1 Evaluation of Existing IT Infastructure Monitoring Systems

This section will review current IT infrustructure monitoring systems and evaluate them on several points as follows:

- Support for timeseries monitoring and real time alerting

- How they can be configured to monitor custom metrics

- How are alert thresholds defined

- How configuration and custom code is delivered to nodes (if requried)

- How the user configures the system

- How dependencies are handled

1.1 Nagios

Timeseries monitoring and real time alerting Nagios is primarily focused at real time alerting and therefore has very little in the way of timeseries monitoring. Additional plugins are available which can be used to graph metrics over time but these cannot be used to make decisions on the status of a given system or service. All that is supported in terms of alerting on historical data is to refrain from alerting until a given condition has been observed in the previous n checks, there is no support for alerting based on trends in historical data.

Support for custom metrics Nagios has support for custom metrics through the NRPE (Nagios Remote Plugin Executor) plugin. These plugins can be any sort of executable which prints out a message to represent the data read as well as a specific exit code which defines the level of the alert, for example "OK", "Critical" .etc

Alert threshold definition Thresholds for NRPE agents must be set on the remote server itself. These thresholds are passed into the remote plugin as an argument when it is executed and are used internally by the script to output the approprate alert level.

Code/Config delivery to nodes Nagios does not have any in built functionality to distribute configuration files or plugin code to remote nodes. In order to automate this, additional software such as Puppet would be required.