

Monitoring at Tk20

Table of Contents

Overview.....	1
Features and Advantages	1
Tk20 Monitoring Network Diagram.....	2
Tk20 Remote Monitoring set up.....	2
Services Monitored by Nagios.....	3
Reference	4

Overview

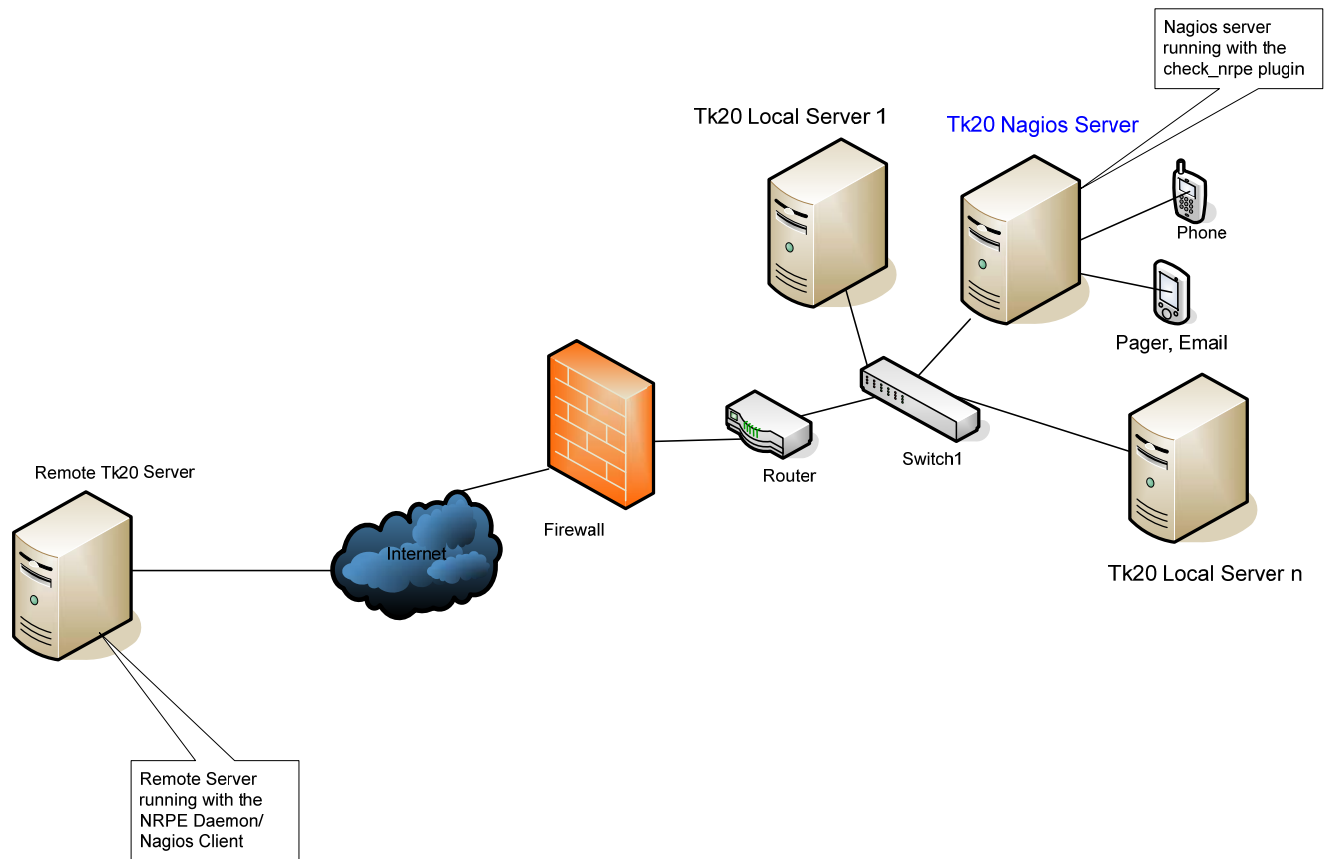
Tk20 monitoring system consists of a centralized monitoring sever called Nagios installed with an open source monitoring software. Nagios at Tk20 has been designed to monitor host and services and inform us if there are any problems even before the end-users know about it, thus allowing us to proactively resolve any problems with the server or the Tk20 access. The monitor runs intermittent checks on hosts and services specified using external "plugins" which return status information to Nagios. When problems are encountered, the monitor can send notifications out to administrative contacts in Tk20 by a variety of different ways (email, instant message, SMS, etc.). Current status information and historical logs can all be accessed via an authorized web browser.

