

SecurityOnion Install

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Objective

The goal of this lab is to successfully setup and install SecurityOnion.

Tools

Proxmox VE

SecurityOnion 2.5.4

Environment/Setup

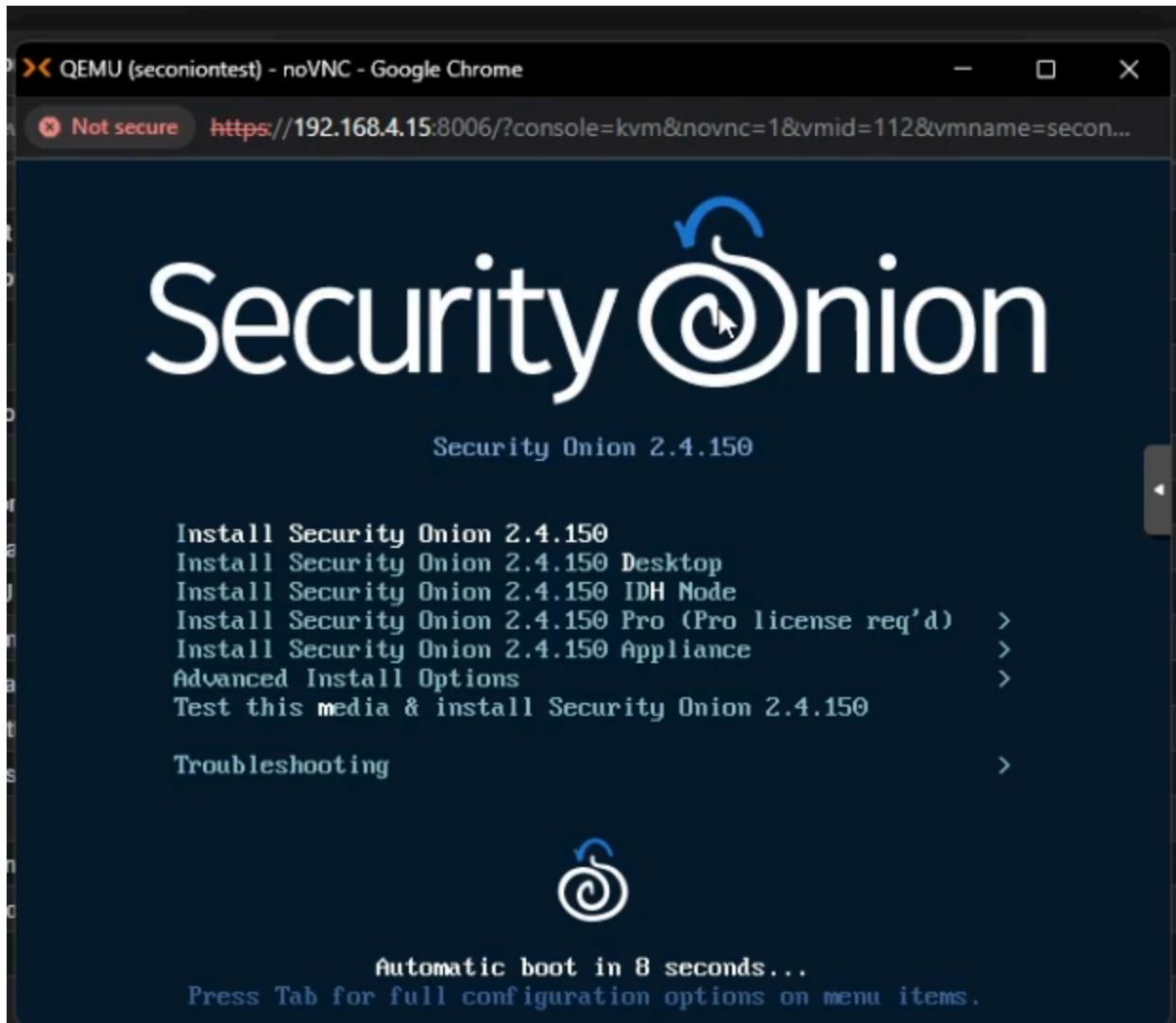
This lab was set up within a proxmox VE hosted on an AMD Laptop. The WUI was accessed over a Windows 11 Desktop. The AMD Laptop had an external storage device (HDD 1TB) attached as well via SATA > USB.

