

Monitoring your system using Nagios and Python plugins

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Agenda

- Why monitoring?
- Introduction to nagios
- Architecture of nagios
- Writing a monitoring plugin in python
- Examples of plugin
- Demo

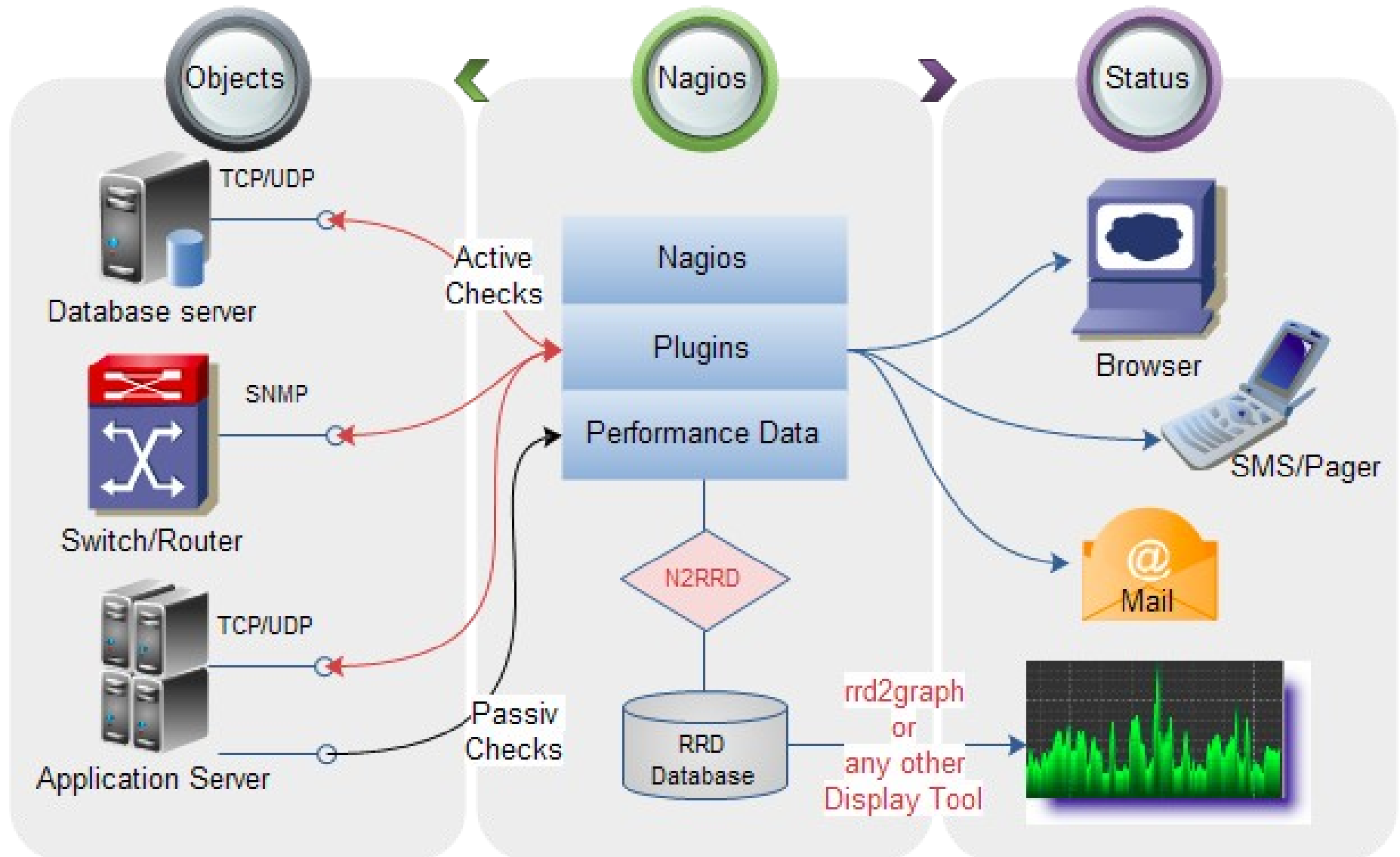
Why monitoring ?

- Monitoring a system is important as it helps you detect problems in the system before hand.
- You can take corrective measures to resolve the issues.
- It gives us idea of resource utilization in the system.
- Scale your system based on the utilization.
- Many monitoring softwares are avlilable.

Introduction to Nagios

- Nagios is open source monitoring software licensed under the GNU GPL V2.
- Nagios offers monitoring and alerting for servers, switches, applications, and services.
- Monitoring via remotely run scripts via Nagios Remote Plugin Executor
- A simple plugin design that allows users to easily develop their own service checks depending on needs, by using their tools of choice (shell scripts, Python, C++, Perl, Ruby, PHP, C#, etc.)
- Graphing with the help of pnp4nagios

Architecture of Nagios



Writing a nagios plugin in python

- Plugin Output
 - Output to be printed to STDOUT that tells if the service is working or why it is failing.
 - Try to keep the output short - probably less than 80 characters
 - SERVICE STATUS: First line of output | performance data
- Performance data: Nagios will consider the parts following a "|" as the performance data
- Performance data format:
'label'=value[UOM];[warn];[crit];[min];[max]

Writing a nagios plugin in python

- Nagios server detects the service status by the exit code of the plugin
- Nagios plugin possible Exit Codes

Exit Code	Status
0	OK
1	WARNING
2	CRITICAL
3	UNKNOWN

Writing a nagios plugin in python

- Plugin Options
 - V version (--version)
 - h help (--help)
 - t timeout (--timeout)
 - w warning threshold (--warning)
 - c critical threshold (--critical)

Example of plugin

- Writing a sample nagios plugin in python.
- Plugging our sample plugin to nagios monitoring system.

Demo

- Using python plugins to monitor glusterfs (a distributed file system)

Thank you