Ch-134.DevOps/Cisco

Demo 4

IT Academy

softserve

Team 2

Ivan Kuvila
Pavlo Tarnovetskyi
Ivan Danyliuk
Vladyslav Boreiko

Ch-134.DevOps/Cisco

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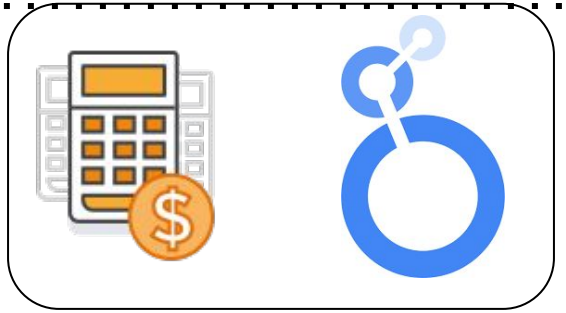
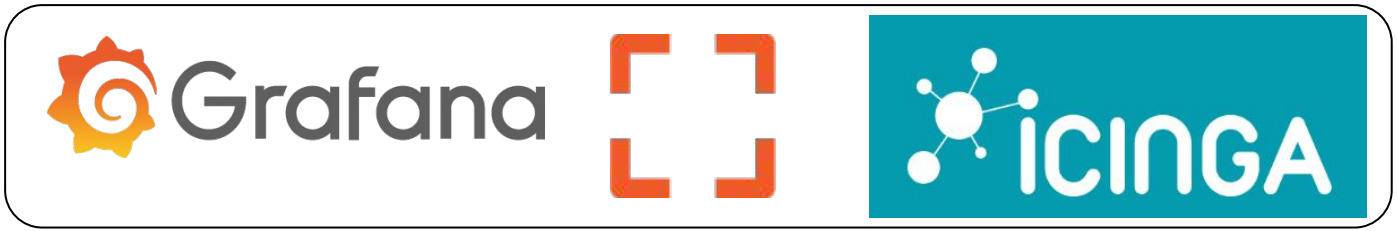
https://github.com/wladOSnull/SSITA_DevOps_4

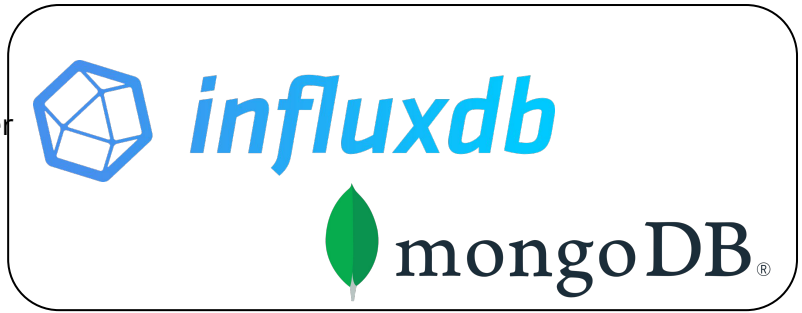
Vladyslav Boreiko



Tasks for demonstration:

- Cost calculation
  - GCP
  - AWS
- SLO / SLI
  - slok/sloth
- Icinga2
  - Icinga2
  - IcingaWeb2
  - Grafana + Icinga2
  - Icinga2 + Grafana Image Renderer
- DBs (first experience)
  - influxdb
  - mongoDB





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Cost calculation

Golang Core:

