**Introduction to Prometheus**

1. **Major components**

* Prometheus server - This scrapes and stores time series data from client systems and applications.
* Exporters - used in exporting existing metrics from third-party systems as Prometheus metrics.
* An [alertmanager](https://github.com/prometheus/alertmanager) used to handle alerts
* The [client libraries](https://prometheus.io/docs/instrumenting/clientlibs/) for instrumenting application code

1. **Installation**

2.1. Create Prometheus system group

$ sudo groupadd --system prometheus

$ grep prometheus /etc/group

prometheus:x:999:

2.2. Create Prometheus system user

$ sudo useradd -s /sbin/nologin -r -g prometheus prometheus

$ id prometheus

uid=999(prometheus) gid=998(prometheus) groups=998(prometheus)

2.3. Install docker and docker-compose

1. Install docker
2. Install docker-compose

2.4 Set up Prometheus, add Exporter and install Grafana

1. Introduce prometheus.yml
2. Introduce docker-compose file:
   * Configure prometheus
   * Add exporter
   * Add visualization with Grafana
3. **Some examples:**

3.1 Monitoring a server

* + Example 1

3.2 Monitoring a Linux process

* + Example 2

3.3. Monitoring disk I/O using Exporter

* + Example 3

3.4 Monitoring an application:

* + Example 4: Python or Java application.