Methodology/Steps

From video in order

Virtual Machine 112 (seconiontest) on node 'pve' No Tags		
Summary	Add	Remove
Console	Memory	12.00 GiB
Hardware	Processors	4 (1 sockets, 4 cores) [host]
Cloud-Init	BIOS	Default (SeaBIOS)
Options	Display	Default
Task History	Machine	Default (i440fx)
Monitor	SCSI Controller	VirtIO SCSI single
Backup	CD/DVD Drive (ide2)	local:iso/securityonion-2.4.150-20250522.iso,media=cdrom,size=13544M
Replication	Hard Disk (scsi0)	local-lvm:vm-112-disk-0,iothread=1,size=200G
Snapshots	Network Device (net0)	virtio=BC:24:11:23:73:25,bridge=vmbr0,firewall=1
	Network Device (net1)	virtio=BC:24:11:35:B4:4C,bridge=vmbr0,firewall=1

Virtual Machine 112 (seconiontest) on node 'pve'		
Summary	Edit	Revert
Name	seconiontest	
Start at boot	No	
Start/Shutdown order	order=any	
OS Type	Linux 6.x - 2.6 Kernel	
Boot Order	scsi0, ide2, net0	
Use tablet for pointer	Yes	
Hotplug	Disk, Network, USB	
ACPI support	Yes	
KVM hardware virtualization	Yes	
Freeze CPU at startup	No	
Use local time for RTC	Default (Enabled for Windows)	
RTC start date	now	
SMBIOS settings (type1)	uuid=0604085d-66a1-4fa7-a41c-f527b5044b3d	
QEMU Guest Agent	Default (Disabled)	
Protection	No	
Spice Enhancements	none	
VM State storage	Automatic	
AMD SEV	Default (Disabled)	



```
#####
##      ** W A R N I N G **      ##
##      _____      ##
##      ##      ##
##      Installing the Security Onion ISO      ##
##      on this device will DESTROY ALL DATA      ##
##      and partitions!      ##
##      ##      ##
##      ** ALL DATA WILL BE LOST **      ##
#####
Do you wish to continue? (Type the entire word 'yes' to proceed.) yes

A new administrative user will be created. This user will be used for setting up and administering Security Onion.

Enter an administrative username: alcbec

Let's set a password for the alcbec user:

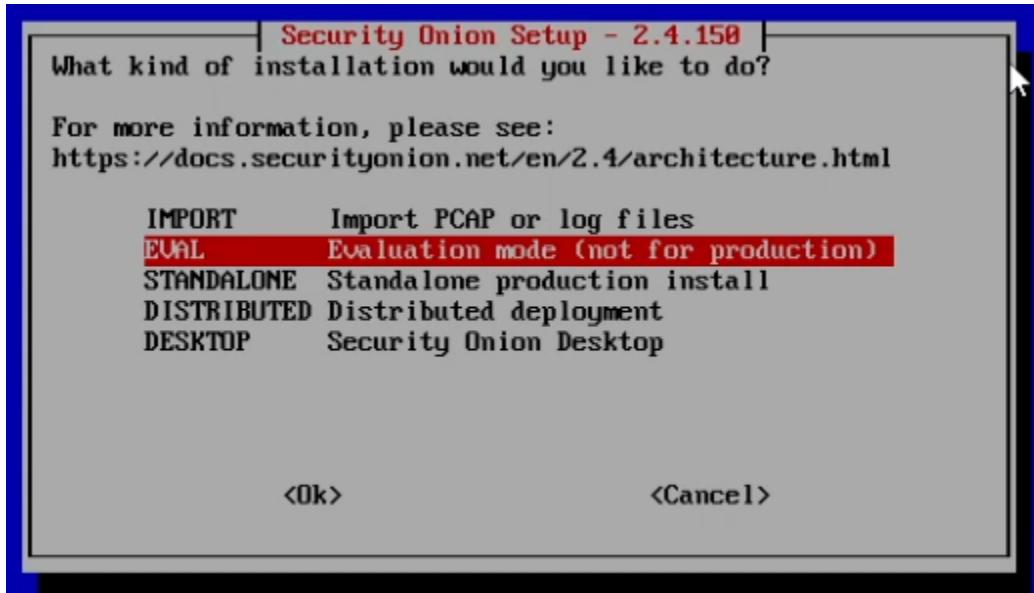
Enter a password:
Re-enter the password:
```

```
Initial Install Complete. Press [Enter] to reboot!
```