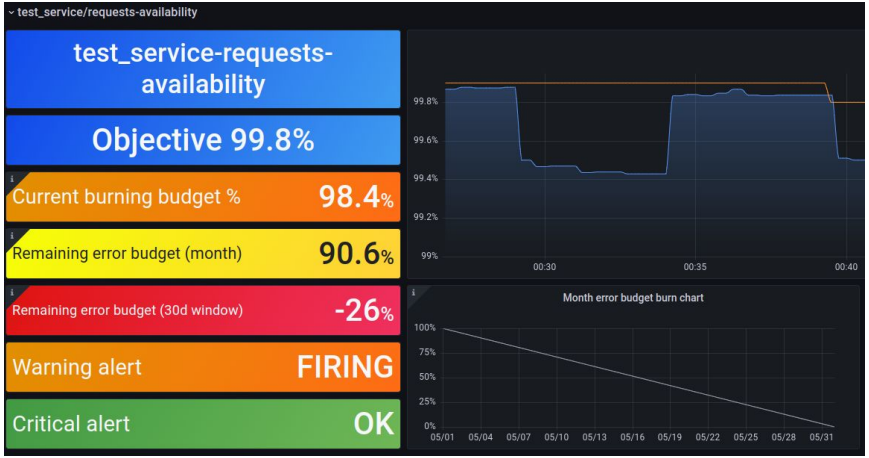
- DevOps tools
- Geo Citizen on LB
- Additional stuff
  - Storage
  - Static IPs

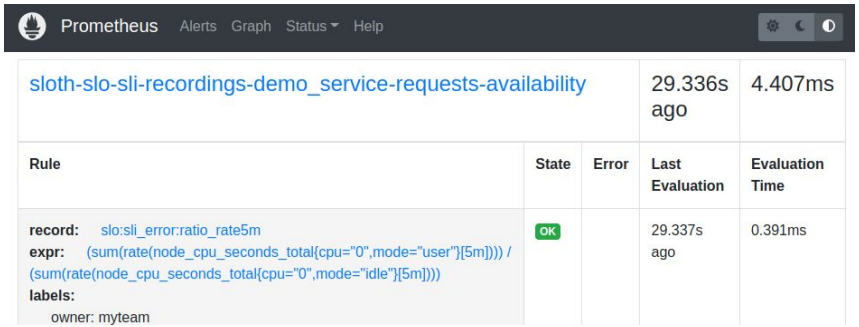
	GCP	AWS
Jenkins Ansible AWX Nexus OSS SonarQube	**210.34**	**140.34**
Storage	**0.03**	**0.03**
LB	**2.92**	**21.91**
Geo Citizen infrastructure	**33.91 / 64.91**	**17.44 / 34.88**
Total (month)	**247.2 / 278.2**	**177.88 / 195.22**
Total (year)	**2116.68 / 2488.68**	**2133.34 / 2342.62**
Total (3 year)	**5144.76 / 6260.76**	**1335 / 1449**
Detail	link to GCP estimate	link to AWS estimate

SLO / SLI : slok/sloth

slok/sloth convert SLO/SLI yaml into Prometheus rules:

