Monitoring SKA TM.LMC using Nagios

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Overview

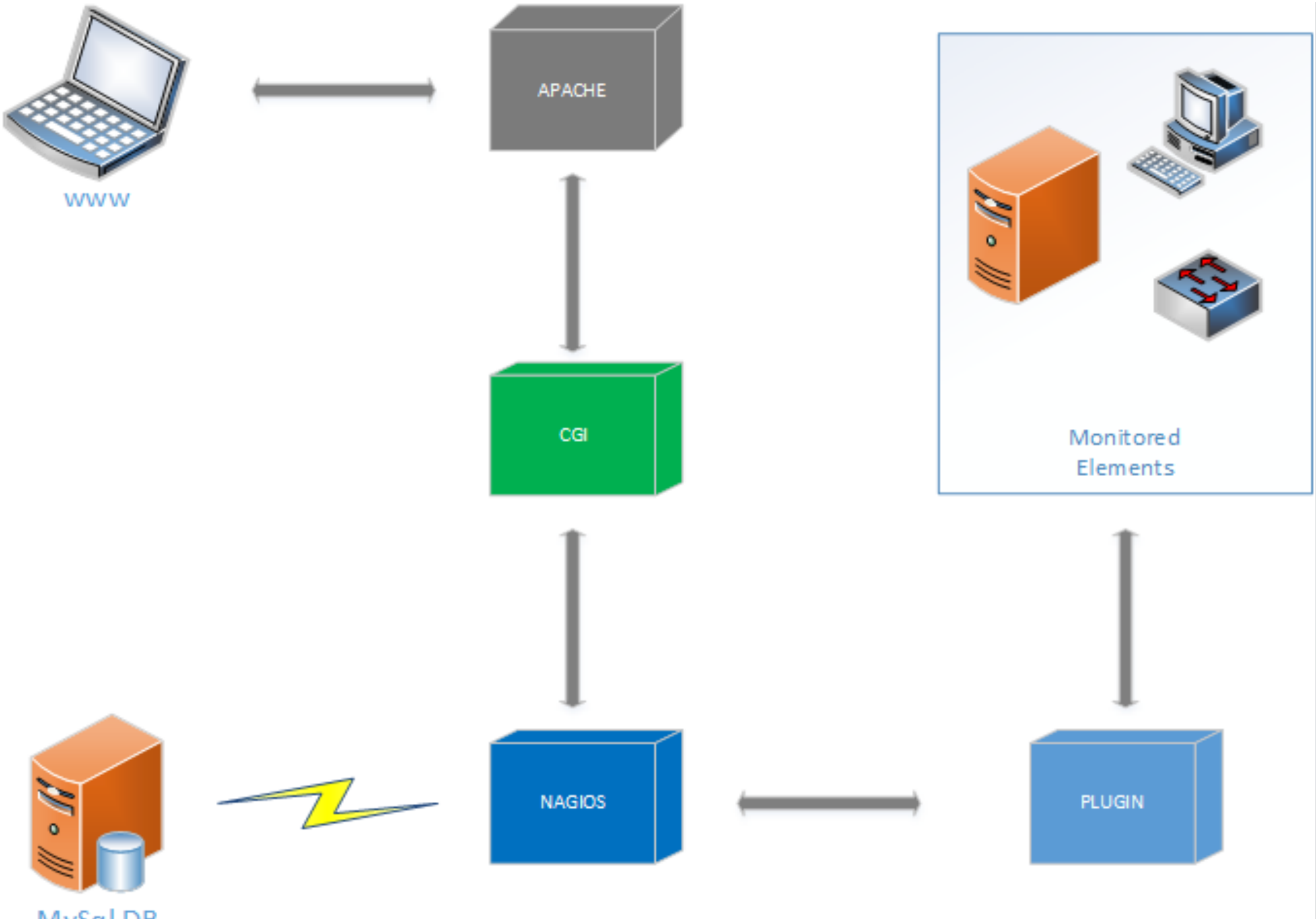
- Nagios
- SKA TM.LMC
- Extended Architecture
- Demo

Nagios

Nagios XI provides monitoring of all mission-critical infrastructure components including applications, services, operating systems, network protocols, systems metrics, and network infrastructure. Hundreds of third-party addons provide for monitoring of virtually all in-house and external applications, services, and systems.

