set to 4194304	PASS
SEAPATH-00179	Check perf_cpu_time_max_percent is set to 1	PASS
SEAPATH-00180	Check perf_event_max_sample_rate is set to 1	PASS
SEAPATH-00181	Check perf_event_paranoid is set to 2	PASS
SEAPATH-00182	Check randomize_va_space is set to 2	PASS
SEAPATH-00183	Check sysrq is set to 0	PASS
SEAPATH-00184	Check unprivileged_bpf_disabled is set to 1	PASS
SEAPATH-00185	Check panic_on_oops is set to 1	PASS
SEAPATH-00186	Check kernel.yama.ptrace_scope is set to 2	PASS
SEAPATH-00187	Check suid_dumpable is set to 0	PASS
SEAPATH-00188	Check protected_fifos is set to 2	PASS
SEAPATH-00189	Check protected_regular is set to 2	PASS
SEAPATH-00190	Check protected_symlinks is set to 1	PASS
SEAPATH-00191	Check protected_hardlinks is set to 1	PASS
SEAPATH-00082	/var/log is mounted on a separate partition	PASS
SEAPATH-00085	syslog-ng can not acquire new privileges	PASS
SEAPATH-00086	syslog-ng capabilities are bounded	PASS
SEAPATH-00087	syslog-ng system calls are filtered	PASS
SEAPATH-00199	No systemd service failed	PASS

- number of tests: 134

- number of failures: 0

Tests hypervisor for virtu-ci1

Test ID	Tests	Results
SEAPATH-00044	Check /etc/syslog-ng/cert.d/clientcert.pem permissions	PASS
SEAPATH-00045	Check /etc/syslog-ng/cert.d/clientkey.pem permissions	PASS
SEAPATH-00003	libvirtd service is running	PASS
SEAPATH-00035	ovs-vswitchd service is running	PASS
SEAPATH-00035	ovsdb-server service is running	PASS
SEAPATH-00038	lspci 3.6.2+ is available	PASS
SEAPATH-00018	KVM device available	PASS
SEAPATH-00019	Qemu for x86-64 available	PASS
SEAPATH-00020	Libvirtd service is running	PASS

- number of tests: 10

- number of failures: 0

Tests hypervisoriommu for virtu-ci1

Test ID	Tests	Results
SEAPATH-00030	iommu enabled in passthrough mode	PASS
SEAPATH-00031	iommu is loaded	PASS
SEAPATH-00032	iommu is populated	PASS
SEAPATH-00050	Linux kernel *iommu* : INTEL_IOMMU is enabled	PASS
SEAPATH-00050	Linux kernel *iommu* : AMD_IOMMU is enabled	PASS
SEAPATH-00050	Linux kernel *iommu* : AMD_IOMMU_V2 is enabled	PASS
SEAPATH-00050	Linux kernel *iommu* : IOMMU_IOVA is enabled	PASS

- number of tests: 8

- number of failures: 0

Tests hypervisorsecurity for virtu-ci1

Test ID	Tests	Results
SEAPATH-00033	/etc/group is consistent	PASS
SEAPATH-00033	/etc/gshadow is consistent	PASS
SEAPATH-00034	/etc/group does not include extra group	PASS
SEAPATH-00034	/etc/gshadow does not include extra group	PASS
SEAPATH-00008	Slab merging is disabled on cmdline	PASS
SEAPATH-00009	Kernel Page Table Isolation is always enabled on cmdline	PASS
SEAPATH-00010	SLUB redzoning and sanity checking enabled on cmdline	PASS

Test ID	Tests	Results
SEAPATH-00207	CPU has no known vulnerabilities	PASS
SEAPATH-00047	/etc/passwd is consistent	PASS
SEAPATH-00048	/etc/passwd does not include extra user	PASS
SEAPATH-00046	/etc/shadow is consistent	PASS
SEAPATH-00015	Vulnerabilities sysfs entry exist	PASS
SEAPATH-00017	System is not vulnerable to : meltdown	PASS
SEAPATH-00017	System is not vulnerable to : l1tf	PASS
SEAPATH-00017	System is not vulnerable to : spectre_v1	PASS
SEAPATH-00017	System is not vulnerable to : spectre_v2	PASS
SEAPATH-00012	admin user exists	PASS
SEAPATH-00013	admin has a password	PASS

- number of tests: 18
- number of failures: 0

Tests common for virtu-ci3

Test ID	Tests	Results
SEAPATH-00078	no paging error	PASS
SEAPATH-00079	no rcu stall	PASS
SEAPATH-00080	no backtraces	PASS
SEAPATH-00075	kernel is PREEMPT RT	PASS
SEAPATH-00076	kernel is realtime	PASS
SEAPATH-00081	kernel is >= 4.19.106	PASS
SEAPATH-00083	syslog-ng service is running	PASS
SEAPATH-00084	syslog-ng is configured to send log on network	PASS

- number of tests: 9
- number of failures: 0

Tests common_security for virtu-ci3

Test ID	Tests	Results
SEAPATH-00197	Only official apt repositories configured	PASS
SEAPATH-00198	No unrecognized packages installed	PASS
SEAPATH-215	auditd service is active	PASS
SEAPATH-216	auditd is configured to output in syslog	PASS
SEAPATH-217	insmod call is logged	PASS
SEAPATH-217	kmod call is logged	PASS

