## Neurotechnology SentiVeillance Cluster

# **Installation guide**

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## Installation

## Single machine

#### OS

- 1. Install Debian Linux distribution **debian-11.2.0-2-amd64-with-nvidia-docker.iso** with Docker.
- 2. Make bootable USB key if you are installing into physical computer and start the installation.



3. Choose where to install Debian

| [!!] Partition disks   |
|--|
| Select disk to partition:  |
| <mark>/dev/nvmeOn1 – 1.0 TB Samsung SSD 980 PRO 1TB</mark><br>SCSI9 (0,0,0) (sda) – 15.9 GB USB Flash Disk |
| <go back=""></go>  |
|  |
|  |
|  |
|  |

4. Continue.

| [!] Partition disks  |  |  |  |  |  |
|--|--|--|--|--|--|
| Selected for partitioning:   |  |  |  |  |  |
| /dev/nvmeOn1 – Samsung SSD 980 PRO 1TB: 1.0 TB   |  |  |  |  |  |
| The disk can be partitioned using one of several different schemes. If you are unsure, choose the first one.                                 |  |  |  |  |  |
| Partitioning scheme:   |  |  |  |  |  |
| <mark>All files in one partition (recommended for new users)</mark><br>Separate /home partition<br>Separate /home, /var, and /tmp partitions |  |  |  |  |  |
| <go back=""></go>  |  |  |  |  |  |
|  |  |  |  |  |  |
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|  |  |  |  |  |  |
| Tab> moves; <space> selects; <enter> activates buttons</enter></space>   |  |  |  |  |  |

5. Check if there is a bootable partition and continue

| [!!] Partition disks<br>This is an overview of your currently configured partitions and mount points. Select a<br>partition to modify its settings (file system, mount point, etc.), a free space to create<br>partitions, or a device to initialize its partition table. |  |  |  |  |  |  |
|---|--|--|--|--|--|--|
| Guided partitioning<br>Configure software RAID<br>Configure the Logical Volume Manager<br>Configure encrypted volumes<br>Configure iSCSI volumes  |  |  |  |  |  |  |
| /dev/nvmeOn1 - 1.0 TB Samsung SSD 980 PRO 1TB<br>1.0 MB FREE SPACE<br>#1 536.9 MB B F ESP<br>#2 998.6 GB F ext4 /<br>#3 1.0 GB F swap swap<br>728.6 kB FREE SPACE<br>SCSI9 (0,0,0) (sda) - 15.9 GB USB Flash Disk<br>#1 primary 15.9 GB B fat32                           |  |  |  |  |  |  |
| Undo changes to partitions<br><mark>Finish partitioning and write changes to disk</mark><br><go back=""></go>   |  |  |  |  |  |  |
|   |  |  |  |  |  |  |

6. Finish the installation

|             | Installa<br>the inst<br>installa<br><go< th=""><th>ation is<br/>tallation<br/>ation.<br/>Back&gt;</th><th>complete;<br/>n media, s</th><th>, so it<br/>so that y</th><th>!] Finish <sup>:</sup><br/>Installa<br/>is time to<br/>you boot in</th><th>the installation<br/>tion complete<br/>boot into your n<br/>nto the new system</th><th>ew system. Make sure to<br/>m rather than restarting<br/>≮Continu</th><th>remove<br/>the</th></go<> | ation is<br>tallation<br>ation.<br>Back> | complete;<br>n media, s | , so it<br>so that y | !] Finish <sup>:</sup><br>Installa<br>is time to<br>you boot in | the installation<br>tion complete<br>boot into your n<br>nto the new system | ew system. Make sure to<br>m rather than restarting<br>≮Continu | remove<br>the |
|-------------|--|--|-------------------------|----------------------|---|---|---|---------------|
| <tab></tab> | moves:   | <space></space>                          | selects;                | <enter></enter>      | activates   | buttons   |   |               |

7. Reboot and remember the computer IP

Deblan GNU/Linux 10 debian–5BRVKUjCug tty1 My IP address: 172.16.1.121 debian–5BRVKUjCug login: \_



#### NVidia GPU driver

Install NVidia GPU driver.