- Composed by: **Scheduler, GUI, Plugin**
- **High** flexible using native/external plugin to monitor remote hosts
- Strong **Notification** System (email, SMS)

Nagios



Nagios Products

Nagios Core

Plugins

Addons

- Monitoring engine
- Alerts and notifications
- Extendable

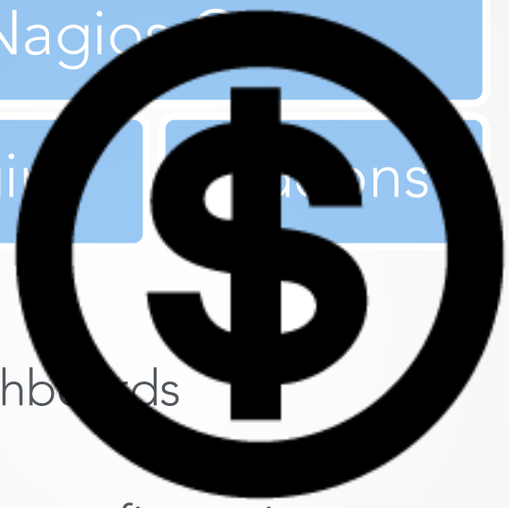
Nagios XI

Wizards, Components

Nagios

Plugi

ons



- Dashb ds
- Web configuration
- Auto-discovery
- Advanced reports
- Easy-to-use

Nagios Fusion

Nagios XI

Nagios XI

Nagios XI

Nagios Core

Nagios

- Central das ard
- Multiple servers
- Authentication
- Reports

Nagios Key Concept

- Simplest setup has central server running Nagios daemon that runs local **check** scripts which the status of **services** on that and remote **hosts**

- A **host** is a computer running on the network which runs one or more services to be checked

- A **service** is anything on the host that you want checked. Its state can be one of: OK, Warning, Critical or Unknown

- A **check** is a script run on the server whose exit status determines the state of the service: 0, 1, 2 or -1

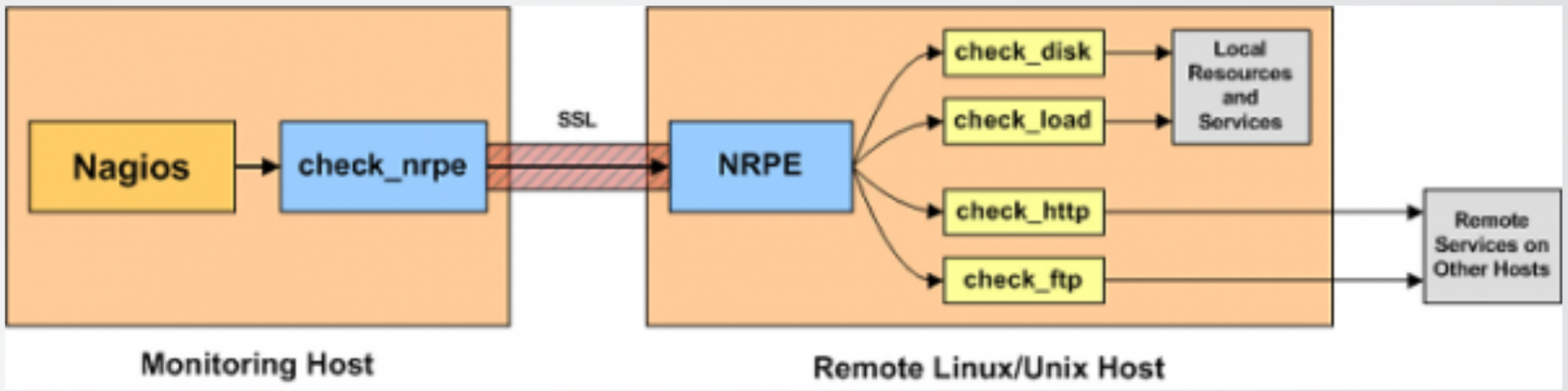
- A **command** wraps a check script or an alarm