- Alert rules
- SLO recordings
- SLI recordings





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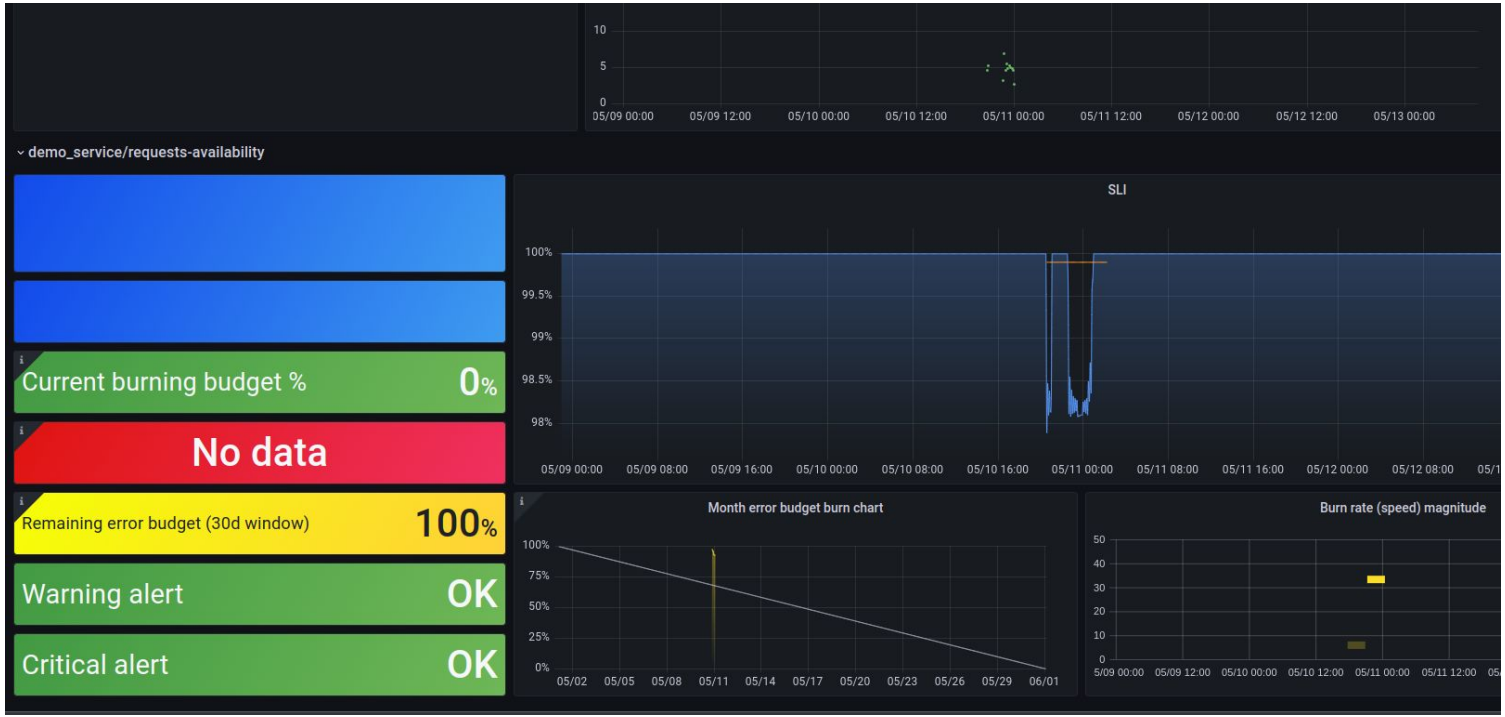
slok/sloth: a project ‘idle’



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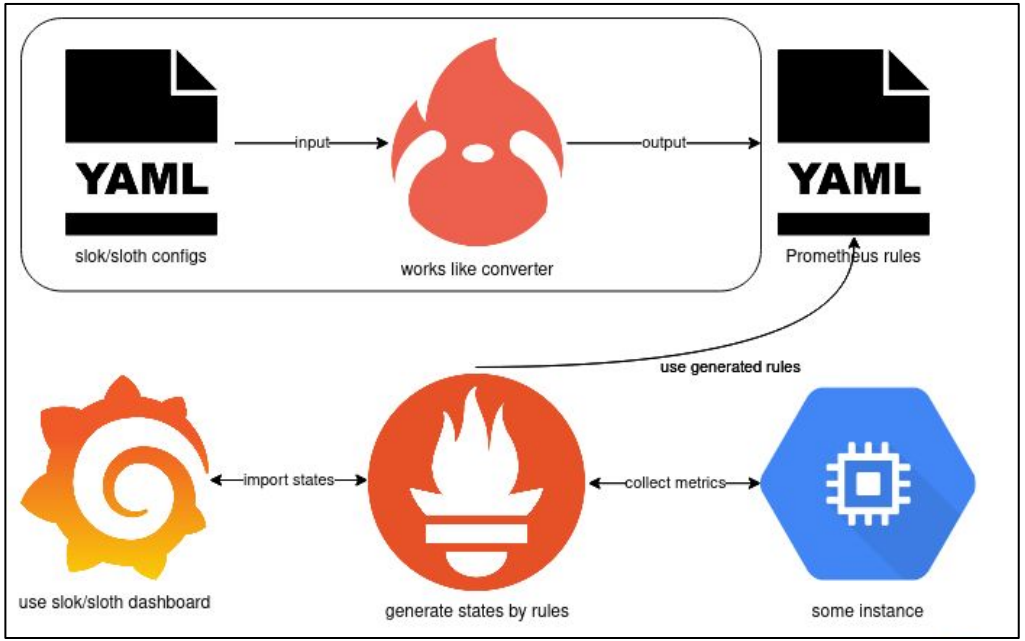
slok/sloth: usage