Test ID	Tests	Results
SEAPATH-217	modprobe call is logged	PASS
SEAPATH-217	rmmod call is logged	PASS
SEAPATH-218	modification in /etc/ is logged	PASS
SEAPATH-219	mount/umount call is logged	PASS
SEAPATH-220	ioperm call is logged	PASS
SEAPATH-220	prctl call is logged	PASS
SEAPATH-220	ptrace call is logged	PASS
SEAPATH-221	file deletion is logged	PASS
SEAPATH-222	open monitoring is logged	PASS
SEAPATH-222	openat monitoring is logged	PASS
SEAPATH-222	unlink monitoring is logged	PASS
SEAPATH-00106	Check /etc/shadow permissions	PASS
SEAPATH-00107	Check /etc/passwd permissions	PASS
SEAPATH-00108	Check /etc/syslog-ng/cert.d/clientkey.pem permissions	PASS
SEAPATH-00049	Check /etc/ssh/ssh_host_ed25519_key permissions	PASS
SEAPATH-00090	Check /etc/ssh/ssh_host_rsa_key permissions	PASS
SEAPATH-00192	All files have a known owner and group	PASS
SEAPATH-00193	All directories writable by all users have the sticky bit	PASS
SEAPATH-00194	All directories writable by all users are owned by root	PASS
SEAPATH-00195	Ceph OSD are owned by ceph	PASS
SEAPATH-00196	No unexpected file has setuid/setgid enabled	PASS
SEAPATH-00088	root password was randomized at boot	PASS
SEAPATH-00089	root password is randomized at each boot	PASS
SEAPATH-00091	root password is encrypted with a cryto at least equivalent as sha512	PASS
SEAPATH-00092	bash timeout is set read-only to 300s	PASS
SEAPATH-00093	sshd forbids setting environment variables	PASS
SEAPATH-00094	sshd server time-out is set to 300s of client inactivity	PASS
SEAPATH-00095	shadow encrypts passwords with SHA512 by default	PASS
SEAPATH-00096	shadow encryption uses at least 65536 rounds	PASS
SEAPATH-00097	pam password authentication uses sha512 with 65536 rounds or yescrypt	PASS
SEAPATH-00098	password set to expire after 90 days	PASS
SEAPATH-00099	*su* is denied	PASS
SEAPATH-00100	/etc/securetty is empty	PASS
SEAPATH-00101	PAM securetty module is active in *login* policy	PASS
SEAPATH-00202	grub root superuser is set in /boot/grub/grub.cfg	PASS
SEAPATH-00203	grub root superuser is password protected	PASS
SEAPATH-00204	main menuentry is unrestricted in /boot/grub/grub.cfg	PASS
SEAPATH-00205	TMPDIR env var is defined and readonly	PASS
SEAPATH-00206	TMPDIR is set with 700 mode and root as owner and group	PASS
SEAPATH-00050	Linux kernel *hardening* : SECURITY_YAMA is enabled	PASS

Test ID	Tests	Results
SEAPATH-00050	Linux kernel *hardening* : DEBUG_WX is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : SECURITY_DMESG_RESTRICT is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : PAGE_TABLE_ISOLATION is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : RETPOLINE is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : LEGACY_VSYSCALL_NONE is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : SLAB_FREELIST_RANDOM is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : SLAB_FREELIST_HARDENED is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : HARDENED_USERCOPY is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : FORTIFY_SOURCE is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : PAGE_POISONING is enabled	PASS
SEAPATH-00170	Wipe slab and page allocations enabled on cmdline	PASS
SEAPATH-00174	Randomize kstack offset in on	PASS
SEAPATH-00175	Disable slab usercopy fallback	PASS
SEAPATH-00201	LSM Yama is enabled	PASS
SEAPATH-00210	MCE is disabled	PASS
SEAPATH-00211	rng_core.default_quality is set to 500	PASS
SEAPATH-00163	sudo policy is installed for group ansible (ansible)	PASS
SEAPATH-00164	sudo requires password for group operator (operator)	PASS
SEAPATH-00165	sudo requires password for group maintenance-N1 (maint-n1)	PASS
SEAPATH-00166	sudo requires password for group maintenance-N3 (maint-n3)	PASS
SEAPATH-00167	sudo requires password for group administrator (admincluster)	PASS
SEAPATH-00168	sudo requires password for group super-administrator (adminsys)	PASS
SEAPATH-00169	sudo requires password for group ansible (ansible)	PASS
SEAPATH-00103	/usr/bin/sudo exists	PASS
SEAPATH-00104	/usr/bin/sudo belongs to group privileged	PASS
SEAPATH-00105	/usr/bin/sudo has permissions 4750	PASS
SEAPATH-00148	/etc/sudoers include env_reset directive	PASS
SEAPATH-00150	/etc/sudoers all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers /etc/sudoers is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/ansible all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/ansible EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/ansible rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/ansible commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/ansible no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/ansible /etc/sudoers.d/ansible is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/ceph-osd-smartctl all commands require authentication	PASS

Test ID	Tests	Results
SEAPATH-00152	/etc/sudoers.d/ceph-osd-smartctl EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/ceph-osd-smartctl rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/ceph-osd-smartctl commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/ceph-osd-smartctl no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/ceph-osd-smartctl /etc/sudoers.d/ceph-osd-smartctl is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/virtu all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/virtu EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/virtu rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/virtu commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/virtu no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/virtu /etc/sudoers.d/virtu is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/admin all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/admin EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/admin rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/admin commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/admin no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/admin /etc/sudoers.d/admin is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/Debian-snmp all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/Debian-snmp EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/Debian-snmp rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/Debian-snmp commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/Debian-snmp no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/Debian-snmp /etc/sudoers.d/Debian-snmp is owned by root:root with 0440 permissions	PASS
SEAPATH-00171	Check coredumps are disabled	PASS
SEAPATH-00172	Check kexec is disabled	PASS
SEAPATH-00173	Check binfmt_misc is disabled	PASS
SEAPATH-00176	Check kptr_restrict is set to 2	PASS
SEAPATH-00177	Check dmesg_restrict is set to 1	PASS
SEAPATH-00178	Check pid_max is set to 4194304	PASS
SEAPATH-00179	Check perf_cpu_time_max_percent is set to 1	PASS
SEAPATH-00180	Check perf_event_max_sample_rate is set to 1	PASS
SEAPATH-00181	Check perf_event_paranoid is set to 2	PASS
SEAPATH-00182	Check randomize_va_space is set to 2	PASS
SEAPATH-00183	Check sysrq is set to 0	PASS
SEAPATH-00184	Check unprivileged_bpf_disabled is set to 1	PASS
SEAPATH-00185	Check panic_on_oops is set to 1	PASS
SEAPATH-00186	Check kernel.yama.ptrace_scope is set to 2	PASS
SEAPATH-00187	Check suid_dumpable is set to 0	PASS
SEAPATH-00188	Check protected_fifos is set to 2	PASS