- **Contacts** are the people who receive the alerts

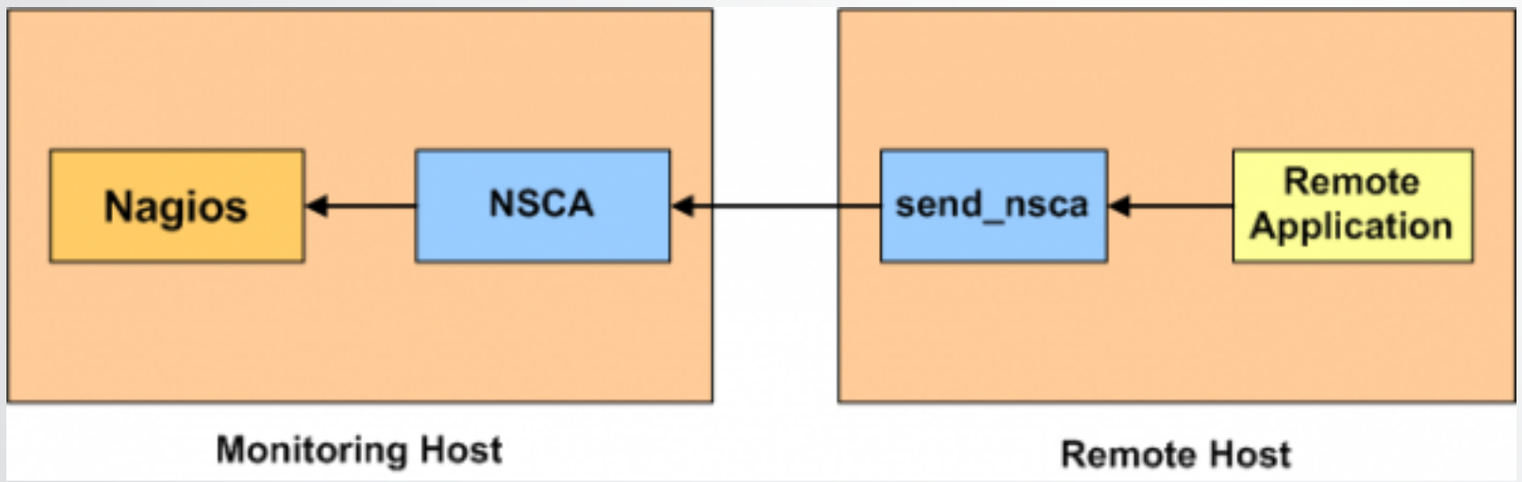
Nagios Remote Checks

NRPE - Nagios Remote Plugin Executor

NRPE allows you to remotely execute Nagios plugins on other Linux/Unix machines. This allows you to monitor remote machine metrics (disk usage, CPU load, etc.).



NRPE can also communicate with some of the Windows agent addons, so you can execute scripts and check metrics on remote Windows machines as well.