How things work:

- Create .yaml with slok/sloth confs
- Convert the confs by slok/sloth into Prometheus rules
- Include the rules to prometheus.yml
- Configure Prometheus to collect metrics from some instance
- Create Prometheus Data source in Grafana
- Import slok/sloth dashboard for SLO/SLI
- Connect dashboard to data source



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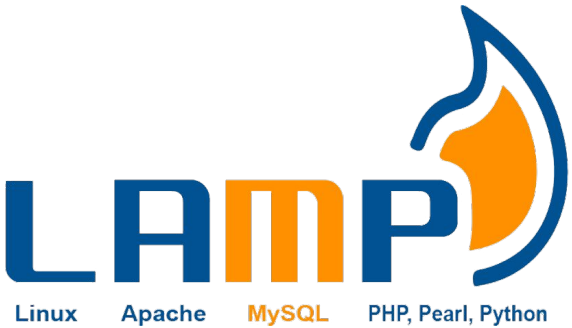
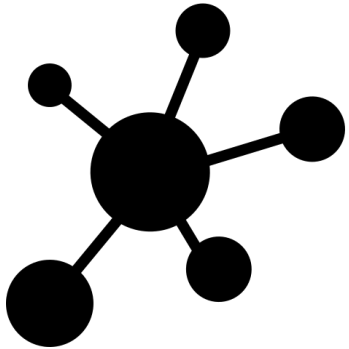
Icinga2: installation & configuration

Components:

- LAMP stack
- Icinga 2 (Master node)
  - + Icinga Web 2
- Icinga 2 (Agent node)
- influxDB (additionally)
- Modules
  - Monitoring
  - Grafana





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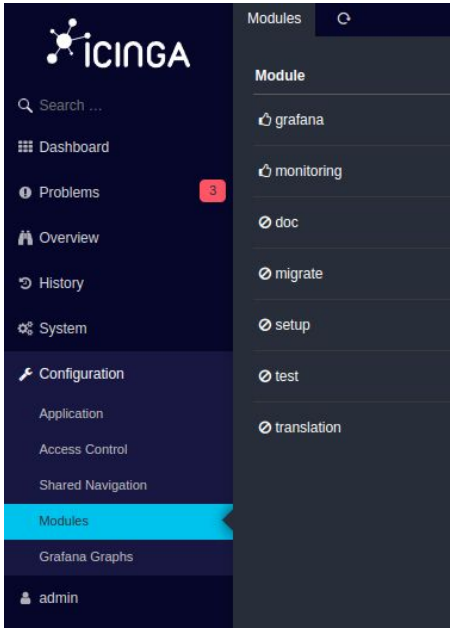
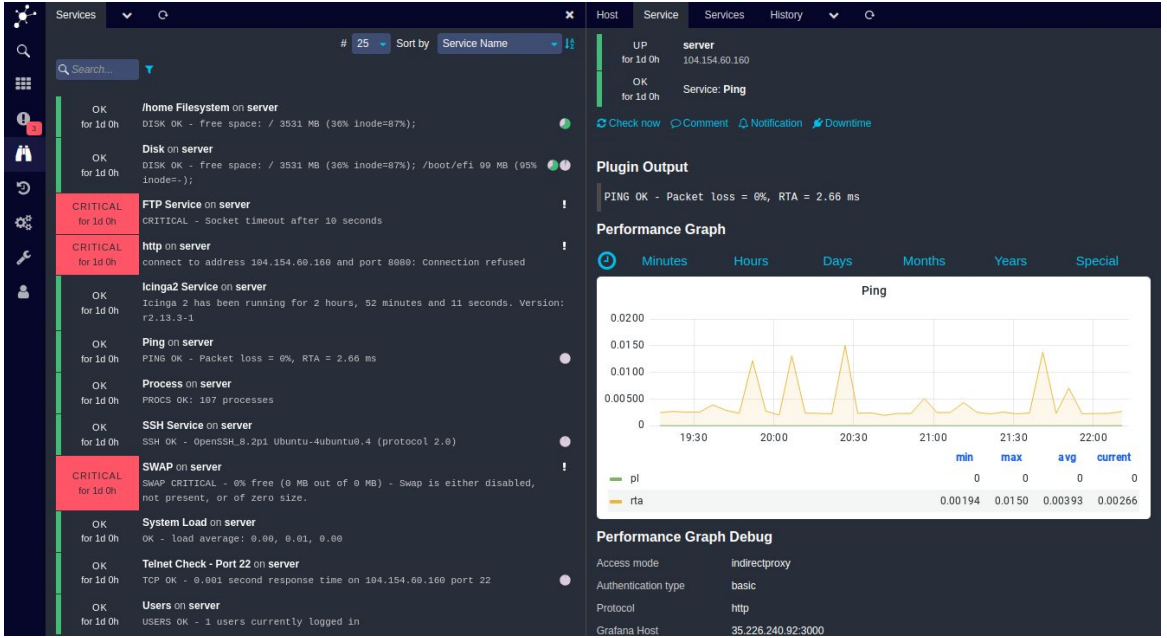
Icinga2: web interface