Features and Advantages:

Nagios at Tk20 has a lot of features, making it a very powerful monitoring tool. Some of the major features are listed below:

- Monitoring of network services used by Tk20 (HTTP, PING etc)
- Monitoring of host resources (disk and memory usage)
- Monitoring of Tk20 services (java, postgresql, login check etc)
- Contact notifications to Tk20 support when service or host problems occur and get resolved (via email, pager, or other user-defined method)
- Escalation of host and service notifications if a problem is not resolved within a configured time
- Scheduled downtime for suppressing host and service notifications during periods of planned outages
- Ability to acknowledge problems via the web interface so that Tk20 contact group is notified that someone is already working on the problem
- Current server status information access via a web browser

Tk20 Monitoring Network Diagram:

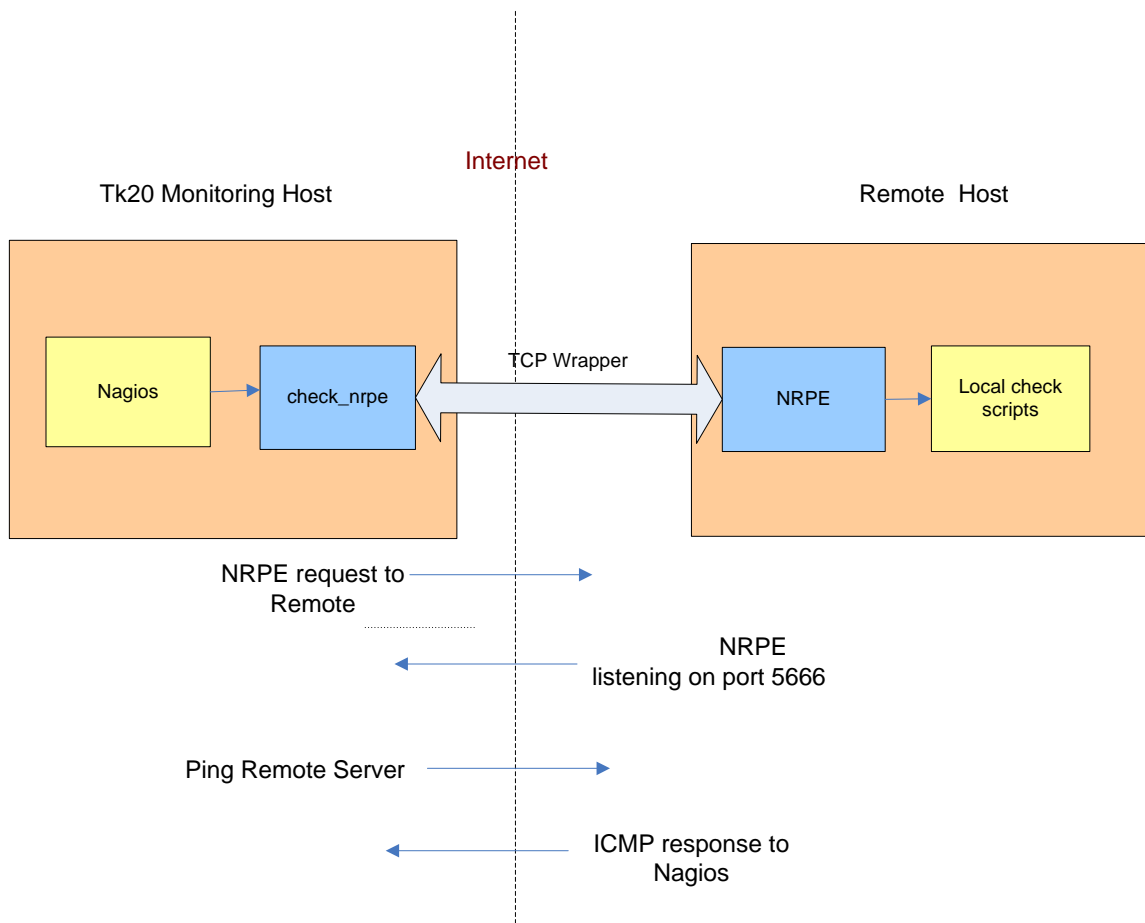


Tk20 Remote Monitoring set up:

Nagios Monitoring server at Tk20 uses “NRPE” (Nagios Remote Plugin Executor) to communicate and monitor remote servers. The Nagios plug-in binary “check_nrpe” communicates the NRPE service installed on the remote server using the TCP port 5666. The communication is secure because of the use of TCP wrappers to create rules on the remote host to allow NRPE requests only from Nagios. The NRPE software on the remote client must run as a service under xinetd. Nagios also needs response to ICMP/PING requests to the remote server to determine whether the remote host is alive or down.

To sum up, in order for Tk20 to be able to monitor a remote server, the remote server should

- 1) Allow access to port 5666 to Nagios server
- 2) Allow ICMP requests from Nagios server



Services Monitored by Nagios:

Nagios monitors the following services on a host that it monitors and sends notification alerts if there is a problem on any of these services.

- 1) Processes:
 - i) HTTP – http is required to have the Tk20 web access
 - ii) PING- to know if a host is alive
 - iii) Tomcat- Tk20 uses the apache tomcat web server.
 - iv) Jboss – Tk20 uses the Jboss application server
- 2) Tk20 Services
 - i) Application Access – A Nagios plugin that mimics logging into the Tk20 application.
 - ii) Disk Space – Checks the disk space usage on the server. This is important because Tk20 users upload files into the system
 - iii) Num Users – Gives information on number of users actively using Tk20 at a given time.
 - iv) Memory Usage – Check the Linux memory usage locally on the server

Reference:

1) Nagios documentation at nagios.org. (Nagios and the Nagios logo are registered trademarks of Ethan Galstad.)