Network Monitoring

Is the Network slow today?

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How Well is the Network Working?

- **Is the Network slow today?**

Pinging every device is a useless metric.

User Experience

- How fast is data flowing towards the user?
- How long do DNS lookups take?
- Real life TCP conversations? http,ftp.etc.
- Mail sending and receiving?
- Etc.

Keep Statistics

- **Historical Graphs**
  o Day-to-Day and Hour-to-Hour graphs for historical comparison

- **Location Graphs**

o And you need to do this for every location on the network.

Potential Solutions

- **Cisco 1924's**
  - Each Cisco1924 has Intel 486SX;
  - Use to measure application response?
- One in each comms cabinet

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Potential Solutions 2

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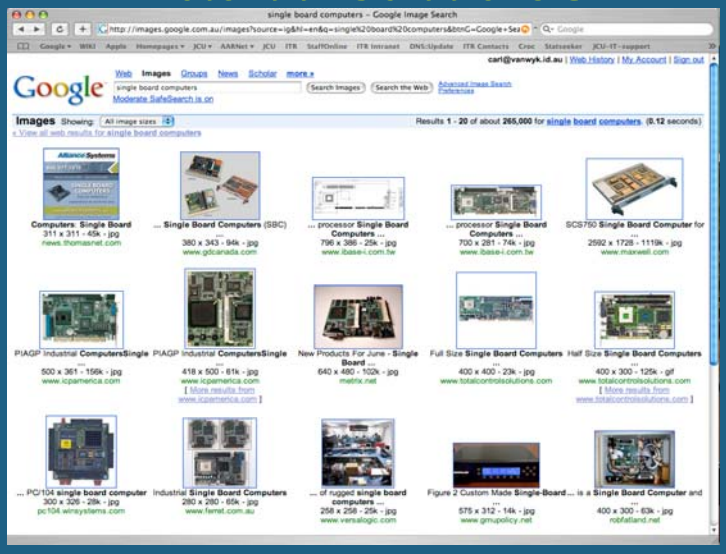
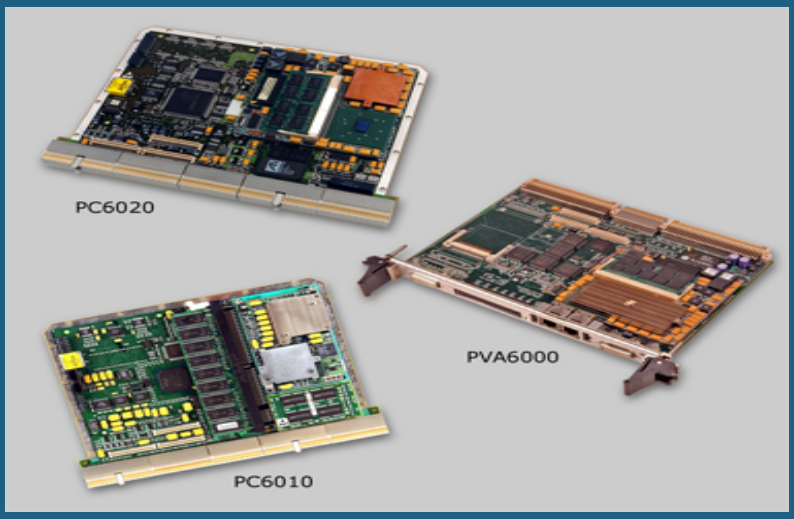
Potential Solutions 3



Potential Solutions 3



Potential Solutions

- **Cisco 1924's**
  - Each Cisco1924 has Intel 486SX;
  - Use to measure application response?
- One in each comms cabinet
- Old scrap PC's? – on the way to skip.
- SBC – Single Board Computers?