About 10 minutes

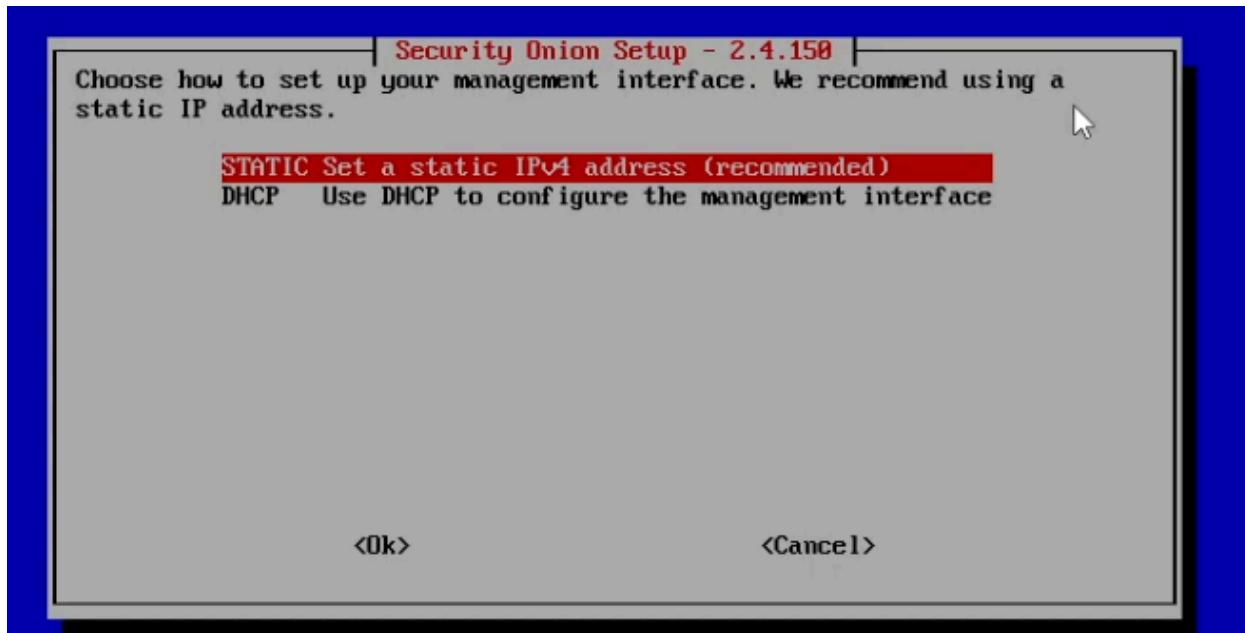
```
Oracle Linux Server 9.6
Kernel 5.15.0-308.179.6.3.el9uek.x86_64 on an x86_64

localhost login: alcbec
Password: _
```

