Xymon

Lárus Árni Hermannsson
Basis ehf.

Sagan

- Tilraunir Henrik Storner (1964) til að hressa uppá Big Brother
- Byrjar 2001 (Data center í DK)
- Hobbit verður “BB Free” 2005
- 2008 Tolkien estate óhressir með nafnið
- Nóv 2008 Hobbit verður Xymon
- "The Anything Monitor"

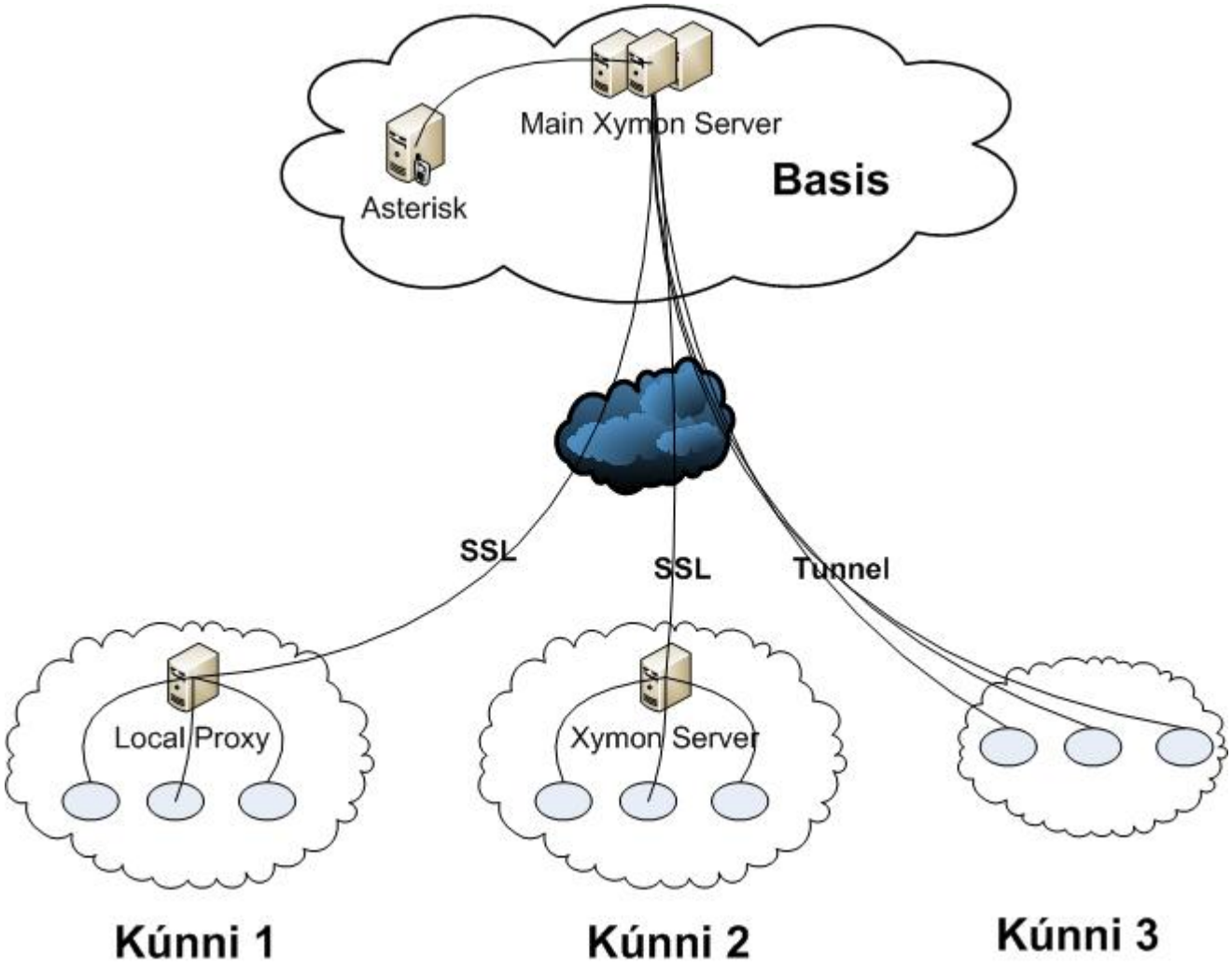
Högun

- Server – Client
- Server tasks eru uppskiptanleg (en oftast á einum server)
  - Main server: All current data
  - 1+ RRD server: Trend og History data
  - 1+ Web display
  - 1+ servers: Misc Network test
- Client: Push en ekki Polling