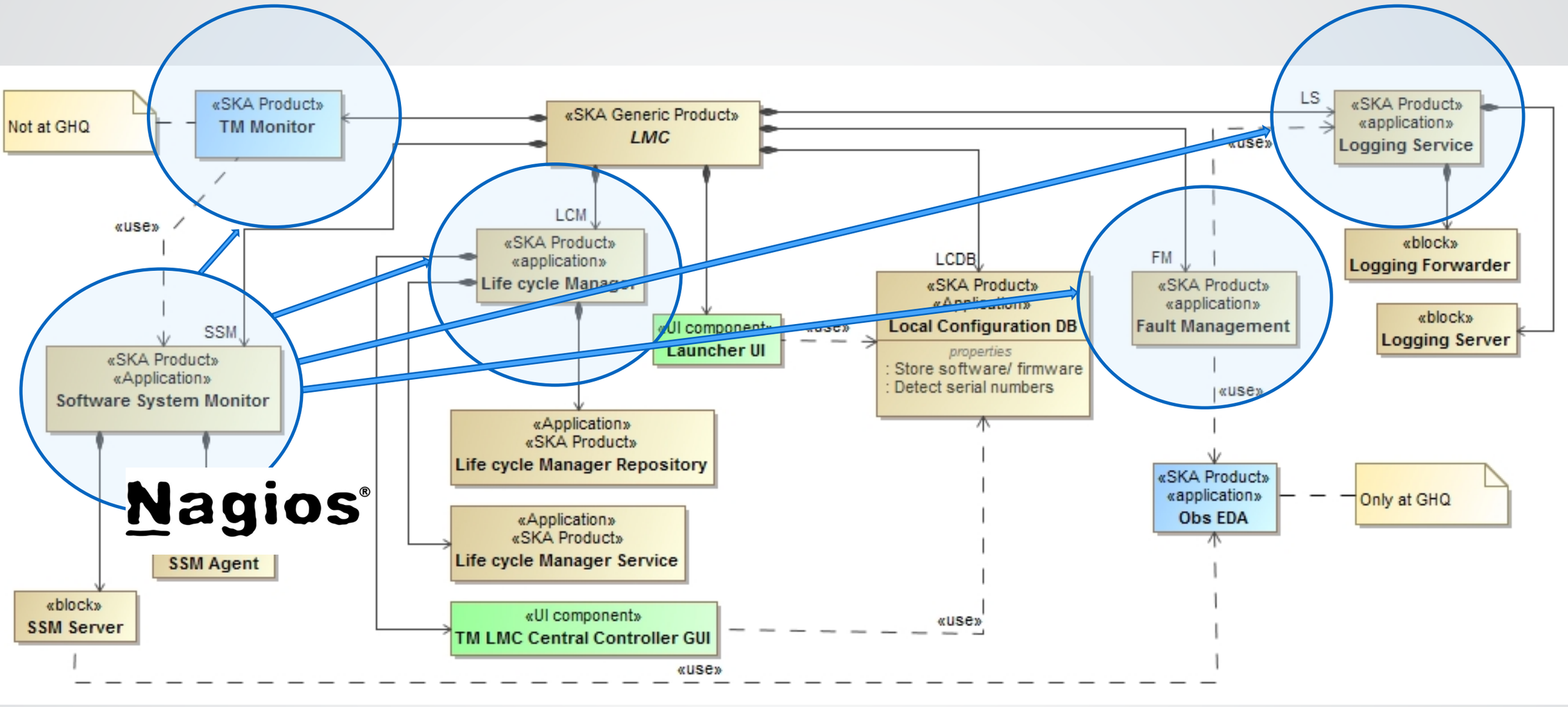
NSCA - Nagios Service Check Acceptor

NSCA is a Linux/Unix daemon allows you to integrate passive alerts and checks from remote machines and applications with Nagios. Useful for processing security alerts, as well as redundant and distributed Nagios setups.

