NAGIOS, Cacti, Prism Monitoring at NERSC

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Overview

- **Monitoring at NERSC**
  - **Node Security**
  - **Web vs. shell vs. ??**
- **NAGIOS**
- **Cacti**
- **Prism**
- **Real Life Examples**

- **Performance vs. Fault**
- **Each system gets a dedicated monitoring node**
  - **Node is owned and maintained by NERSC, but is interconnected where possible to internals of system.**

- **Security is provided by firewalling nodes to outside world.**
  - **Https only to web access.**
  - **Firewalled, iptables, and apache access controls**
  - **Few or no local accounts**
    - **Managed by NIM/LDAP**

Web based

- **Allows portability.**
- **System allows outside world access to data via tunnels.**
- **Logging of access is performed.**

- **NAGIOS - http://www.nagios.org/ is primary fault monitoring system.**
  - **All systems have a NAGIOS monitoring process.**
  - **Some plugins are locally written**
    - **Ddn fault & temperature**
    - **Engenio/FaSTT fault**
    - **Cray Cabinet temperature**
    - **Cray xtcli node & link faults**

Cacti

- **http://www.cacti.net/**
- **Used to collect data from network, temperature, and ddn statistics.**
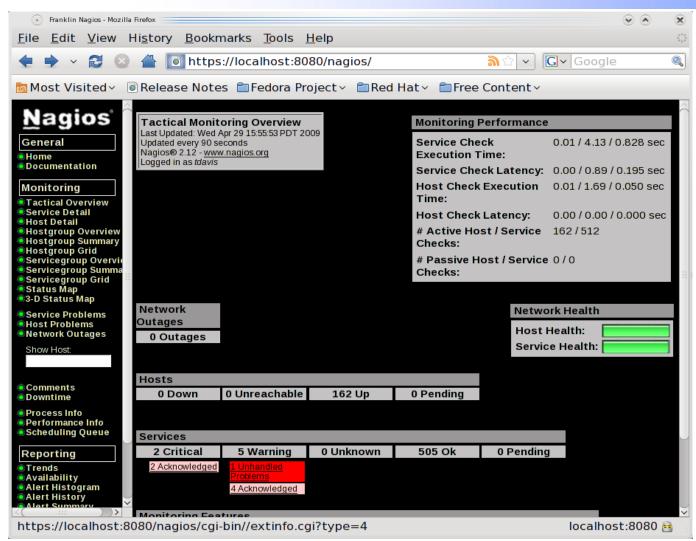 - **Locally written plugins for thermal and ddn statistics.**

Prism

- **Locally written**
- **Understands RDF feeds.**
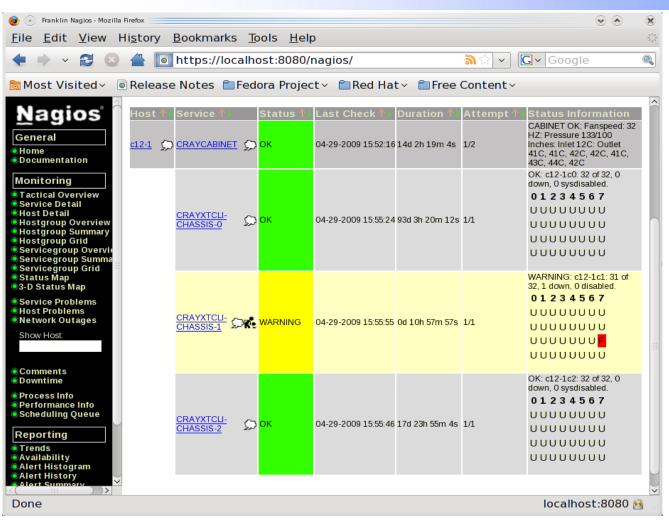- **Can aggregrate feeds into one display.**

NAGIOS status

NAGIOS – xtcli status

Cacti – DDN statistics

Aggregate DDN IO ops

From 2009/04/28 15:37:35 To 2009/04/29 15:37:35

☐ cab02-u1 Read IO's	Current:	17.46	Average:	38.54	Max:	690.09	
☐ cab02-u2 Read IO's	Current:	13.31	Average:	32.92	Max:	930.68	
☐ cab04-u1 Read IO's	Current:	13.81	Average:	42.24	Max:	916.66	
☐ cab04-u2 Read IO's	Current:	10.63	Average:	27.55	Max:	371.89	
☐ cab06-u1 Read IO's	Current:	17.10	Average:	43.92	Max:	1.58 k	
☐ cab06-u2 Read IO's	Current:	20.35	Average:	31.30	Max:	778.11	
☐ cab08-u1 Read IO's	Current:	17.34	Average:	55.69	Max:	781.23	
☐ cab08-u2 Read IO's	Current:	17.89	Average:	30.09	Max:	290.42	
☐ cab10-u1 Read IO's	Current:	16.91	Average:	29.44	Max:	790.64	
☐ cab10-u2 Read IO's	Current:	114.28	Average:	52.53	Max:	582.98	
☐ cab02-u1 Write IO's	Current:	134.81	Average:	111.47	Max:	745.88	
☐ cab02-u2 Write IO's	Current:	135.38	Average:	95.33	Max:	456.38	
☐ cab04-u1 Write IO's	Current:	138.41	Average:	118.61	Max:	565.32	
☐ cab04-u2 Write IO's	Current:	135.93	Average:	105.27	Max:	1.13 k	
☐ cab06-u1 Write IO's	Current:	131.70	Average:	109.95	Max:	535.29	
☐ cab06-u2 Write IO's	Current:	144.50	Average:	87.83	Max:	407.67	
☐ cab08-u1 Write IO's	Current:	127.91	Average:	89.21	Max:	473.22	
☐ cab08-u2 Write IO's	Current:	126.32	Average:	85.99	Max:	406.54	
☐ cab10-u1 Write IO's	Current:	140.26	Average:	101.63	Max:	712.63	
☐ cab10-u2 Write IO's	Current:	148.96	Average:	92.06	Max:	769.85	