Hobbit Client

- Clientinn er heimskur (Dumb Client)
- Aðeins gagnasöfnun
  - Keyrir algengar skipanir sem gefa status
  - Safnar tölulegum gögnum
  - Skannar Log-fæla
  - Skoðar möppur og skrár
  - Execute custom test
- Hrágögnin eru send á Server til úrvinnslu

Proxy og Local Forward



Hvað getur Xymon mónítorað?

- Slatti af “pre-built tests”
  - Network (external) monitoring
    - ping ,FTP, SSH, SMTP, POP, IMAP(S), NNTP(S), LDAP(S) query, HTTP(S) w/ content, SSL certificate, etc.
  - Local client monitoring
    - cpu, disk, memory, services, procs, files, etc
- Hafsjór af “community tests” þarna úti
- Build you own!
- Forritunarmál að eigin vali

"The Anything Monitor"

- Xymon serverinn tekur við
  - Status
  - Message
  - Numerical value
- Hvað viljum við skoða?
  - Veður, hita, titring, mailque, peering, etc.
- Algerlega takmarkalaust
  - Getur þar fyrir ekki tapað í samanburði á “testum”

Hrátt og einfalt = Öflugt

- Sveigjanleikinn kemur frá mörgum sjálfstæðum grunneiningum.
- Ekkert Hókus pókus -> Fílírókus
- Inngangsþröskuldur frekar hár
  - Ekkert “Next->Next->Next” og mús.
- Svotil allt control og config er CLI

Custom test

```
#!/bin/bash
COLUMN=weather; COLOR=green

DEGREES=`/usr/local/bin/getweather temperature`
if [ $DEGREES -ge 30 ]; then COLOR=red; fi

$BB $BBDISP \
   “status $MACHINE.$COLUMN $COLOR `date`
    temperature=$DEGREES”

exit 0
```

Alerting

- Aðeins hugmyndaflugið takmarkar reglur

```
$WEBHOSTS=%(www|intranet|support|mail).foo.com

HOST=$WEBHOSTS SERVICE=http
        SCRIPT /usr/local/bin/smsalert 4538761925 FORMAT=sms

HOST=$WEBHOSTS SERVICE=cpu,disk,memory
        MAIL unixsupport@foo.com


$UNIXSUPPORT=MAIL unixsupport@foo.com TIME=*:0800:1600 SERVICE=cpu,disk,memory

HOST=%(www|intranet|support|mail).foo.com
        $UNIXSUPPORT

HOST=dns.bar.com
        $UNIXSUPPORT
```

Þröskuldar

- HOST=%db.*.foo.com TIME=W:0800:1600
- LOAD 8.0 12.0
- DISK /db 80 90
- PROC mysqld 1

- HOST=%.*.foo.com
- LOAD 7.0 12.0 HOST=bax.foo.com
- LOAD 3.0 8.0

- HOST=host.bar.net
- DISK /mnt/disk1 70 85
- DISK /mnt/disk2 95 98
- DISK /mnt/disk3 95 98
- DISK /mnt/disk4 101 101

Gallar

- Feitar configskrár sem hægt að klúðra!
- Frekar ljótt viðmót
- Config non-gui
- Lítið Access Control
- Mis virk framþróun