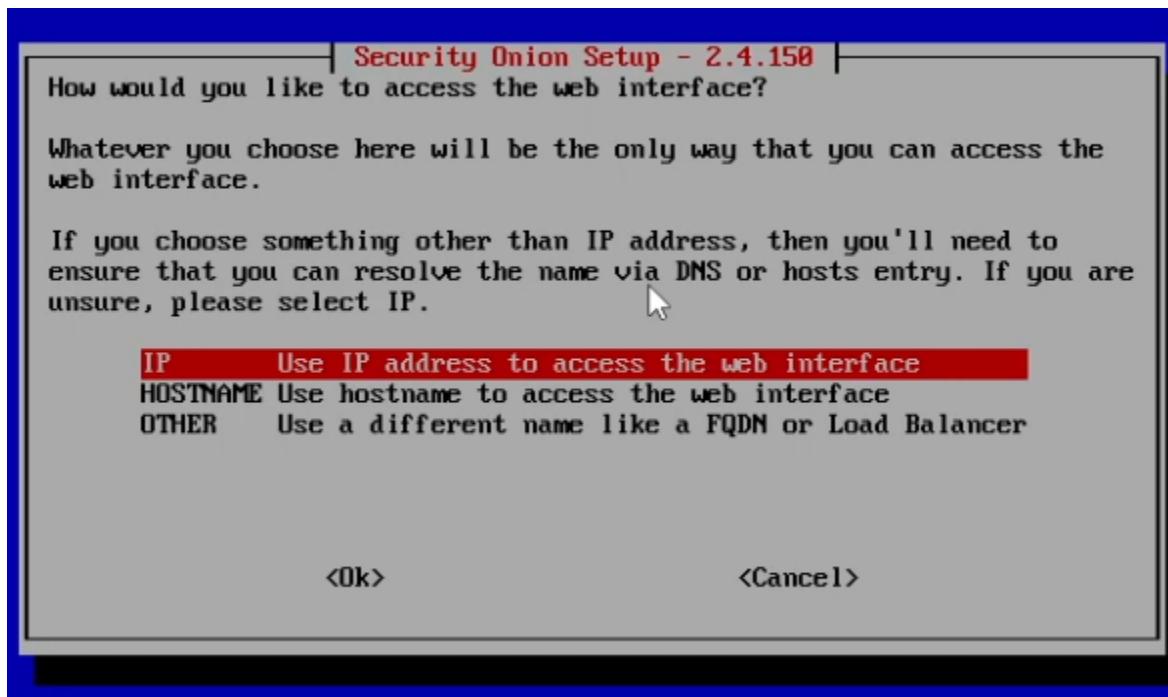


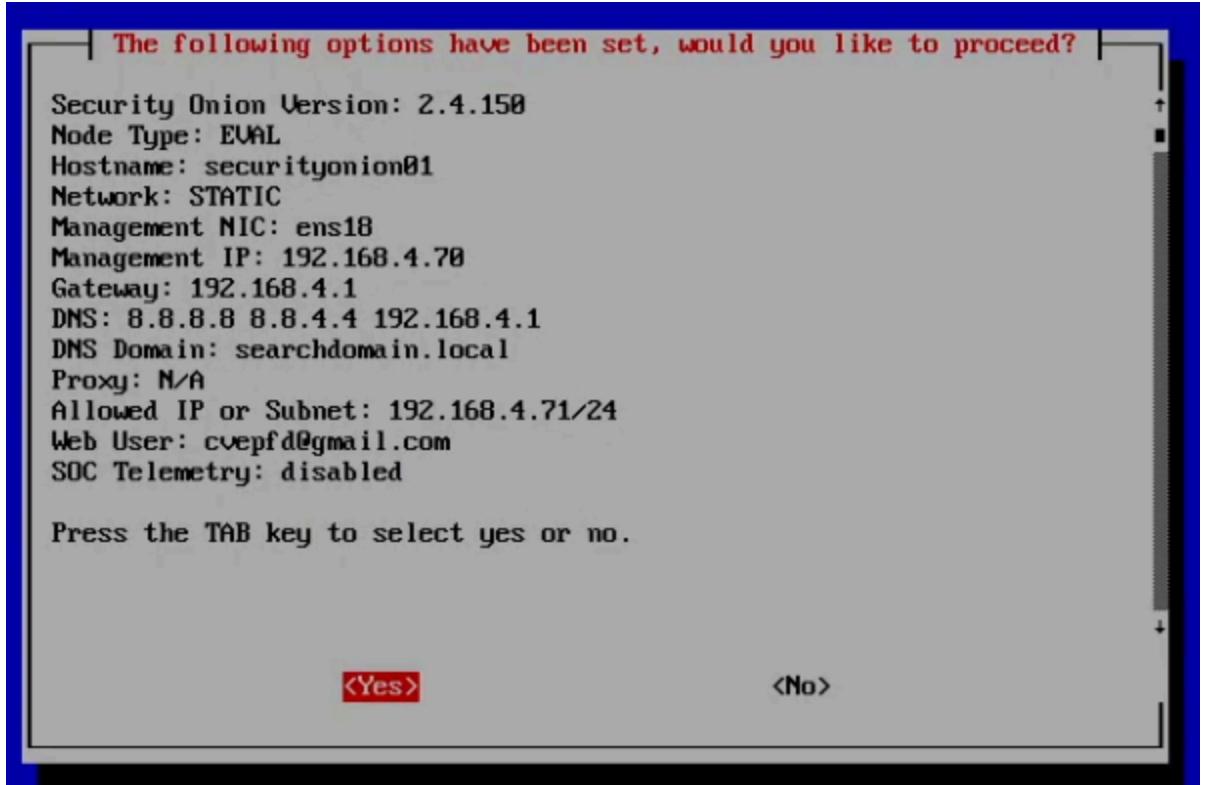
Agree>standard>choose name>





Setup networking, kind of self intuitive from here till...





```

zeek/tools/sbin/so-zeek-stats
zeek/tools/sbin/so-zeek-stop

sent 50.89M bytes received 30.34K bytes 101.84M bytes/sec
total size is 50.76M speedup is 1.00
2025-07-03T02:24:01Z | INFO | Executing command: mkdir -p /opt/so/saltstack/local/salt/zeek/policy/intel
2025-07-03T02:24:01Z | INFO | Executing command: touch /opt/so/saltstack/local/salt/zeek/policy/intel/intel.dat
2025-07-03T02:24:01Z | INFO | Chown the salt dirs on the manager for socore
2025-07-03T02:24:01Z | INFO | Executing command: chown -R socore:socore /opt/so
2025-07-03T02:24:01Z | INFO | Executing command: mkdir -p /opt/so/saltstack/local/pillar/elasticfleet
2025-07-03T02:24:02Z | INFO | Executing command: touch /opt/so/saltstack/local/pillar/elasticsearch/adv_elasticsearch.sls
2025-07-03T02:24:02Z | INFO | Executing command: mkdir -p /opt/so/saltstack/local/pillar/logrotate
2025-07-03T02:24:02Z | INFO | Executing command: touch /opt/so/saltstack/local/pillar/logrotate/adv_logrotate.sls
2025-07-03T02:24:02Z | INFO | Executing command: touch /opt/so/saltstack/local/pillar/logrotate/soc_logrotate.sls
2025-07-03T02:24:02Z | INFO | Executing command: mkdir -p /opt/so/saltstack/local/pillar/kibana
2025-07-03T02:24:02Z | INFO | Executing command: touch /opt/so/saltstack/local/pillar/kibana/adv_kibana.sls
2025-07-03T02:24:02Z | INFO | Executing command: touch /opt/so/saltstack/local/pillar/kibana/soc_kibana.sls
2025-07-03T02:24:02Z | INFO | Executing command: mkdir -p /opt/so/saltstack/local/pillar/kafka
2025-07-03T02:24:02Z | INFO | Executing command: touch /opt/so/saltstack/local/pillar/kafka/adv_kafka.sls
2025-07-03T02:24:02Z | INFO | Executing command: touch /opt/so/saltstack/local/pillar/kafka/soc_kafka.sls
2025-07-03T02:24:02Z | INFO | Generating the minion pillar
2025-07-03T02:24:02Z | INFO | Executing command: so-minion -o=setup
Minion file created for securityonion01_eval
Imported RPM-GPG-KEY-oracle
Imported RPM-GPG-KEY-EPEL-9
Imported SALT-PROJECT-GPG-PUBKEY-2023.pub
Imported docker.pub
Imported securityonion.pub
2025-07-03T02:24:02Z | INFO | Executing command: dnf -v clean all
Loaded plugins: builddep, changelog, config-manager, copr, debug, debuginfo-install, download, generate_completion_cache, groups-manager, needs-restarting, playground, repoclosure, repodiff, repograph, repomanage, reposync, system-upgrade
DNF version: 4.14.0
cachedir: /var/cache/dnf
Cleaning data: packages dbcache metadata
0 files removed
2025-07-03T02:24:02Z | INFO | Executing command: mkdir -vp /root/oldrepos
mkdir: created directory '/root/oldrepos'
2025-07-03T02:24:02Z | INFO | Executing command: dnf repolist all
repo id          repo name          status
securityonion    Security Onion Repo      enabled
Syncing Repos
2025-07-03T02:24:02Z | INFO | Repo Sync
2025-07-03T02:24:02Z | INFO | Adding Repo Download Configuration
2025-07-03T02:24:02Z | INFO | Executing command: dnf repolist
repo id          repo name          status
securityonion    Security Onion Repo      enabled
      % Total    % Received % Xferd  Average Speed   Time   Time  Current
                                         Dload  Upload Total Spent    Left  Speed
      0     0    0     0     0       0      0 --::-- --::-- --::-- 0

