

1 CLOUDMON NTM SYSTEM REQUIREMENTS

Cloudmon NTM consists of two main components, the Cloudmon NTM controller and the Cloudmon NTM probe(s). Cloudmon NTM provides following flexible installation options based on the deployment scenarios.

- Cloudmon NTM All-in-One
 - This install both Controller and Probe on single system. Suitable for small enterprises, where only one site to be monitored.
- Cloudmon NTM Controller
 - Suitable for hosting the Cloudmon NTM controller centrally and with distributed NTM probes deployed in various sites / buildings / networks.
- Cloudmon NTM Probe
 - Captures mirrored traffic from physical / virtual TAPs / AWS VPC mirroring, does DPI and provide metadata to the controller

1.1 Cloudmon NTM All-in-One System Requirements

For installation of Cloudmon NTM All-in-One, where Cloudmon NTM Controller and probe are co-located, you need to meet the following system requirements.

1.1.1 On-premises installation

| Category | Requirement |
|-------------------|--|
| Hardware | Minimum Intel® Xeon E5-2640 or equivalent or properly configured <u>Virtual Machine</u> |
| OS | CentOS Version 7.7, x86-64bit architecture |
| Web browser | The following browsers are officially supported by the NTM web interface (in order of performance and reliability): <ul style="list-style-type: none"> • Google Chrome 89 or above • Mozilla Firefox 86 or above • Safari 14 or above |
| Network interface | Two interfaces, <ol style="list-style-type: none"> 1. Management interface 2. Monitored interface (Intel i350 or x540) |

Note:

Hardware requirements for the Cloudmon NTM (All-in-One) depends on the number of devices to be monitored and the monitoring intervals that you are planning to use.

| Devices | CPU Threads | RAM | Max. Probes | Disk space |
|-----------|-------------|-------|-------------|------------|
| Up to 100 | 8 | 16 GB | 1 | 1 TB |
| Up to 250 | 8 | 32 GB | 2 | 1 TB |
| Up to 500 | 16 | 64 GB | 3 | 2 TB |

| | | | | |
|------------|---|--------|----|------|
| Up to 1000 | 24 | 128 GB | 5 | 4 TB |
| Up to 2500 | 32 | 128 GB | 10 | 8 TB |
| > 2500 | contact the Veryx support team for more information on scaling. | | | |

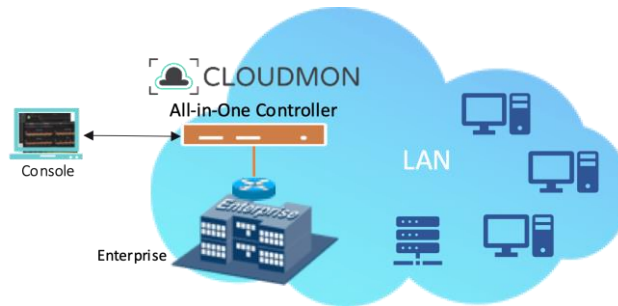


Figure 1: Sample on-premises deployment

1.1.2 On-cloud installation

Cloudmon NTM All-in-One can be installed on any public cloud instance and is also readily available in AWS marketplace. For installing Cloudmon NTM (All-in-One), you need to meet the following system requirements.

| Devices | CPU Threads | RAM | Max. Probes | Disk space | AWS EC2 Type (recommended) |
|------------|---|--------|-------------|------------|----------------------------|
| Up to 100 | 8 | 32 GB | 1 | 1 TB | m5.2xlarge |
| Up to 250 | 8 | 32 GB | 2 | 16 GB | m5.2xlarge |
| Up to 500 | 16 | 64 GB | 3 | 16 GB | m5.4xlarge |
| Up to 1000 | 32 | 128 GB | 5 | 16 GB | m5.8xlarge |
| > 1000 | contact the Veryx support team for more information on scaling. | | | | |

Note:

| | |
|-------------------|---|
| Network interface | Two interfaces, 1. Management interface 2. Monitored interface (Intel i350 or x540) |
|-------------------|---|

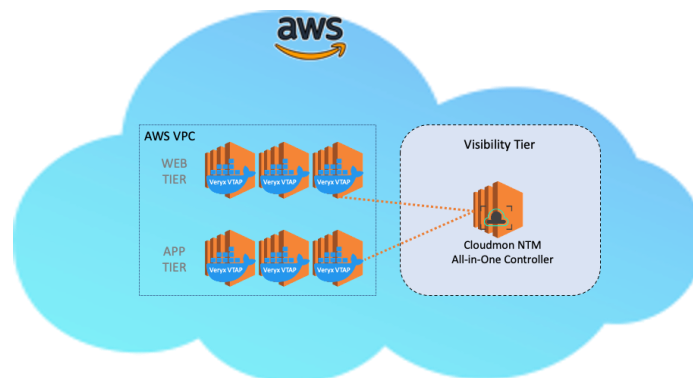


Figure 2: Sample AWS deployment using virtual TAPs

1.2 Cloudmon NTM Controller System Requirements

For installations of Cloudmon NTM where the Controller is located separately from the probe(s), you need to meet the following requirements for the Cloudmon NTM Controller.