Test ID	Tests	Results
SEAPATH-00189	Check protected_regular is set to 2	PASS
SEAPATH-00190	Check protected_symlinks is set to 1	PASS
SEAPATH-00191	Check protected_hardlinks is set to 1	PASS
SEAPATH-00082	/var/log is mounted on a separate partition	PASS
SEAPATH-00085	syslog-ng can not acquire new privileges	PASS
SEAPATH-00086	syslog-ng capabilities are bounded	PASS
SEAPATH-00087	syslog-ng system calls are filtered	PASS
SEAPATH-00199	No systemd service failed	PASS

- number of tests: 134
- number of failures: 0

Tests hypervisor for virtu-ci3

Test ID	Tests	Results
SEAPATH-00044	Check /etc/syslog-ng/cert.d/clientcert.pem permissions	PASS
SEAPATH-00045	Check /etc/syslog-ng/cert.d/clientkey.pem permissions	PASS
SEAPATH-00003	libvirtd service is running	PASS
SEAPATH-00035	ovs-vswitchd service is running	PASS
SEAPATH-00035	ovsdb-server service is running	PASS
SEAPATH-00038	lspci 3.6.2+ is available	PASS
SEAPATH-00018	KVM device available	PASS
SEAPATH-00019	Qemu for x86-64 available	PASS
SEAPATH-00020	Libvirtd service is running	PASS

- number of tests: 10
- number of failures: 0

Tests hypervisoriommu for virtu-ci3

Test ID	Tests	Results
SEAPATH-00030	iommu enabled in passthrough mode	PASS
SEAPATH-00031	iommu is loaded	PASS
SEAPATH-00032	iommu is populated	PASS
SEAPATH-00050	Linux kernel *iommu* : INTEL_IOMMU is enabled	PASS
SEAPATH-00050	Linux kernel *iommu* : AMD_IOMMU is enabled	PASS
SEAPATH-00050	Linux kernel *iommu* : AMD_IOMMU_V2 is enabled	PASS
SEAPATH-00050	Linux kernel *iommu* : IOMMU_IOVA is enabled	PASS

- number of tests: 8
- number of failures: 0

Tests hypervisorsecurity for virtu-ci3

Test ID	Tests	Results
SEAPATH-00033	/etc/group is consistent	PASS
SEAPATH-00033	/etc/gshadow is consistent	PASS
SEAPATH-00034	/etc/group does not include extra group	PASS
SEAPATH-00034	/etc/gshadow does not include extra group	PASS
SEAPATH-00008	Slab merging is disabled on cmdline	PASS
SEAPATH-00009	Kernel Page Table Isolation is always enabled on cmdline	PASS
SEAPATH-00010	SLUB redzoning and sanity checking enabled on cmdline	PASS
SEAPATH-00207	CPU has no known vulnerabilities	PASS
SEAPATH-00047	/etc/passwd is consistent	PASS
SEAPATH-00048	/etc/passwd does not include extra user	PASS
SEAPATH-00046	/etc/shadow is consistent	PASS
SEAPATH-00015	Vulnerabilities sysfs entry exist	PASS
SEAPATH-00017	System is not vulnerable to : meltdown	PASS
SEAPATH-00017	System is not vulnerable to : l1tf	PASS
SEAPATH-00017	System is not vulnerable to : spectre_v1	PASS
SEAPATH-00017	System is not vulnerable to : spectre_v2	PASS
SEAPATH-00012	admin user exists	PASS
SEAPATH-00013	admin has a password	PASS

- number of tests: 18
- number of failures: 0

Tests common for virtu-ci2

Test ID	Tests	Results
SEAPATH-00078	no paging error	PASS
SEAPATH-00079	no rcu stall	PASS
SEAPATH-00080	no backtraces	PASS
SEAPATH-00075	kernel is PREEMPT RT	PASS
SEAPATH-00076	kernel is realtime	PASS
SEAPATH-00081	kernel is >= 4.19.106	PASS
SEAPATH-00083	syslog-ng service is running	PASS
SEAPATH-00084	syslog-ng is configured to send log on network	PASS

- number of tests: 9

- number of failures: 0

Tests common_security for virtu-ci2

Test ID	Tests	Results
SEAPATH-00197	Only official apt repositories configured	PASS
SEAPATH-00198	No unrecognized packages installed	PASS
SEAPATH-215	auditd service is active	PASS
SEAPATH-216	auditd is configured to output in syslog	PASS
SEAPATH-217	insmod call is logged	PASS
SEAPATH-217	kmod call is logged	PASS
SEAPATH-217	modprobe call is logged	PASS
SEAPATH-217	rmmod call is logged	PASS
SEAPATH-218	modification in /etc/ is logged	PASS
SEAPATH-219	mount/umount call is logged	PASS
SEAPATH-220	ioperm call is logged	PASS
SEAPATH-220	prctl call is logged	PASS
SEAPATH-220	ptrace call is logged	PASS
SEAPATH-221	file deletion is logged	PASS
SEAPATH-222	open monitoring is logged	PASS
SEAPATH-222	openat monitoring is logged	PASS
SEAPATH-222	unlink monitoring is logged	PASS
SEAPATH-00106	Check /etc/shadow permissions	PASS
SEAPATH-00107	Check /etc/passwd permissions	PASS
SEAPATH-00108	Check /etc/syslog-ng/cert.d/clientkey.pem permissions	PASS
SEAPATH-00049	Check /etc/ssh/ssh_host_ed25519_key permissions	PASS
SEAPATH-00090	Check /etc/ssh/ssh_host_rsa_key permissions	PASS
SEAPATH-00192	All files have a known owner and group	PASS
SEAPATH-00193	All directories writable by all users have the sticky bit	PASS
SEAPATH-00194	All directories writable by all users are owned by root	PASS
SEAPATH-00195	Ceph OSD are owned by ceph	PASS
SEAPATH-00196	No unexpected file has setuid/setgid enabled	PASS
SEAPATH-00088	root password was randomized at boot	PASS
SEAPATH-00089	root password is randomized at each boot	PASS
SEAPATH-00091	root password is encrypted with a cryto at least equivalent as sha512	PASS
SEAPATH-00092	bash timeout is set read-only to 300s	PASS
SEAPATH-00093	sshd forbids setting environment variables	PASS
SEAPATH-00094	sshd server time-out is set to 300s of client inactivity	PASS
SEAPATH-00095	shadow encrypts passwords with SHA512 by default	PASS
SEAPATH-00096	shadow encryption uses at least 65536 rounds	PASS
SEAPATH-00097	pam password authentication uses sha512 with 65536 rounds or yescrypt	PASS
SEAPATH-00098	password set to expire after 90 days	PASS