```

Setup in about 20-60m

| Security Onion Setup - 2.4.150 |

EVAL setup is now complete!

Access the Security Onion Console (SOC) web interface by navigating to:
<https://192.168.4.70>

Then login with the following username and password.

SOC Username: cvepf@gmail.com

SOC Password: Use the password that was entered during setup

Press TAB and then the ENTER key to exit this screen.

<Ok>

Login to Security Onion

Password Login

Email Address

Specify a valid email address. Contact your administrator for new account creation.

Password



LOGIN

Passwordless Login (Security Key / WebAuthn / PassKey)

Email Address

LOGIN



Lessons Learned/Reflection

What was most cumbersome was figuring out what was causing the AES crypto issue

I kept getting ‘end Kernel panic’ errors for various reasons. Initially I just went from new error to new error until it was fully remediated by ensuring host was the type within the processors tab. From there I had to change the BIOS setting to enable KVM hardware virtualization as well as ensure it was toggled to ‘Yes’ within 112(seconiontest) Options. Once these were remediated. I was then able to successfully boot and install SecurityOnion.

Appendix

<https://docs.securityonion.net/en/2.4/proxmox.html#cpu>

Panic screens

```
[ 9.120386] cryptomgr_test+0x24/0x40
[ 9.120386] kthread+0xd2/0x100
[ 9.120386] ? __pxf_kthread+0x10/0x10
[ 9.120386] ret_from_fork+0x34/0x50
[ 9.120386] ? __pxf_kthread+0x10/0x10
[ 9.120386] ret_from_fork_asm+0x1a/0x30
[ 9.120386] </TASK>
[ 9.120386] Modules linked in: aesni_intel crypto_simd cryptd
[ 9.127085] ---[ end trace 0000000000000000 ]---
[ 9.127263] RIP: 0010:aejni_gcm_init+0xbd/0x510 [aesni_intel]
[ 9.127352] Code: 0f 6f eb 66 0f 70 cb 4e 66 0f ef cb f3 0f 7f 8e a0 00 00 00
66 0f 6f cd 66 0f 70 d5 4e 66 0f 70 e3 4e 66 0f ef d5 66 0f ef e3 <66> 0f 3a 44
cb 11 66 0f 3a 44 eb 00 66 0f 3a 44 d4 00 66 0f ef d5
[ 9.127506] RSP: 0018:fffffa3758050f780 EFLAGS: 00000246
[ 9.127570] RAX: fffffa3758050fa80 RBX: 0000000000000000 RCX: ffff89a681e42030
[ 9.127636] RDX: fffffa3758050fa80 RSI: fffffa3758050f880 RDI: ffff89a681e42040
[ 9.127709] RBP: fffffa3758050fa18 R08: fffff89a681b1e000 R09: 0000000000000000
[ 9.127775] R10: 0000000000000001 R11: 0000000000000000 R12: fffff89a681e42030
[ 9.127838] R13: fffffa3758050f880 R14: fffffa3758050f7e0 R15: 0000000000000001
[ 9.127906] FS: 0000000000000000(0000) GS:ffff89a6bbd80000(0000) knlGS:00000
000000000000
[ 9.127989] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[ 9.128046] CR2: 00007fb9be87160 CR3: 0000000123420000 CR4: 0000000000006f0
[ 9.128190] note: cryptomgr_test[102] exited with preempt_count 1
```

```
[ 18.414158] do_group_exit+0x2d/0x90
[ 18.414158] __x64_sys_exit_group+0x14/0x20
[ 18.414158] do_syscall_64+0x5c/0x90
[ 18.414158] ? do_syscall_64+0x69/0x90
[ 18.414158] ? handle_mm_fault+0xc5/0x2a0
[ 18.414158] ? do_user_addr_fault+0x1d8/0x690
[ 18.414158] ? exc_page_fault+0x62/0x150
[ 18.414158] entry_SYSCALL_64_after_hwframe+0x63/0xcd
[ 18.414158] RIP: 0033:0x7fd311d9f395
[ 18.414158] Code: ba 01 00 00 00 b8 ca 00 00 00 0f 05 c3 0f 1f 84 00 00 00
00 f3 0f 1e fa ba e7 00 00 00 eb 06 0f 1f 44 00 00 f4 89 d0 0f 05 <48> 3d 00 f0
ff ff 76 f3 f7 d8 89 05 3b fe 00 00 eb e9 66 0f 1f 84
[ 18.414158] RSP: 002b:00007ffdc079ae88 EFLAGS: 00000246 DR16_RAX: 000000000000
000e7
[ 18.414158] RAX: ffffffffffffffd da RBX: 00007fd311d9a000 RCX: 00007fd311d9f395
[ 18.414158] RDX: 0000000000000e7 RSI: 00007ffdc079aa50 RDI: 000000000000007f
[ 18.414158] RBP: 00007ffdc079b010 R08: 00007ffdc079a9f9 R09: 0000000000000000
[ 18.414158] R10: 00000000ffffffff R11: 0000000000000246 R12: 00007fd311d78000
[ 18.414158] R13: 0000002300000007 R14: 0000000000000007 R15: 00007ffdc079b020
[ 18.414158] </TASK>
[ 18.414158] Kernel Offset: 0x3760000 from 0xffffffff81000000 (relocation ran
ge: 0xffffffff80000000-0xffffffffbf000000)
[ 18.414158] ---[ end Kernel panic - not syncing: Attempted to kill init! exit
code=0x00007f00 ]---
```

```
[ 17.686042] kthread+0xd9/0x100
[ 17.686042] ? kthread_complete_and_exit+0x20/0x20
[ 17.686042] ret_from_fork+0x22/0x30
[ 17.686042] </TASK>
[ 17.686042] Modules linked in:
[ 17.692127] ---[ end trace 4deaaf69046fa07 ]---
[ 17.692268] RIP: 0010:aesni_gcm_init+0xb9/0x30f
[ 17.692341] Code: 0f 6f eb 66 0f 70 cb 4e 66 0f ef cb f3 0f 7f 8e a0 00 00 00
66 0f 6f cd 66 0f 70 d5 4e 66 0f 70 e3 4e 66 0f ef d5 66 0f ef e3 <66> 0f 3a 44
cb 11 66 0f 3a 44 eb 00 66 0f 3a 44 d4 00 66 0f ef d5
[ 17.692491] RSP: 0018:ffffbd39c06db820 EFLAGS: 000000246
[ 17.692552] RAX: fffffbd39c06dbb20 RBX: 0000000000000000 RCX: ffff9a6400ed1820
[ 17.692614] RDX: fffffbd39c06dbb20 RSI: fffffbd39c06db920 RDI: ffff9a6400ed1830
[ 17.692675] RBP: fffffbd39c06dbab8 R08: ffff9a6401f8e000 R09: 0000000000000000
[ 17.692738] R10: 0000000000000000 R11: 0000000000000000 R12: ffff9a6400ed1820
[ 17.692800] R13: fffffbd39c06db920 R14: 0000000000000000 R15: 0000000000000001