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Chosen Solution
Soekris 4501

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Chosen Solution

- **Single Board Computer (Soekris Net4501)**
- **Small Linux Distro (Pebble)**
- **Read Only File System**
- **One in every comms cabinet (U$150 ea).**
- **Bare board or boxed.**
- **Add 64MB Flash RAM, Power Supply.**

- **Graphs – Nagios Monitor and Graphing.**
- **http://network-util-3.jcu.edu.au/nagios/**

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How it Works

- Each remote Net4501 box performs:
- PING tests – internal, external
- DNS tests
- FTP downloads
- HTTP downloads
- MAIL send and receive
- These tests are defined and controlled on the central NAGIOS server.
- All the resultant data is stored on central server.

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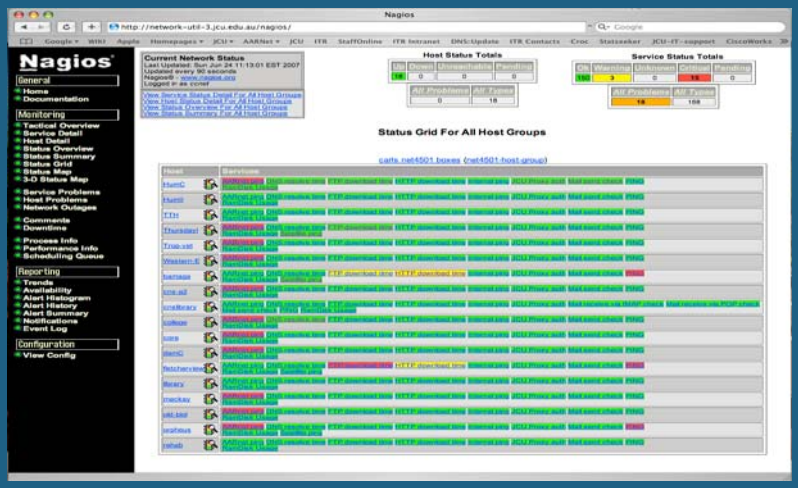
Nagios Status Grid



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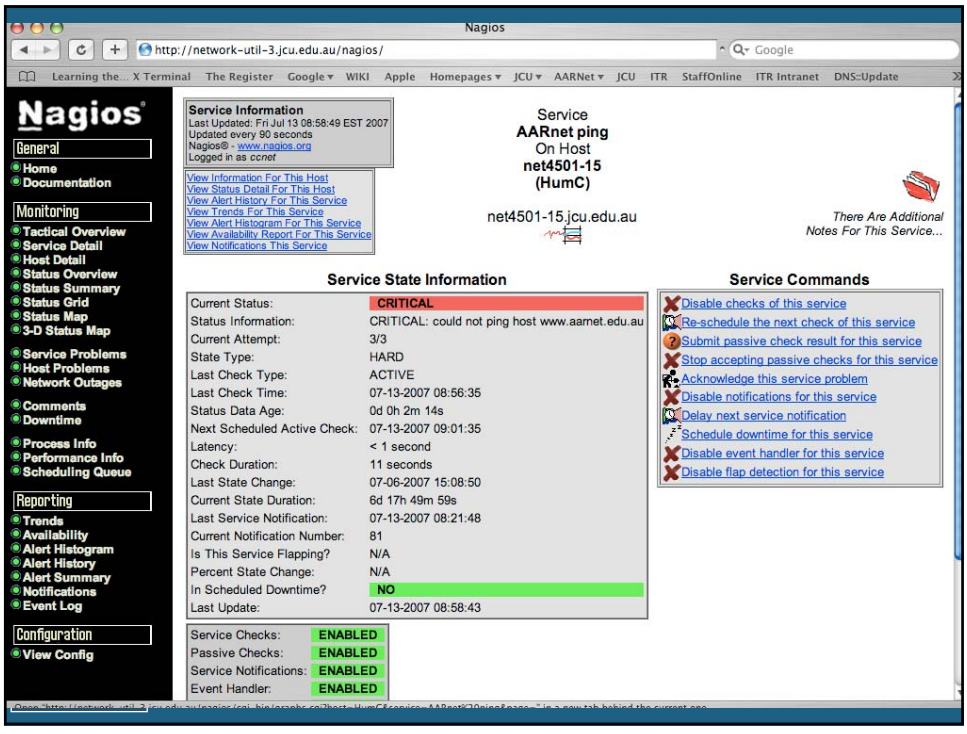
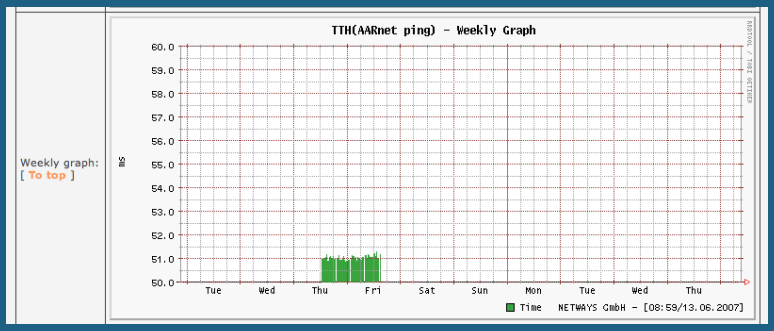
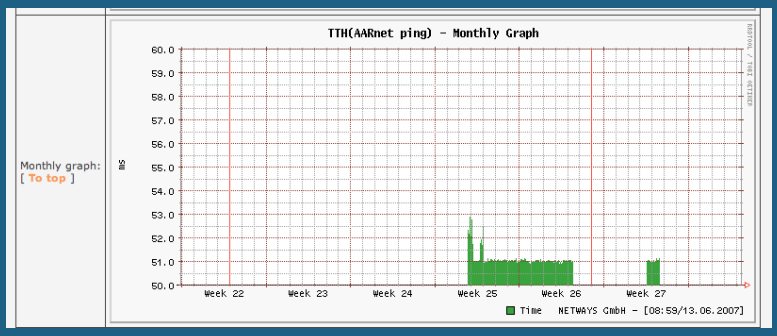