1.2.1 On-premises installation

| Category | Requirement |
|-------------------|--|
| Hardware | Minimum Intel® Xeon E5-2640 or equivalent or properly configured <u>Virtual Machine</u> |
| OS | CentOS Version 7.7, x86-64bit architecture |
| Web browser | The following browsers are officially supported by the NTM web interface (in order of performance and reliability): <ul style="list-style-type: none"> • Google Chrome 89 or above • Mozilla Firefox 86 or above • Safari 14 or above |
| Network interface | Two interfaces, <ol style="list-style-type: none"> 1. Management interface 2. Monitored interface (Intel i350 or x540) |

Note:

Hardware requirements for Cloudmon NTM Controller depends on the number of devices to be monitored and the monitoring intervals that you are planning to use.

| Devices | CPU Threads | RAM | Max. Probes | Disk space |
|------------|---|--------|-------------|------------|
| Up to 100 | 8 | 16 GB | 1 | 1 TB |
| Up to 250 | 8 | 32 GB | 2 | 1 TB |
| Up to 500 | 16 | 64 GB | 3 | 2 TB |
| Up to 1000 | 24 | 128 GB | 5 | 4 TB |
| Up to 2500 | 32 | 128 GB | 10 | 8 TB |
| > 2500 | contact the Veryx support team for more information on scaling. | | | |

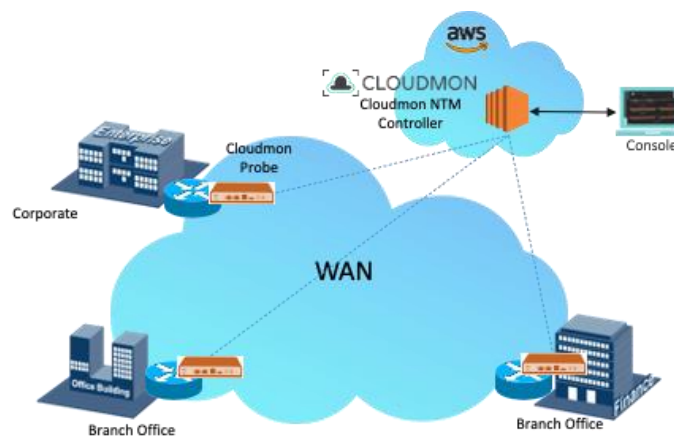


Figure 3: Sample distributed on-premises deployment

1.2.2 On-cloud installation

Cloudmon NTM Controller can be installed on any public cloud instance and is also readily available in AWS marketplace. For installing Cloudmon NTM Controller, you need to meet the following system requirements.

| Devices | CPU Threads | RAM | Max. Probes | Disk space | AWS EC2 Type (recommended) |
|------------|---|--------|-------------|------------|----------------------------|
| Up to 100 | 8 | 32 GB | 1 | 1 TB | m5.2xlarge |
| Up to 250 | 8 | 32 GB | 2 | 16 GB | m5.2xlarge |
| Up to 500 | 16 | 64 GB | 3 | 16 GB | m5.4xlarge |
| Up to 1000 | 32 | 128 GB | 5 | 16 GB | m5.8xlarge |
| > 1000 | contact the Veryx support team for more information on scaling. | | | | |

Note:

| | |
|-------------------|---|
| Network interface | Two interfaces, 1. Management interface 2. Monitored interface (Intel i350 or x540) |
|-------------------|---|