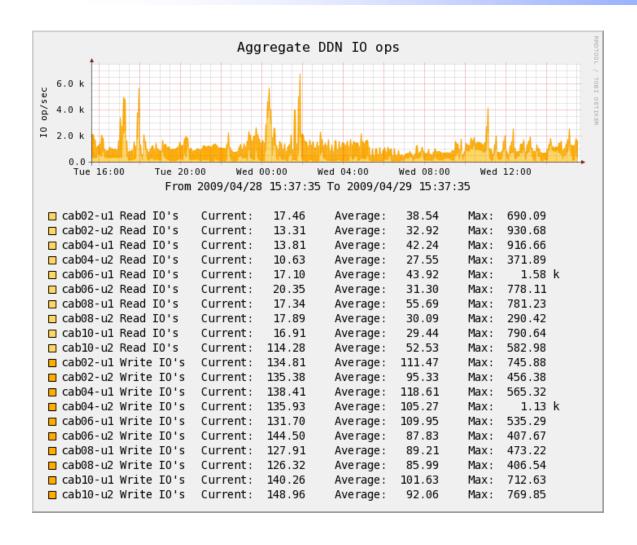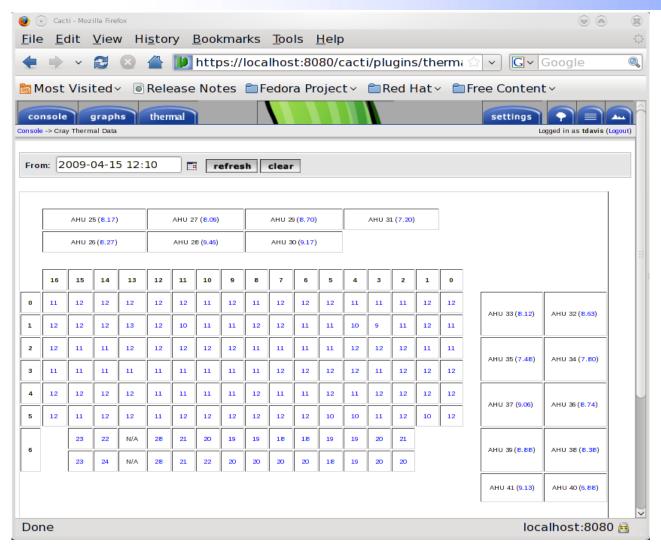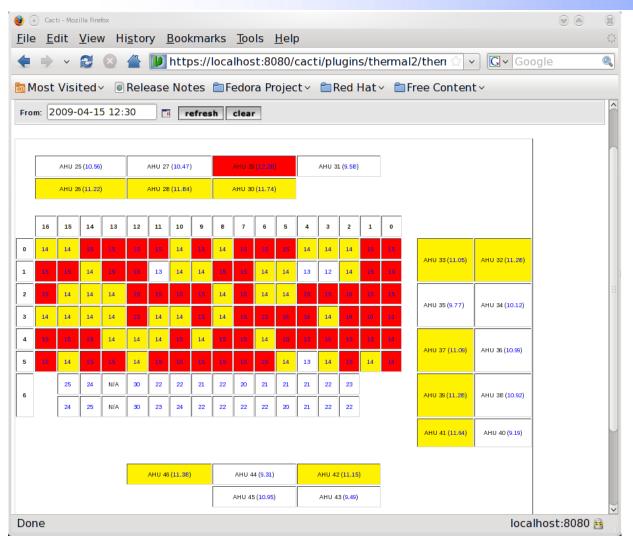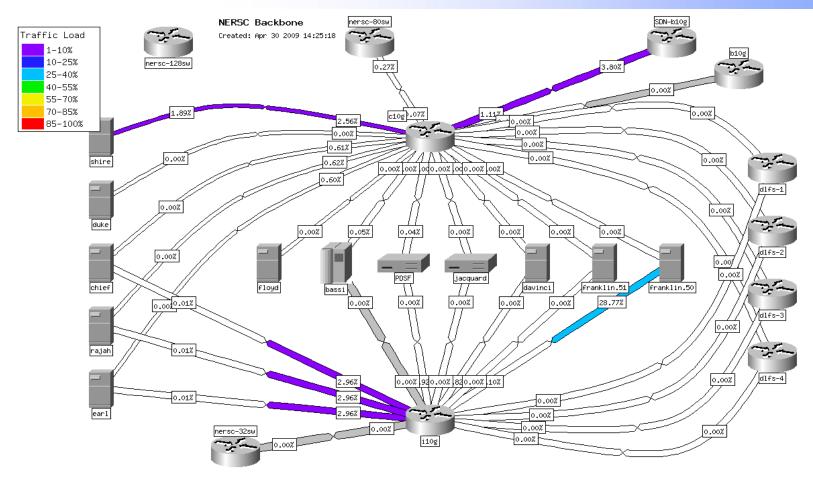# Cacti – Thermal Plugin

Cacti – Thermal Plugin

Cacti – Network Weather Map

Prism