Test ID	Tests	Results
SEAPATH-00099	*su* is denied	PASS
SEAPATH-00100	/etc/securetty is empty	PASS
SEAPATH-00101	PAM securetty module is active in *login* policy	PASS
SEAPATH-00202	grub root superuser is set in /boot/grub/grub.cfg	PASS
SEAPATH-00203	grub root superuser is password protected	PASS
SEAPATH-00204	main menuentry is unrestricted in /boot/grub/grub.cfg	PASS
SEAPATH-00205	TMPDIR env var is defined and readonly	PASS
SEAPATH-00206	TMPDIR is set with 700 mode and root as owner and group	PASS
SEAPATH-00050	Linux kernel *hardening* : SECURITY_YAMA is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : DEBUG_WX is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : SECURITY_DMESG_RESTRICT is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : PAGE_TABLE_ISOLATION is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : RETPOLINE is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : LEGACY_VSYSCALL_NONE is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : SLAB_FREELIST_RANDOM is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : SLAB_FREELIST_HARDENED is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : HARDENED_USERCOPY is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : FORTIFY_SOURCE is enabled	PASS
SEAPATH-00050	Linux kernel *hardening* : PAGE_POISONING is enabled	PASS
SEAPATH-00170	Wipe slab and page allocations enabled on cmdline	PASS
SEAPATH-00174	Randomize kstack offset in on	PASS
SEAPATH-00175	Disable slab usercopy fallback	PASS
SEAPATH-00201	LSM Yama is enabled	PASS
SEAPATH-00210	MCE is disabled	PASS
SEAPATH-00211	rng_core.default_quality is set to 500	PASS
SEAPATH-00163	sudo policy is installed for group ansible (ansible)	PASS
SEAPATH-00164	sudo requires password for group operator (operator)	PASS
SEAPATH-00165	sudo requires password for group maintenance-N1 (maint-n1)	PASS
SEAPATH-00166	sudo requires password for group maintenance-N3 (maint-n3)	PASS
SEAPATH-00167	sudo requires password for group administrator (admincluster)	PASS
SEAPATH-00168	sudo requires password for group super-administrator (adminsys)	PASS
SEAPATH-00169	sudo requires password for group ansible (ansible)	PASS
SEAPATH-00103	/usr/bin/sudo exists	PASS
SEAPATH-00104	/usr/bin/sudo belongs to group privileged	PASS
SEAPATH-00105	/usr/bin/sudo has permissions 4750	PASS
SEAPATH-00148	/etc/sudoers include env_reset directive	PASS
SEAPATH-00150	/etc/sudoers all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers commands are not specified without arguments	PASS

Test ID	Tests	Results
SEAPATH-00155	/etc/sudoers no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers /etc/sudoers is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/admin all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/admin EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/admin rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/admin commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/admin no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/admin /etc/sudoers.d/admin is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/ansible all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/ansible EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/ansible rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/ansible commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/ansible no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/ansible /etc/sudoers.d/ansible is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/Debian-snmp all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/Debian-snmp EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/Debian-snmp rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/Debian-snmp commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/Debian-snmp no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/Debian-snmp /etc/sudoers.d/Debian-snmp is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/ceph-osd-smartctl all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/ceph-osd-smartctl EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/ceph-osd-smartctl rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/ceph-osd-smartctl commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/ceph-osd-smartctl no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/ceph-osd-smartctl /etc/sudoers.d/ceph-osd-smartctl is owned by root:root with 0440 permissions	PASS
SEAPATH-00150	/etc/sudoers.d/virtu all commands require authentication	PASS
SEAPATH-00152	/etc/sudoers.d/virtu EXEC option is not used	PASS
SEAPATH-00153	/etc/sudoers.d/virtu rules are not defined by negation	PASS
SEAPATH-00154	/etc/sudoers.d/virtu commands are not specified without arguments	PASS
SEAPATH-00155	/etc/sudoers.d/virtu no command is specified with wildcard argument	PASS
SEAPATH-00156	/etc/sudoers.d/virtu /etc/sudoers.d/virtu is owned by root:root with 0440 permissions	PASS
SEAPATH-00171	Check coredumps are disabled	PASS
SEAPATH-00172	Check kexec is disabled	PASS
SEAPATH-00173	Check binfmt_misc is disabled	PASS
SEAPATH-00176	Check kptr_restrict is set to 2	PASS
SEAPATH-00177	Check dmesg_restrict is set to 1	PASS
SEAPATH-00178	Check pid_max is set to 4194304	PASS
SEAPATH-00179	Check perf_cpu_time_max_percent is set to 1	PASS

Test ID	Tests	Results
SEAPATH-00180	Check perf_event_max_sample_rate is set to 1	PASS
SEAPATH-00181	Check perf_event_paranoid is set to 2	PASS
SEAPATH-00182	Check randomize_va_space is set to 2	PASS
SEAPATH-00183	Check sysrq is set to 0	PASS
SEAPATH-00184	Check unprivileged_bpf_disabled is set to 1	PASS
SEAPATH-00185	Check panic_on_oops is set to 1	PASS
SEAPATH-00186	Check kernel.yama.ptrace_scope is set to 2	PASS
SEAPATH-00187	Check suid_dumpable is set to 0	PASS
SEAPATH-00188	Check protected_fifos is set to 2	PASS
SEAPATH-00189	Check protected_regular is set to 2	PASS
SEAPATH-00190	Check protected_symlinks is set to 1	PASS
SEAPATH-00191	Check protected_hardlinks is set to 1	PASS
SEAPATH-00082	/var/log is mounted on a separate partition	PASS
SEAPATH-00085	syslog-ng can not acquire new privileges	PASS
SEAPATH-00086	syslog-ng capabilities are bounded	PASS
SEAPATH-00087	syslog-ng system calls are filtered	PASS
SEAPATH-00199	No systemd service failed	PASS