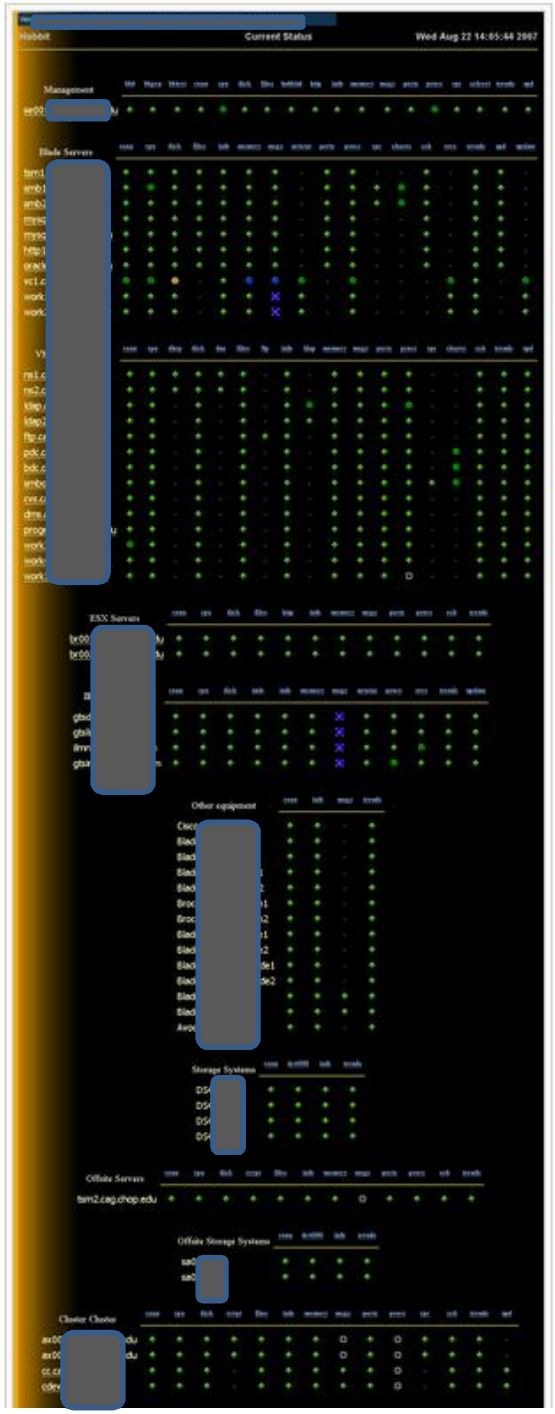
Aðrir fídusar

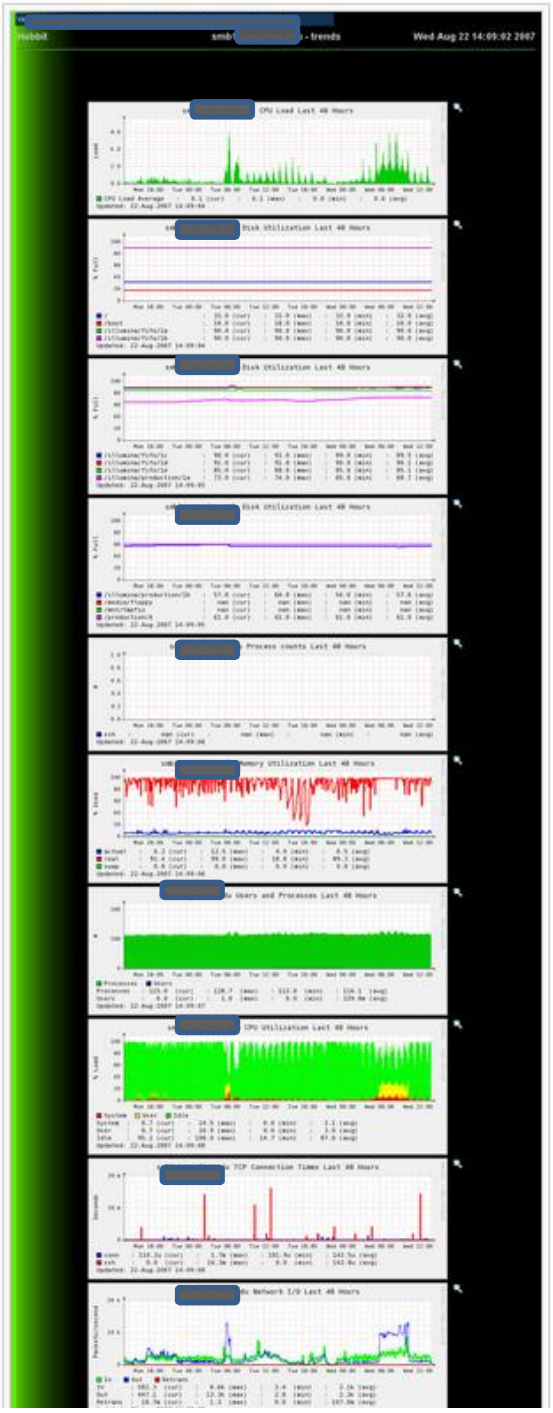
- Miðlægt config
- Þarf kerfið að geta hringt?
  - Nei
- Þurfa prófin að vera til?
  - Nei
- Xymon er Display og datacollector með allerting mechanisma.

