

# NRPE - Architecture

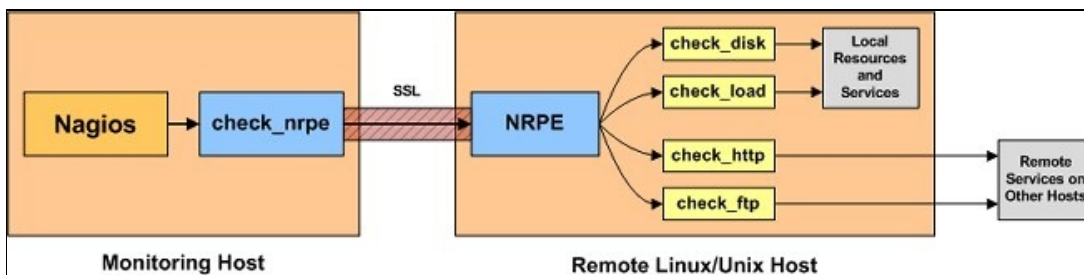
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## Overview

The NRPE addon is designed to allow you to execute Nagios plugins on remote Linux/Unix machines. The main reason for doing this is to allow Nagios to monitor "local" resources (like CPU load, memory usage, etc.) on remote machines. Since these public resources are not usually exposed to external machines, an agent like NRPE must be installed on the remote Linux/Unix machines.

Note: It is possible to execute Nagios plugins on remote Linux/Unix machines through SSH. There is a `check_by_ssh` plugin that allows you to do this. Using SSH is more secure than the NRPE agent, but it also imposes a larger (CPU) overhead on both the monitoring and remote machines. This can become an issue when you start monitoring hundreds or thousands of machines. Many Nagios admins opt for using the NRPE addon because of the lower load it imposes.

## Design Overview



The NRPE addon consists of two pieces:

- The `check_nrpe` plugin, which resides on the local monitoring machine
- The NRPE daemon, which runs on the remote Linux/Unix machine

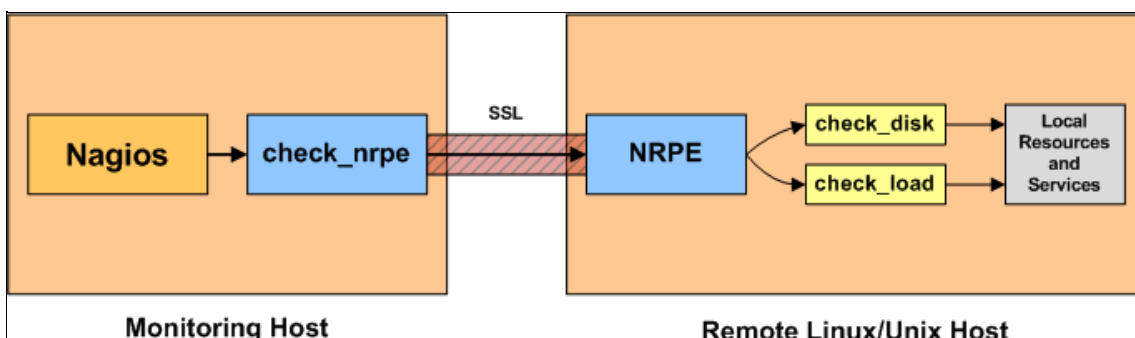
When Nagios needs to monitor a resource of service from a remote Linux/Unix machine:

- Nagios will execute the `check_nrpe` plugin and tell it what service needs to be checked
- The `check_nrpe` plugin contacts the NRPE daemon on the remote host over an (optionally) SSL-protected connection
- The NRPE daemon runs the appropriate Nagios plugin to check the service or resource
- The results from the service check are passed from the NRPE daemon back to the `check_nrpe` plugin, which then returns the check results to the Nagios process

**Note:** The NRPE daemon requires that Nagios plugins be installed on the remote Linux/Unix host. Without these, the daemon wouldn't be able to monitor anything.

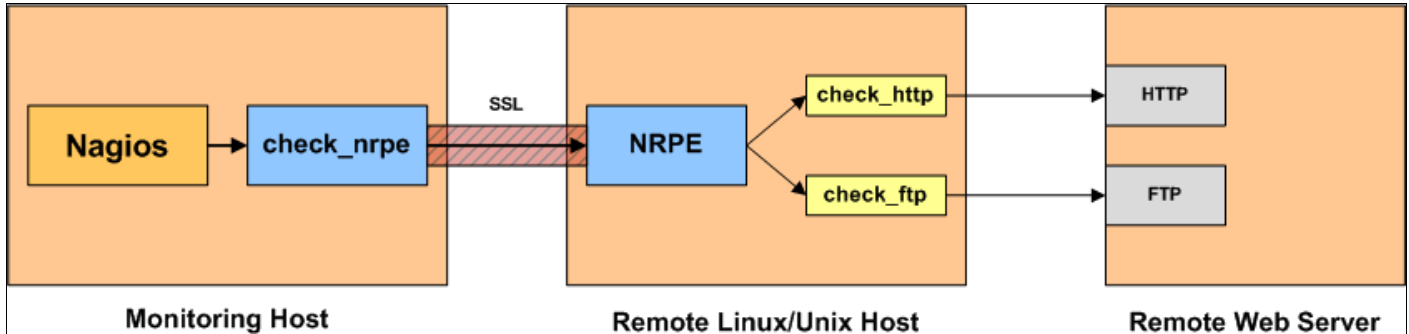
## Direct Checks

The most straight forward use of the NRPE addon is to monitor "local" or "private" resources on a remote Linux/Unix Machine. This includes things like CPU load, memory usage, swap usage, current users, disk usage, process states, etc.



## Indirect Checks

You can also use the NRPE addon to indirectly check "public" services and resources of remote servers that might not be reachable directly from the monitoring host. For instance, if the remote host that the NRPE daemon and plugins are installed on can talk to the a remote web server (but the monitoring host cannot), you can configure the NRPE daemon to allow you to monitor the remote web server indirectly. The NRPE daemon is essentially acting as proxy in this case.



## Final Thoughts

For any support related questions please visit the [Nagios Support Forums](http://support.nagios.com/forum/) at:

<http://support.nagios.com/forum/>

Posted by: **tlea** - Fri, Jan 22, 2016 at 12:57 AM. This article has been viewed 2727 times.

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