

Collect System Metrics

Collect and transfer system metrics (CPU usage, Memory usage and Disk usage) in real-time. For the purpose, we are planning to use Topbeat.

Topbeat is a lightweight shipper that you can install on your servers to periodically read system-wide and per-process CPU and memory statistics and then index the statistics in Elasticsearch.

Topbeat helps you monitor your servers by collecting metrics like:

System-wide statistics

- System load: in the last minute, in the last 5 minutes, and in the last 15 minutes
- System wide CPU usage: user (and percentage), system, idle, IOWait, and so on at both per CPU and overall level
- System wide memory usage: total, used (and percentage), free, and so on
- System wide swap usage: total, used (and percentage), free, and so on

Per-process statistics

- Process name
- Process parent pid
- Process state
- Process pid
- Process CPU usage: user (and percentage), system, total, and start time
- Process Memory usage: virtual memory, resident memory (and percentage), and shared memory

File system statistics

- List of available disks
- For each disk, the name, type, and where it is mounted
- For each disk, the total, used (and percentage), free, and available space

Implementation

Pre-requisites

Install Elasticsearch

For installation; refer Elasticsearch installation documentation at https://www.elastic.co/guide/en/elasticsearch/reference/current/_installation.html

Install Topbeat

For Topbeat installation; refer Topbeat documentation at <https://www.elastic.co/guide/en/beats/topbeat/current/topbeat-installation.html>

Configure Topbeat

Refer Topbeat configuration guide at <https://www.elastic.co/guide/en/beats/topbeat/current/topbeat-configuration.html>

Create Topbeat index template in Elasticsearch

Your Topbeat data will be stored in this index. For creating index refer the guide at: <https://www.elastic.co/guide/en/beats/topbeat/current/topbeat-template.html>

Start Topbeat

Refer https://www.elastic.co/guide/en/beats/topbeat/current/step_4_starting_topbeat.html