[ 17.692864] FS: 0000000000000000(0000) GS:ffff9a672fc80000(0000) knlGS:00000
000000000000
[ 17.692945] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[ 17.693093] CR2: 0000000000000000 CR3: 000000034c010000 CR4: 00000000000006e0
[ 17.693298] Kernel panic - not syncing: Fatal exception
[ 17.694077] Kernel Offset: 0x17800000 from 0xffffffff81000000 (relocation ran
ge: 0xffffffff80000000-0xffffffffffff)
[ 17.694077] ---[ end Kernel panic - not syncing: Fatal exception ]---
```

```
[ 17.686042] kthread+0xd9/0x100
[ 17.686042] ? kthread_complete_and_exit+0x20/0x20
[ 17.686042] ret_from_fork+0x22/0x30
[ 17.686042] </TASK>
[ 17.686042] Modules linked in:
[ 17.692127] ---[ end trace 4deaaf69046fa07 ]---
[ 17.692268] RIP: 0010:aesni_gcm_init+0xb9/0x30f
[ 17.692341] Code: 0f 6f eb 66 0f 70 cb 4e 66 0f ef cb f3 0f 7f 8e a0 00 00 00
66 0f 6f cd 66 0f 70 d5 4e 66 0f 70 e3 4e 66 0f ef d5 66 0f ef e3 <66> 0f 3a 44
cb 11 66 0f 3a 44 eb 00 66 0f 3a 44 d4 00 66 0f ef d5
[ 17.692491] RSP: 0018:ffffbd39c06db820 EFLAGS: 000000246
[ 17.692552] RAX: fffffbd39c06dbb20 RBX: 0000000000000000 RCX: ffff9a6400ed1820
[ 17.692614] RDX: fffffbd39c06dbb20 RSI: fffffbd39c06db920 RDI: ffff9a6400ed1830
[ 17.692675] RBP: fffffbd39c06dbab8 R08: ffff9a6401f8e000 R09: 0000000000000000
[ 17.692738] R10: 0000000000000000 R11: 0000000000000000 R12: ffff9a6400ed1820
[ 17.692800] R13: fffffbd39c06db920 R14: 0000000000000000 R15: 0000000000000001
[ 17.692864] FS: 0000000000000000(0000) GS:ffff9a672fc80000(0000) knlGS:00000
000000000000
[ 17.692945] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[ 17.693093] CR2: 0000000000000000 CR3: 000000034c010000 CR4: 00000000000006e0
[ 17.693298] Kernel panic - not syncing: Fatal exception
[ 17.694077] Kernel Offset: 0x17800000 from 0xffffffff81000000 (relocation ran
ge: 0xffffffff80000000-0xffffffffffff)
[ 17.694077] ---[ end Kernel panic - not syncing: Fatal exception ]---
```

```

[ 65.301719] sd: sd1 sda2 sda3 sda4
[ 65.302090] sd 0:0:0:0: [sda] Attached SCSI disk
[119.283409] sd 0:0:0:0: [sda] 1953525168 512-byte logical blocks: (1.00 TB/932 GiB)
[119.283777] sd 0:0:0:0: [sda] Write Protect is off
[119.283781] sd 0:0:0:0: [sda] Mode Sense: 28 00 00 00
[119.284153] sd 0:0:0:0: [sda] No Caching mode page found
[119.284158] sd 0:0:0:0: [sda] Assuming drive cache: write through
[119.337343] sdar: sdal sda2 sda3 sda4
[119.338267] sd 0:0:0:0: [sda] Attached SCSI disk
[57146.148417] sd 0:0:0:0: [sda] 1953525168 512-byte logical blocks: (1.00 TB/932 GiB)
[57146.148842] sd 0:0:0:0: [sda] Write Protect is off
[57146.148852] sd 0:0:0:0: [sda] Mode Sense: 28 00 00 00
[57346.149313] sd 0:0:0:0: [sda] No Caching mode page found
[57346.149320] sd 0:0:0:0: [sda] Assuming drive cache: write through
[57146.204662] sdar: sdal sda2 sda3 sda4
[57146.205160] sd 0:0:0:0: [sda] Attached SCSI disk
[59438.026879] EXT4-fs (sdal): mounted filesystem 1565a9bc-8106-46a6-9115-640a9ad1ef86 z/w with ordered data mode. Quota mode: none.
[59535.795553] EXT4-fs (sda3): mounted filesystem 31175670-16b0-46c3-98b9-5dd4607e66e4 z/w with ordered data mode. Quota mode: none.
[60047.595821] EXT4-fs (sda1): shut down requested (2)
[60047.596681] Aborting journal on device sda1-8.
[60047.599860] device offline error, dev sda, sector 185172704 op 0x1:(WRITE) flags 0x4800 phys_seg 30 prio class 0
[60047.599903] device offline error, dev sda, sector 185172944 op 0x1:(WRITE) flags 0x4800 phys_seg 30 prio class 0
[60047.599926] device offline error, dev sda, sector 247810 op 0x1:(WRITE) flags 0x4800 phys_seg 30 prio class 0
[60047.599933] Buffer I/O error on dev sda1, logical block 122881, lost sync page write
[60047.599945] JBD2: I/O error when updating journal superblock for sda1-8.
[60047.599949] device offline error, dev sda, sector 185173184 op 0x1:(WRITE) flags 0x4800 phys_seg 30 prio class 0
[60047.599961] device offline error, dev sda, sector 185173424 op 0x1:(WRITE) flags 0x4800 phys_seg 30 prio class 0
[60047.599972] device offline error, dev sda, sector 185173664 op 0x1:(WRITE) flags 0x4800 phys_seg 30 prio class 0
[60047.599983] device offline error, dev sda, sector 185173904 op 0x1:(WRITE) flags 0x4800 phys_seg 30 prio class 0
[60047.599993] device offline error, dev sda, sector 185174144 op 0x1:(WRITE) flags 0x8000 phys_seg 16 prio class 0
[60047.600075] device offline error, dev sda, sector 567384 op 0x1:(WRITE) flags 0x3000 phys_seg 1 prio class 0
[60047.600082] Buffer I/O error on dev sda3, logical block 11, lost async page write
[60047.600095] device offline error, dev sda, sector 973934312 op 0x1:(WRITE) flags 0x9800 phys_seg 2 prio class 2
[60047.600101] Aborting journal on device sda3-8.
[60047.600111] Buffer I/O error on dev sda3, logical block 121667584, lost sync page write
[60047.600117] JBD2: I/O error when updating journal superblock for sda3-8.
[60047.600146] EXT4-fs (sda3): shut down requested (2)
root@pve:~# 