- number of tests: 134
- number of failures: 0

Tests hypervisor for virtu-ci2

Test ID	Tests	Results
SEAPATH-00044	Check /etc/syslog-ng/cert.d/clientcert.pem permissions	PASS
SEAPATH-00045	Check /etc/syslog-ng/cert.d/clientkey.pem permissions	PASS
SEAPATH-00003	libvirtd service is running	PASS
SEAPATH-00035	ovs-vswitchd service is running	PASS
SEAPATH-00035	ovsdb-server service is running	PASS
SEAPATH-00038	lspci 3.6.2+ is available	PASS
SEAPATH-00018	KVM device available	PASS
SEAPATH-00019	Qemu for x86-64 available	PASS
SEAPATH-00020	Libvirtd service is running	PASS

- number of tests: 10
- number of failures: 0

Tests hypervisoriommu for virtu-ci2

Test ID	Tests	Results
SEAPATH-00030	iommu enabled in passthrough mode	PASS
SEAPATH-00031	iommu is loaded	PASS
SEAPATH-00032	iommu is populated	PASS
SEAPATH-00050	Linux kernel *iommu* : INTEL_IOMMU is enabled	PASS
SEAPATH-00050	Linux kernel *iommu* : AMD_IOMMU is enabled	PASS
SEAPATH-00050	Linux kernel *iommu* : AMD_IOMMU_V2 is enabled	PASS
SEAPATH-00050	Linux kernel *iommu* : IOMMU_IOVA is enabled	PASS

- number of tests: 8
- number of failures: 0

Tests hypervisorsecurity for virtu-ci2

Test ID	Tests	Results
SEAPATH-00033	/etc/group is consistent	PASS
SEAPATH-00033	/etc/gshadow is consistent	PASS
SEAPATH-00034	/etc/group does not include extra group	PASS
SEAPATH-00034	/etc/gshadow does not include extra group	PASS
SEAPATH-00008	Slab merging is disabled on cmdline	PASS
SEAPATH-00009	Kernel Page Table Isolation is always enabled on cmdline	PASS
SEAPATH-00010	SLUB redzoning and sanity checking enabled on cmdline	PASS
SEAPATH-00207	CPU has no known vulnerabilities	PASS
SEAPATH-00047	/etc/passwd is consistent	PASS
SEAPATH-00048	/etc/passwd does not include extra user	PASS
SEAPATH-00046	/etc/shadow is consistent	PASS
SEAPATH-00015	Vulnerabilities sysfs entry exist	PASS
SEAPATH-00017	System is not vulnerable to : meltdown	PASS
SEAPATH-00017	System is not vulnerable to : l1tf	PASS
SEAPATH-00017	System is not vulnerable to : spectre_v1	PASS
SEAPATH-00017	System is not vulnerable to : spectre_v2	PASS
SEAPATH-00012	admin user exists	PASS
SEAPATH-00013	admin has a password	PASS