1.\$ sudo ./NVIDIA-Linux-x86\_64-530.41.03.run

Choose Yes to disable Nouveau driver during NVidia GPU driver installation, reboot OS and run NVidia GPU driver installation again. Select default choices during installation.

Check installed NVidia driver.

2. \$ nvidia-smi

#### SentiVeillance Cluster

1. Install the *SentiVeillance Cluster* from file **SentiVeillance\_9\_1\_Cluster\_YYYY-MM-DD.zip**. Extract (**On Linux machine**) and run the following instructions:

```
cd SentiVeillance_9_1_Cluster
$ sudo ./sentiveillance-cluster-ctl.sh install
```

Installation options:

--trial VALUE - specify 0 to configure to use non trial licensing service, if you have licenses in USB Dongle.

```
$ sudo ./sentiveillance-cluster-ctl.sh install --trial 0
```

--ssl - Enable ssl to secure communication with server. This will create Certificate Authority (CA) and self signed certificates. Do note that you need install created CA authority on client devices and/or browsers.

```
$ sudo ./sentiveillance-cluster-ctl.sh install --ssl
```

Choose to use default ip address.

2. If your network has no DNS server, you need to update configuration in */opt/neurotec/sentiveillance-cluster-unit/docker-compose.yml* so that video stream can be retrieved from Milestone VMS.

Find *x-extra\_hosts* section and enter name and address:

```
x-extra_hosts:
```

&milestone-extra\_hosts

- "hostname1:172.16.0.100"
- "hostname2:172.16.0.101"
- 3. Once installed and configured, start the *SentiVeillance Cluster*:
  - \$ sudo ./sentiveillance-cluster-ctl.sh start
- 4. Open in browser http://pc\_ip\_address/ SentiVeillance Cluster web panel.
- 5. Login with *admin* with password *admin*.

| 🍯 SentiVeillance — Mozilla Firefox |                       | 185 - 18862181 | <u></u> |   | × |
|------------------------------------|-----------------------|----------------|---------|---|---|
| O 🗅 127.0.0.1:31461/login          |                       |                |         | ជ | ≡ |
|                                    | <b>EURDtechnology</b> |                |         |   |   |
|                                    | SentiVeillance        |                |         |   |   |
|                                    | Username *            |                |         |   |   |
|                                    | Password *            |                |         |   |   |
|                                    | SIGN IN               |                |         |   |   |
|                                    |                       |                |         |   |   |

Read the SentiVeillance Cluster user guide to configure SentiVeillance Cluster.

### **Kubernetes**

For larger installations with many cameras, *SentiVeillance Cluster* should be installed on <u>Kubernetes</u> cluster. Installation can be performed using provided <u>Helm</u> charts.

*Extract* SentiVeillance\_9\_1\_Cluster\_YYYY\_MM\_DD.zip file and see *charts/sentiveillance-cluster/README.md* for more detailed instructions

## Licensing

Your installed computer must have access to internet to acquire Trial licenses to try SentiVeillance Cluster or you must have Dongle with licenses.

If you have Dongle with SentiVeillance Cluster licenses

- Install SentiVeillance Cluster SentiVeillance Cluster
- Connect Dongle to the installed PC. Restart service *systemctl restart npgadmin*

If you have already installed SentiVeillance Cluster with trial and now want to switch to licenses from Dongle.

- Connect Dongle to computer
- Modify value *Trial=false* to false in /opt/neurotec/sentiveillance-cluster-unit/activation/pgd.conf and restart service systemctl restart npgadmin

## Configuration

Services configuration can be changed by editing /opt/neurotec/sentiveillancecluster-unit/docker-compose.yml file.

#### **Trusted Certificate Authorities**

SentiVeillance Cluster may need to communicate using TLS with external services (Milestone VMS or event server). Self signed certificates are accepted by default. This behavior can be changed by setting SSL\_VERIFY\_PEER to true. If set to true, self signed certificates will only be accepted when Certificate Authority certificate (.crt) files are provided (place files in

/opt/neurotec/sentiveillance-cluster-unit/service/config/tls/trusted\_
3d\_party\_ca/).