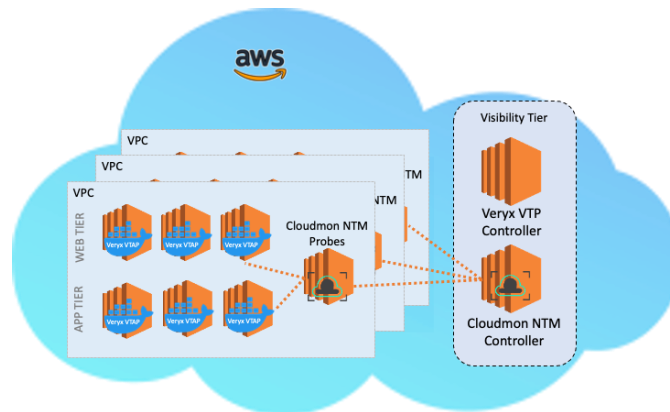


Figure 4: Sample distributed AWS deployment using virtual TAPs

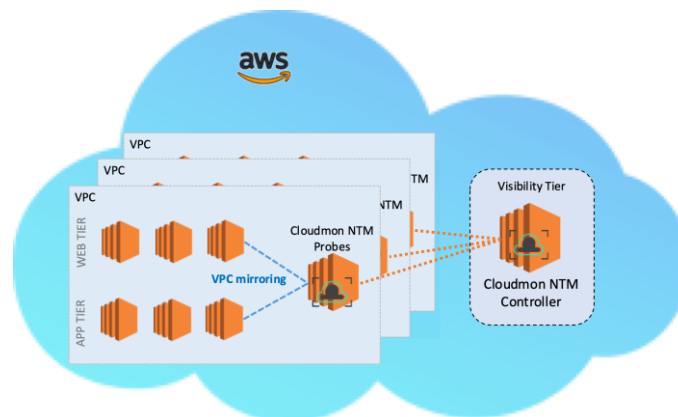


Figure 5: Sample distributed AWS deployment using VPC mirroring

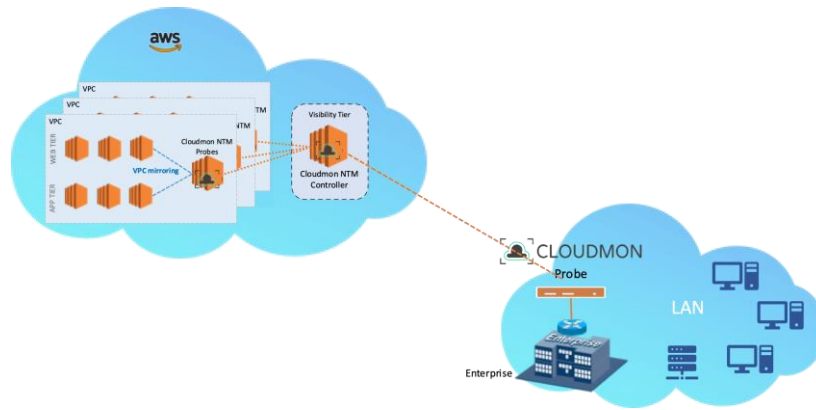


Figure 6: Sample distributed Hybrid deployment

1.3 Cloudmon NTM Probe System Requirements

For installation of Cloudmon NTM probes which are not collated with the Controller, you need to meet the following system requirements:

1.3.1 On-premises installation

| Category | Requirement |
|-------------------|--|
| Hardware | Intel® i7 3770K or equivalent or properly configured <u>Virtual Machine</u> |
| OS | CentOS Version 7.7, x86-64bit architecture |
| Network interface | Two interfaces, <ol style="list-style-type: none"> 1. Management interface 2. Monitored interface (Intel i350 or x540) |

Hardware requirements for the NTM probe depend on the monitoring intervals that you use. Your network size can also influence the performance of your monitoring.

| Devices | CPU Threads | RAM | Disk space |
|-----------|-------------|------|------------|
| Up to 100 | 4 | 4 GB | 8 GB |
| Up to 250 | 4 | 4 GB | 8 GB |
| Up to 500 | 8 | 8 GB | 8 GB |

1.3.2 On-cloud installation

Cloudmon NTM Probes can be installed on any public cloud instances and is also readily available in AWS marketplace. For installing Cloudmon NTM Probe, you need to meet the following system requirements.

| Devices | CPU Threads | RAM | Disk space | AWS EC2 Type (recommended) |
|-----------|-------------|------|------------|----------------------------|
| Up to 50 | 2 | 2 GB | 8 GB | t3.medium |
| Up to 100 | 2 | 2 GB | 8 GB | t3.medium |
| Up to 250 | 2 | 2 GB | 8 GB | t3.medium |

| | | | | |
|------------|---|------|------|----------|
| Up to 500 | 2 | 8 GB | 8 GB | m5.large |
| Up to 1000 | 2 | 8 GB | 8 GB | m5.large |

Note:

| | |
|-------------------|---|
| Network interface | Two interfaces, 1. Management interface 2. Monitored interface (Intel i350 or x540) |
|-------------------|---|

1.4 Large Installations

The maximum number of devices you can monitor with one NTM on premises installation mainly depends on the monitoring methodology and the monitoring intervals you use. In general, we recommend that you use a dedicated physical machine to run both the NTM controller and remote probes.

1.5 Running Cloudmon NTM in Virtual Environments

You can run the Cloudmon NTM controller and remote probes on virtualized platforms. However, NTM consists of different components that all rely on the performance and the stability of the probe system, where virtual environments add even more layers of complexity. This needs to be considered when you want to set up your Cloudmon NTM installation in a way that you can achieve the same level of performance as on a physical server.