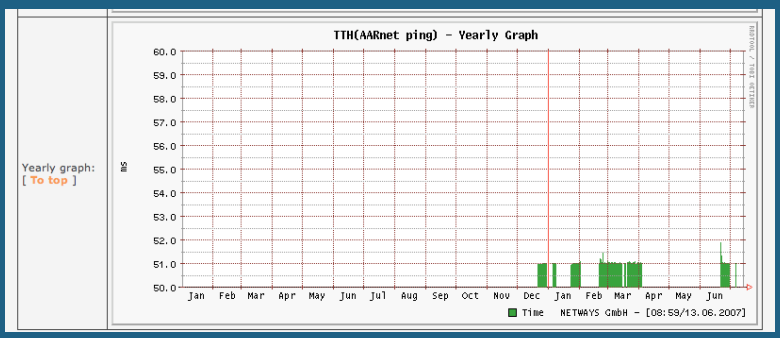
Nagios detail 2



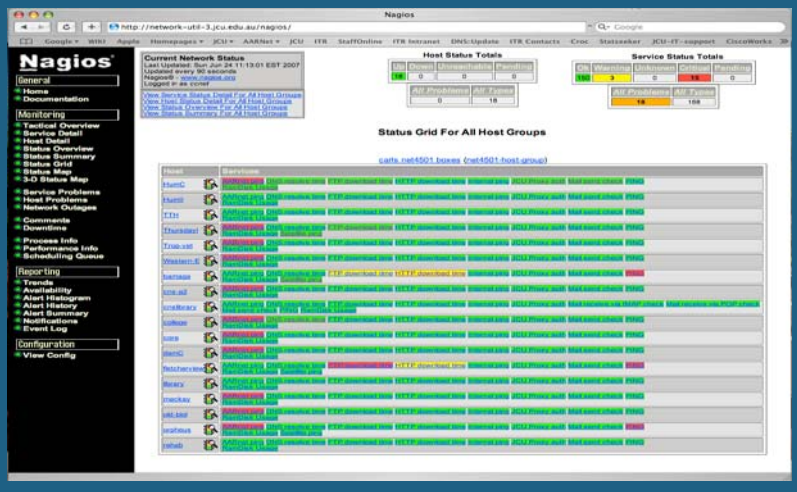
Nagios detail 3

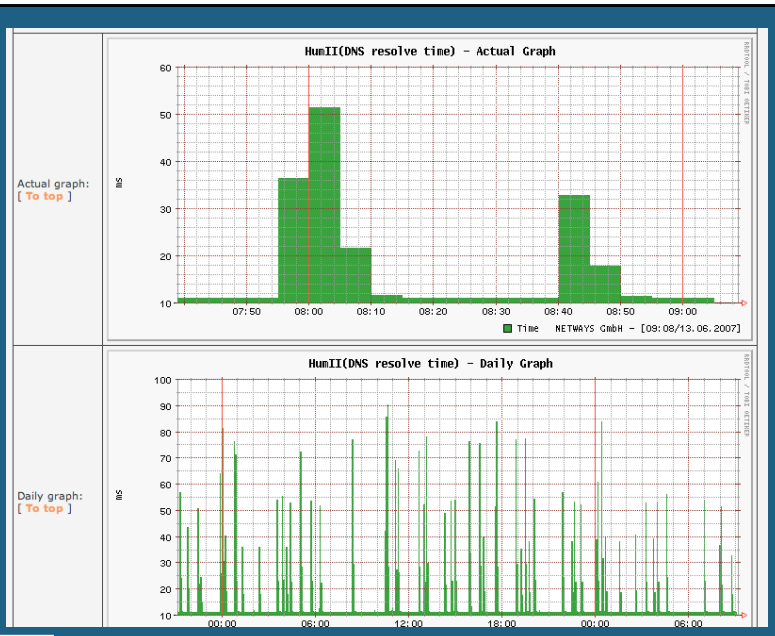


Nagios detail 4



Nagios Status Grid





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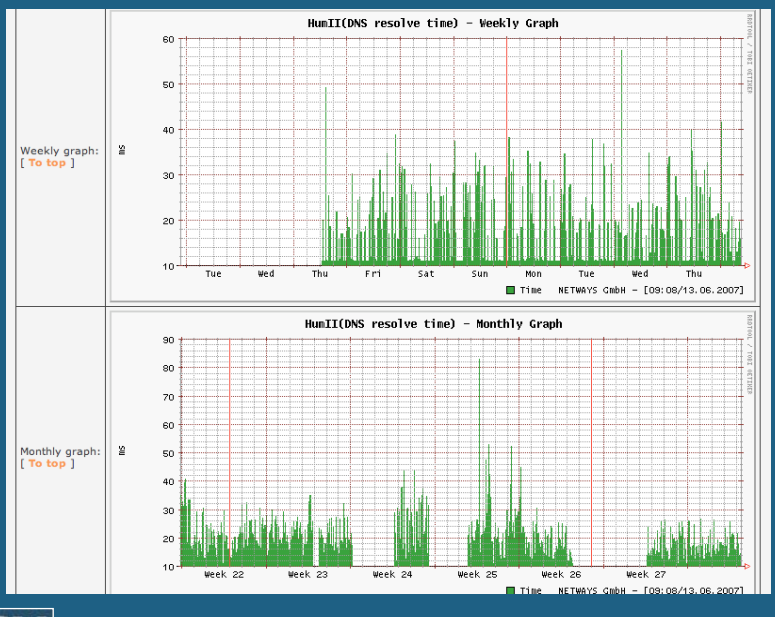

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Work to Do

- Differentiate between LAN and WAN tests.
- Find additional network apps to test.
- Make it a “package” of a server and remotes to deploy anywhere.
- QRNO project?

- DOCUMENTATION!

Thank you

Questions?

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