```

```

[ 18.531458] panic+0xf4/0x2c6
[ 18.531458] ? do_writev+0x6f/0x120
[ 18.531458] do_exit.cold+0x15/0x15
[ 18.531458] do_group_exit+0x2d/0x90
[ 18.531458] __x64_sys_exit_group+0x14/0x20
[ 18.531458] do_syscall_64+0x5c/0x90
[ 18.531458] ? exc_page_fault+0x62/0x150
[ 18.531458] entry_SYSCALL_64_after_hwframe+0x63/0xcd
[ 18.531458] RIP: 0033:0x7f7d0428e395
[ 18.531458] Code: ba 01 00 00 00 b8 ca 00 00 00 0f 05 c3 0f 1f 84 00 00 00 00
00 f3 0f 1e fa ba e7 00 00 00 eb 06 0f 1f 44 00 00 f4 89 d0 0f 05 <48> 3d 00 f8
ff ff 76 f3 f7 d8 89 05 3b fe 00 00 eb e9 66 0f 1f 84
[ 18.531458] RSP: 002b:00007ffd8448c4d8 EFLAGS: 00000246 ORIG_RAX: 000000000000
000e?
[ 18.531458] RAX: ffffffffda RBX: 00007f7d04289000 RCX: 00007f7d0428e395
[ 18.531458] RDX: 0000000000000e7 RSI: 00007ffd8448c0a0 RDI: 000000000000007f
[ 18.531458] RBP: 00007ffd8448c660 R08: 00007ffd8448c049 R09: 0000000000000000
[ 18.531458] R10: 00000000ffffffffff R11: 0000000000000246 R12: 00007f7d04267000
[ 18.531458] R13: 0000002300000007 R14: 0000000000000007 R15: 00007ffd8448c670
[ 18.531458] </TASK>
[ 18.531458] Kernel Offset: 0x2d000000 from 0xffffffff81000000 (relocation ran
ge: 0xfffffff80000000-0xfffffff80000000)
[ 18.531458] ---[ end Kernel panic - not syncing: Attempted to kill init! exit
code=0x00007f00 ]---