- number of tests: 18
- number of failures: 0

Latency tests results

virtu-ci1

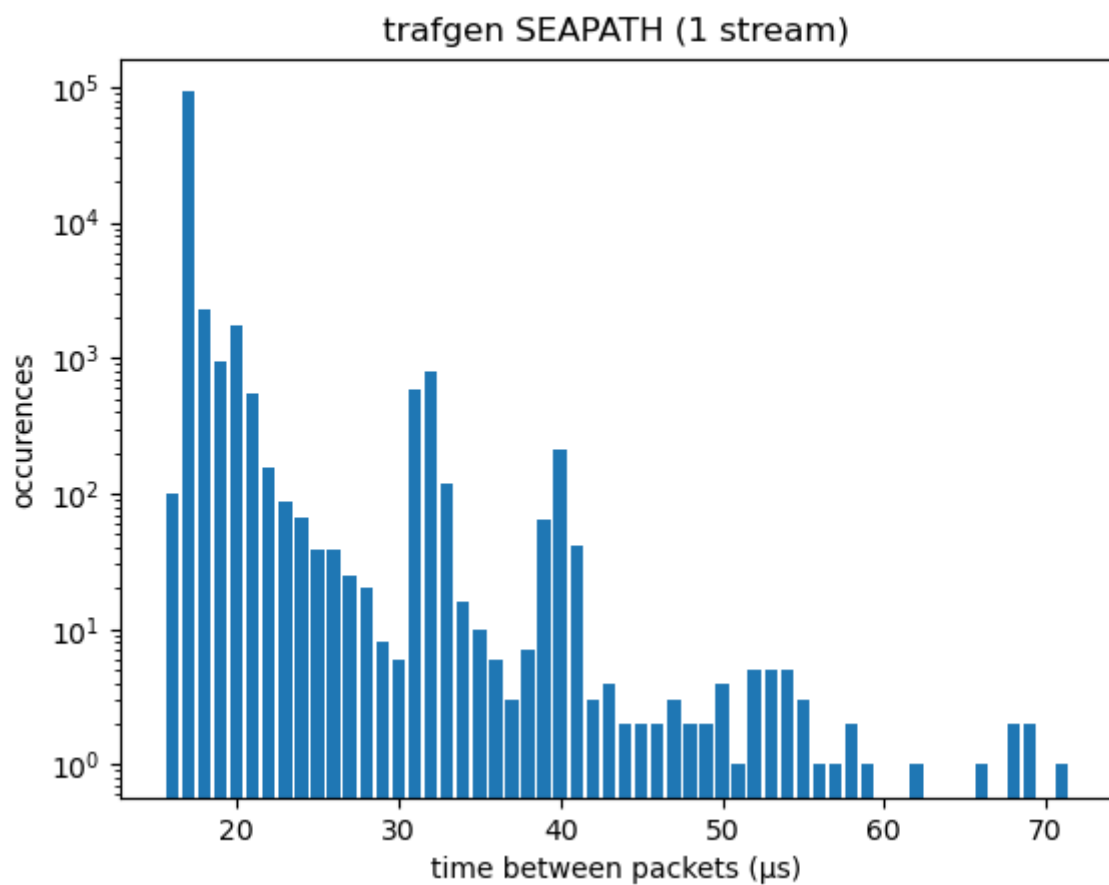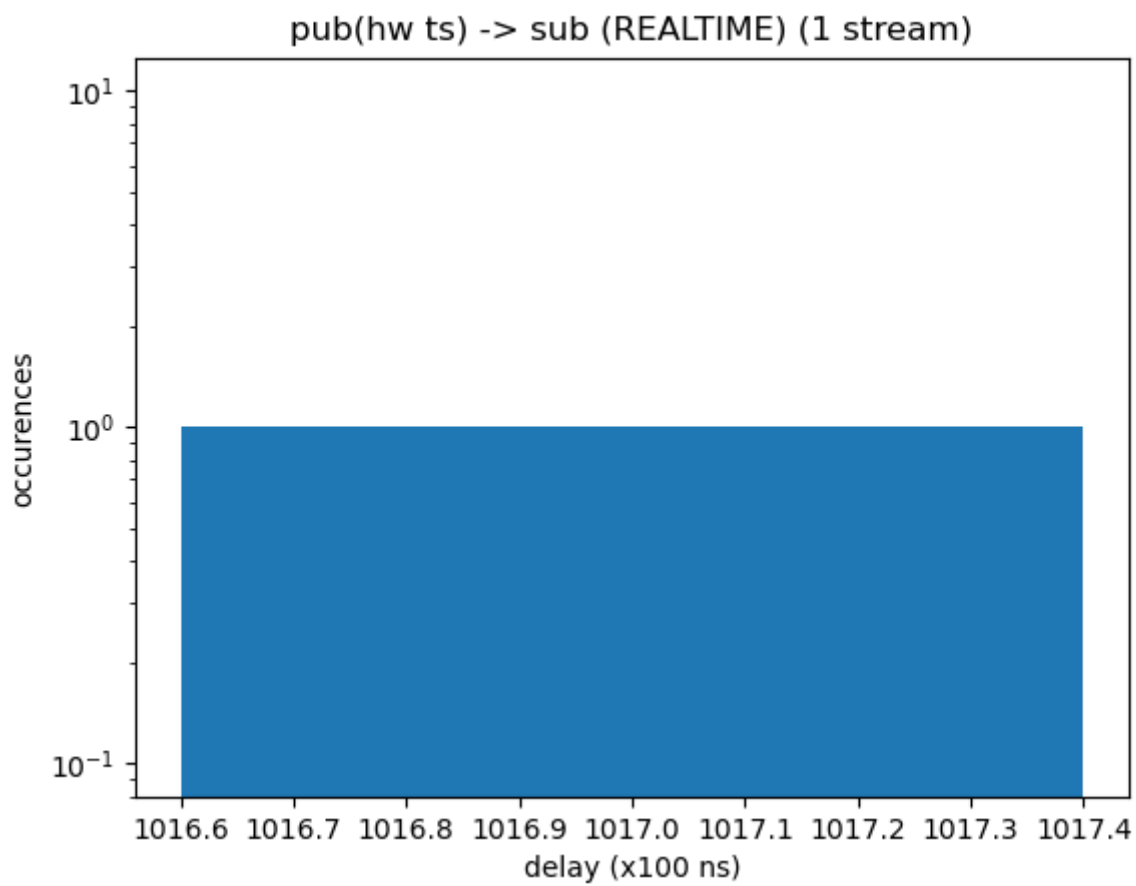pub(hw ts) -> sub (REALTIME) (1 stream)