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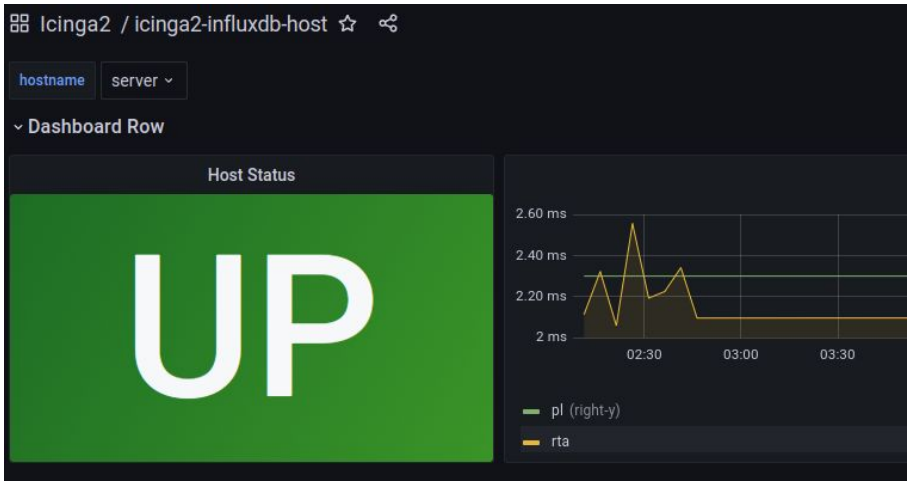
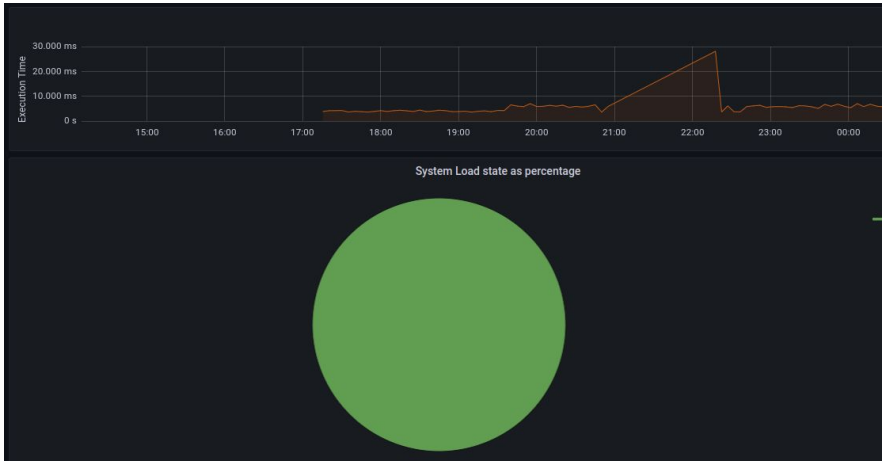
Icinga2: Grafana