```

Virtual Environment 8.3.0 Search

Node 'pve'

Q Search
S Summary
N Notes
S Shell
System Network Certificates DNS Hosts Options Time System Log Updates Repositories Firewall Disks LVM LVM-Thin Directory ZFS Ceph

```
Linux pve 6.8.12-4-pve #1 SMP PREEMPT_DYNAMIC PNX 6.8.12-4 (2024-11-06T15:04Z) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.

Last login: Wed Jul  2 09:58:36 EDT 2025 on pts/0
root@pve:~$ umount /mnt/sda3-storage
root@pve:~$ wipefs -a /dev/sda3
/dev/sda3: 2 bytes were erased at offset 0x000000438 (ext4): 53 ef
root@pve:~$ mkfs.ext /dev/sda3
-bash: mkfs.ext: command not found
root@pve:~$ mkfs.ext4 /dev/sda3
mke2fs 1.47.0 (5-Feb-2023)
Creating filesystem with 243863552 4k blocks and 60973056 inodes
Filesystem UUID: 710e6ebc-fa70-49fc-9098-e117c3295af0
Superblock backups stored on blocks:
      32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208,
      4096000, 7962624, 11239424, 20480000, 23887872, 71663616, 78675968,
      102400000, 214990848

Allocating group tables: done
Writing inode tables: done
Creating journal (262144 blocks): done
Writing superblocks and filesystem accounting information: done

root@pve:~$ mkdir -p /mnt/sda3-storage
root@pve:~$ mount /dev/sda3 /mnt/sda3-storage
root@pve:~$ blkid /dev/sda3
/dev/sda3: UUID="710e6ebc-fa70-49fc-9098-e117c3295af0" BLOCK_SIZE="4096" TYPE="ext4"
1c9e5f"
root@pve:~$ nano /etc/fstab
root@pve:~$
```

de%2Fpve:4:=jsconsole::8::2

```
GNU nano 7.2
# <file system> <mount point> <type> <options> <dump> <pass>
/dev/pve/root / ext4 errors=remount-ro 0 1
UUID=7DE2-5B4A /boot/efi vfat defaults 0 1
/dev/pve/swap none swap sw 0 0
proc /proc proc defaults 0 0
```

^{^G} Help
^{^X} Exit

^{^O} Write Out
^{^R} Read File

^{^W} Where Is
^{^V} Replace

^{^K} Cut
^{^U} Paste