trafgen SEAPATH (1 stream)
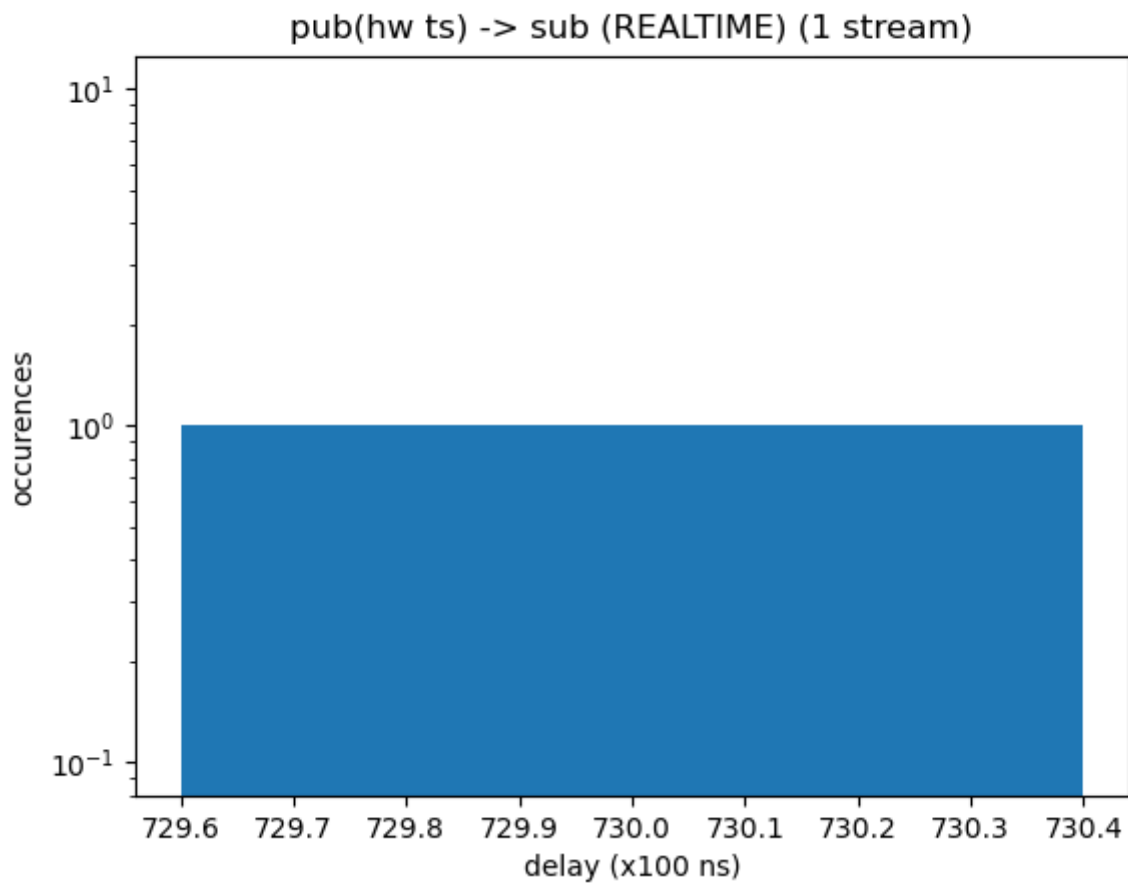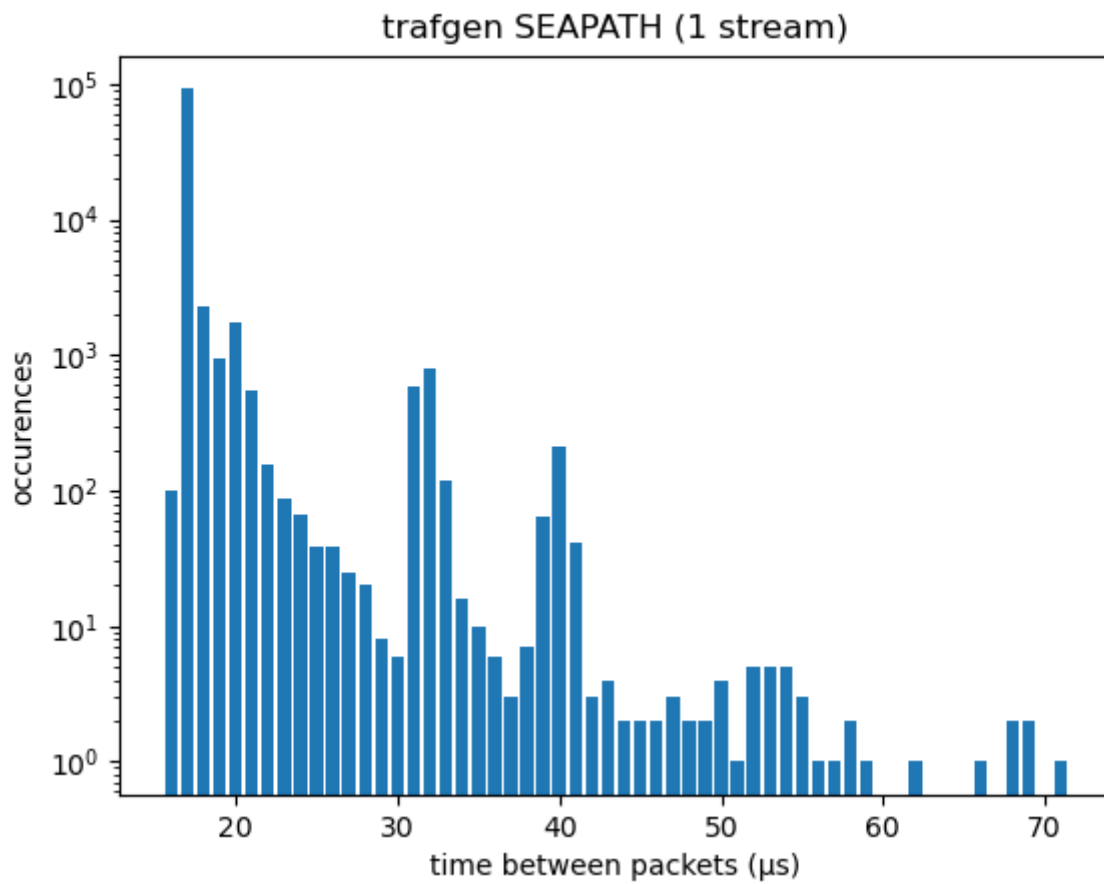
Data: 1 frames
std dev pub-sub time: 0.0 ns
median: 72979 ns
mean: 72979 ns
min: 72979 ns
max: 72979 ns

Data: 99999 frame pairs
std dev of frame-to-frame time: 2.4645944015403143 µs
median: 17 µs
mean: 17.465464654646546 µs
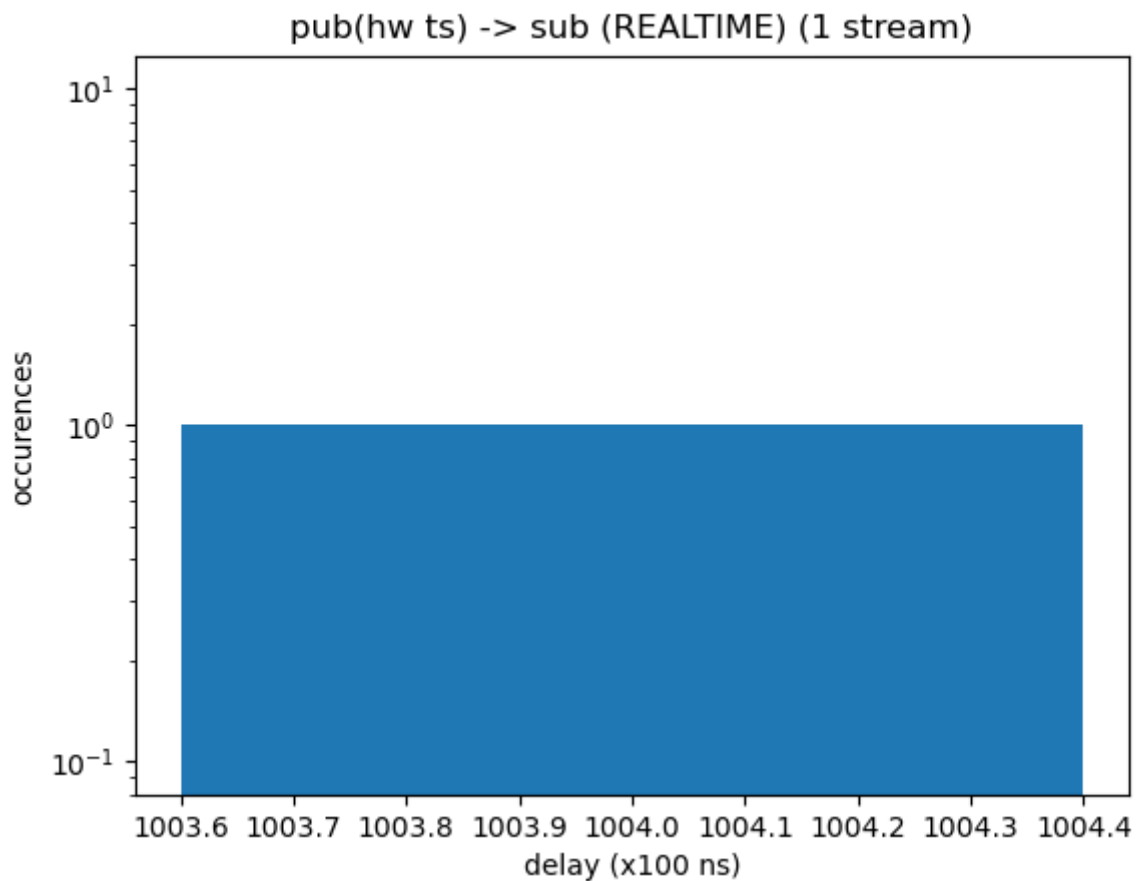min: 16 µs
max: 71 µs