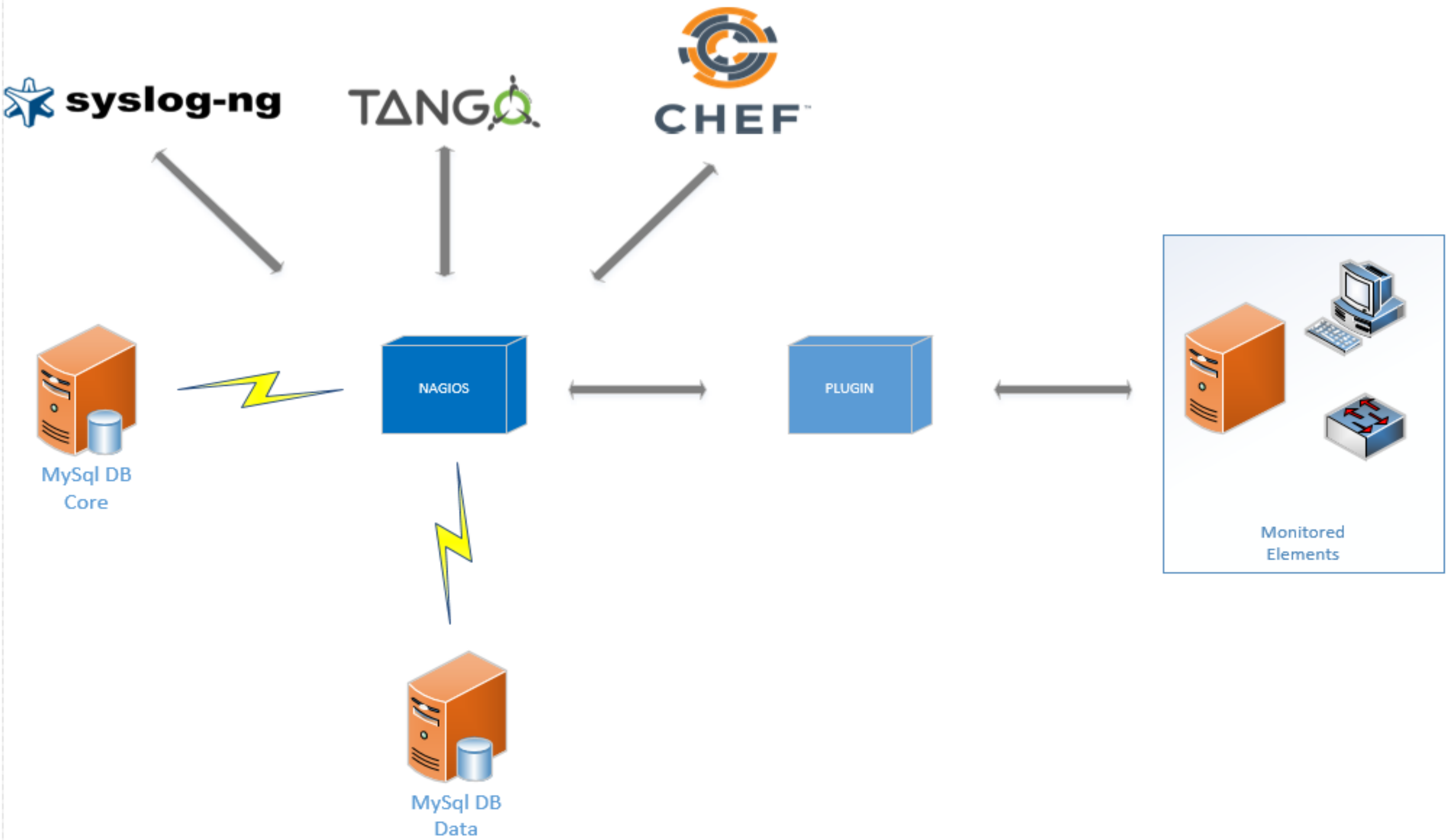
SKA TM.LMC

- SKA (Square Kilometer Array) is composed by two independent telescopes.
- TM (Telescope Manager) provides overall system management capabilities for the Telescope, including coordination across elements and orchestrated functioning to achieve science and engineering goals.
- TM.LMC (Local and Monitoring control) support operation of TM, in particular Monitoring, Lifecycle management, Fault Management, Logging.

SKA TM.LMC PBS



NAGIOS EXTENDED ARCHITECTURE



Monitoring level

- Generic level
- Generic level + process status
- Correctness of operation

Live Demo

Thank you!!

References

Nagios Core Administration Cookbook

Using Nagios to monitor the Telescope Manager (TM) of the Square Kilometer Array (SKA) – Matteo Canzari, Matteo Di Carlo, Mauro Dolci, Riccardo Smareglia

https://www.nagios.org/

https://exchange.nagios.org/directory/Plugins

Contacts

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