influxDB



MariaDB



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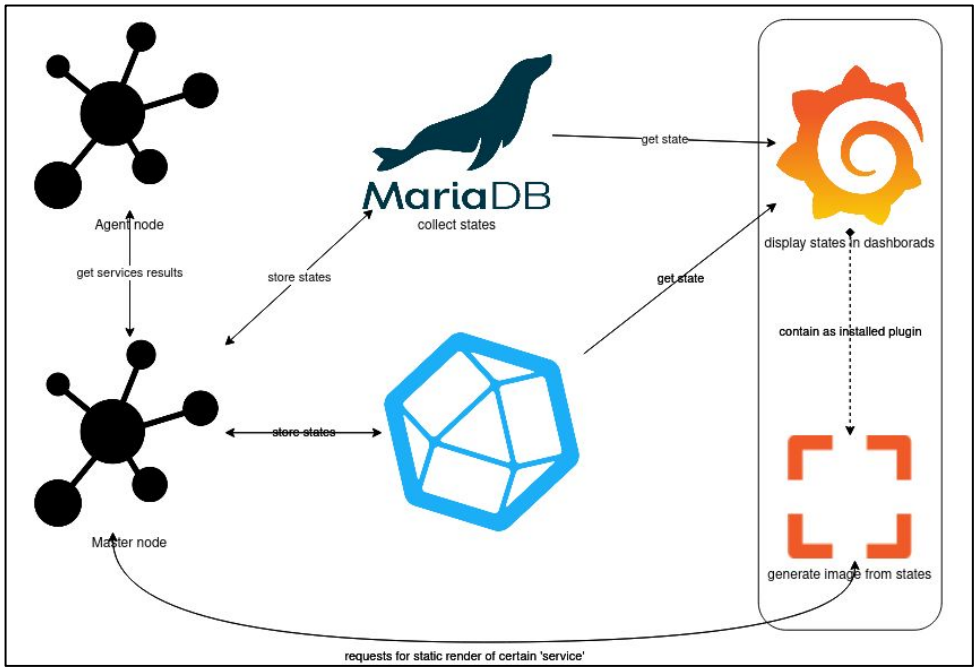
Icinga2: diagram ...

How things work:

- Master node retrieve service states from agent node
- Master collect states in MariaDB and influxDB
- Connected MariaDB & influxDB Data source in Grafana
- Grafana display dashboards from the sources
- Grafana contain installed Grafana Image Renderer
- Icinga2 request for static image of graph for some ‘service’ to Grafana Image Renderer



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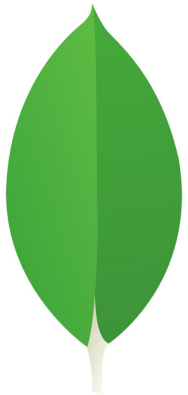
DBs ...



Basic experience:

- MQL
  - MongoDB
- Flux & FQL
  - influxDB
- SQL
  - PostgreSQL (Geo Citizen)
  - SQLite
  - MySQL / MariaDB (Blood bank)
- PQL
  - Prometheus

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Retrospective

Hardest:

- Almost full pipeline for deploying dockerized Geo Citizen project

Most liked:

- Bash scripting
- Supervisor
- Docker stuff
- Programming languages

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Any questions?