virtu-ci2

pub(hw ts) -> sub (REALTIME) (1 stream)
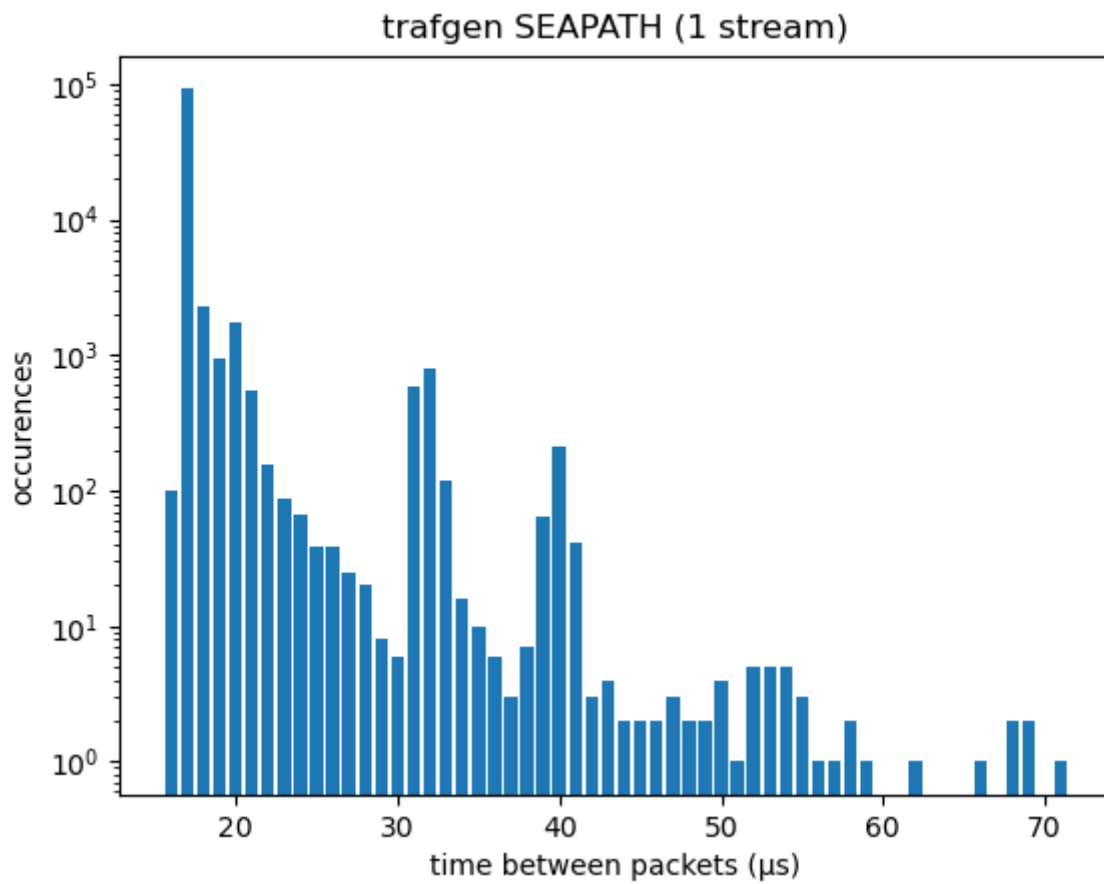

trafgen SEAPATH (1 stream)

Data: 1 frames
std dev pub-sub time: 0.0 ns
median: 101665 ns
mean: 101665 ns
min: 101665 ns
max: 101665 ns

Data: 99999 frame pairs
std dev of frame-to-frame time: 2.4645944015403143 µs
median: 17 µs
mean: 17.465464654646546 µs
min: 16 µs
max: 71 µs

virtu-ci3

trafgen SEAPATH (1 stream)

Data: 1 frames
std dev pub-sub time: 0.0 ns
median: 100362 ns
mean: 100362 ns
min: 100362 ns
max: 100362 ns

Data: 99999 frame pairs
std dev of frame-to-frame time: 2.4645944015403143 µs
median: 17 µs
mean: 17.465464654646546 µs
min: 16 µs
max: 71 µs

About this documentation

This documentation uses the AsciiDoc documentation generator. It is a convenient format that allows using plain-text formatted writing that can later be converted to various output formats such as HTML and PDF.

In order to generate an HTML version of this documentation, use the following command (the asciidoc package will need to be installed in your Linux distribution):

```
$ asciidoc main.adoc
```

This will result in a README.html file being generated in the current directory.

If you prefer a PDF version of the documentation instead, use the following command (the dblatex package will need to be installed on your Linux distribution):

```
$ asciidoctor-pdf main.adoc
```