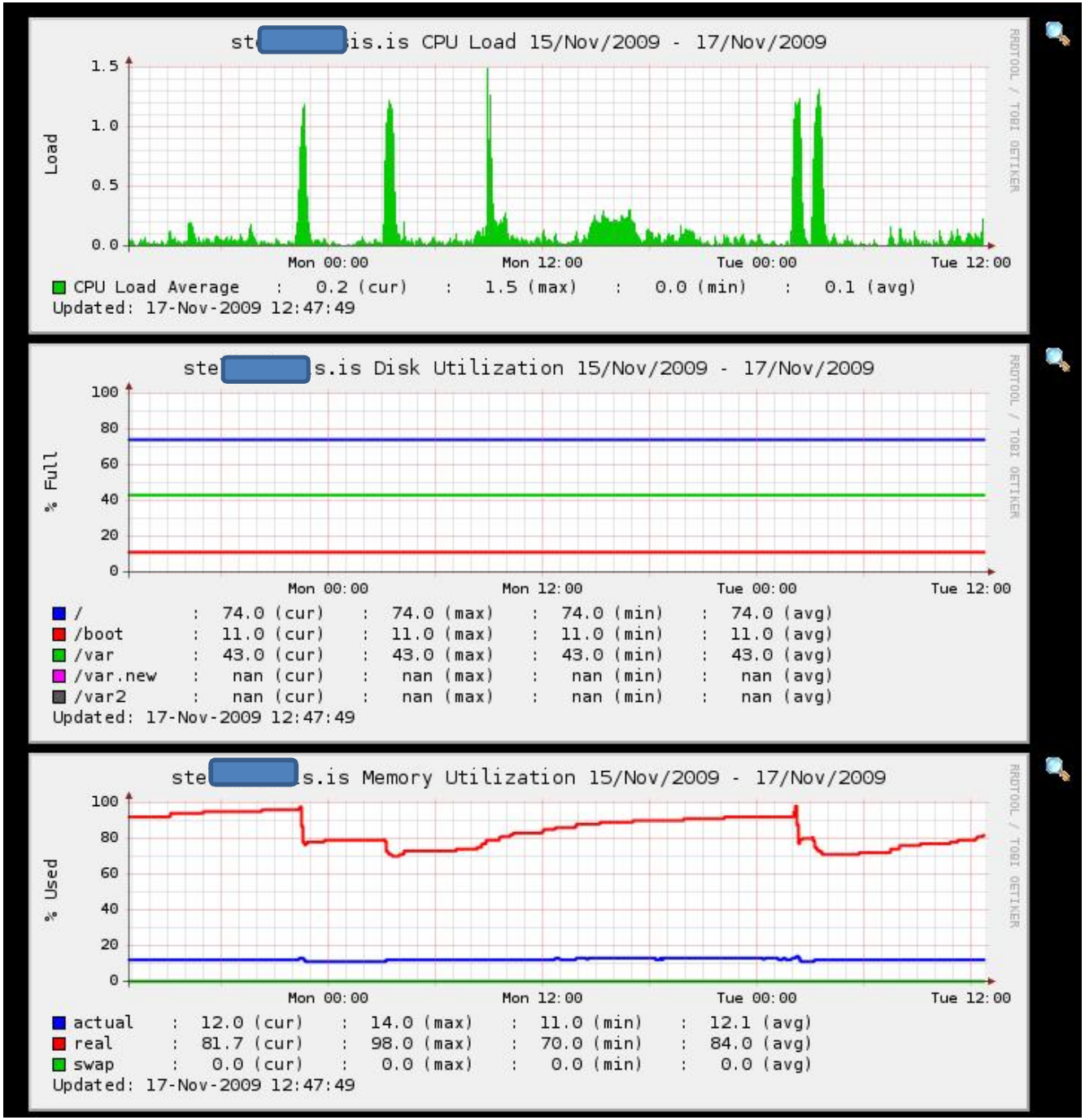
FOSS

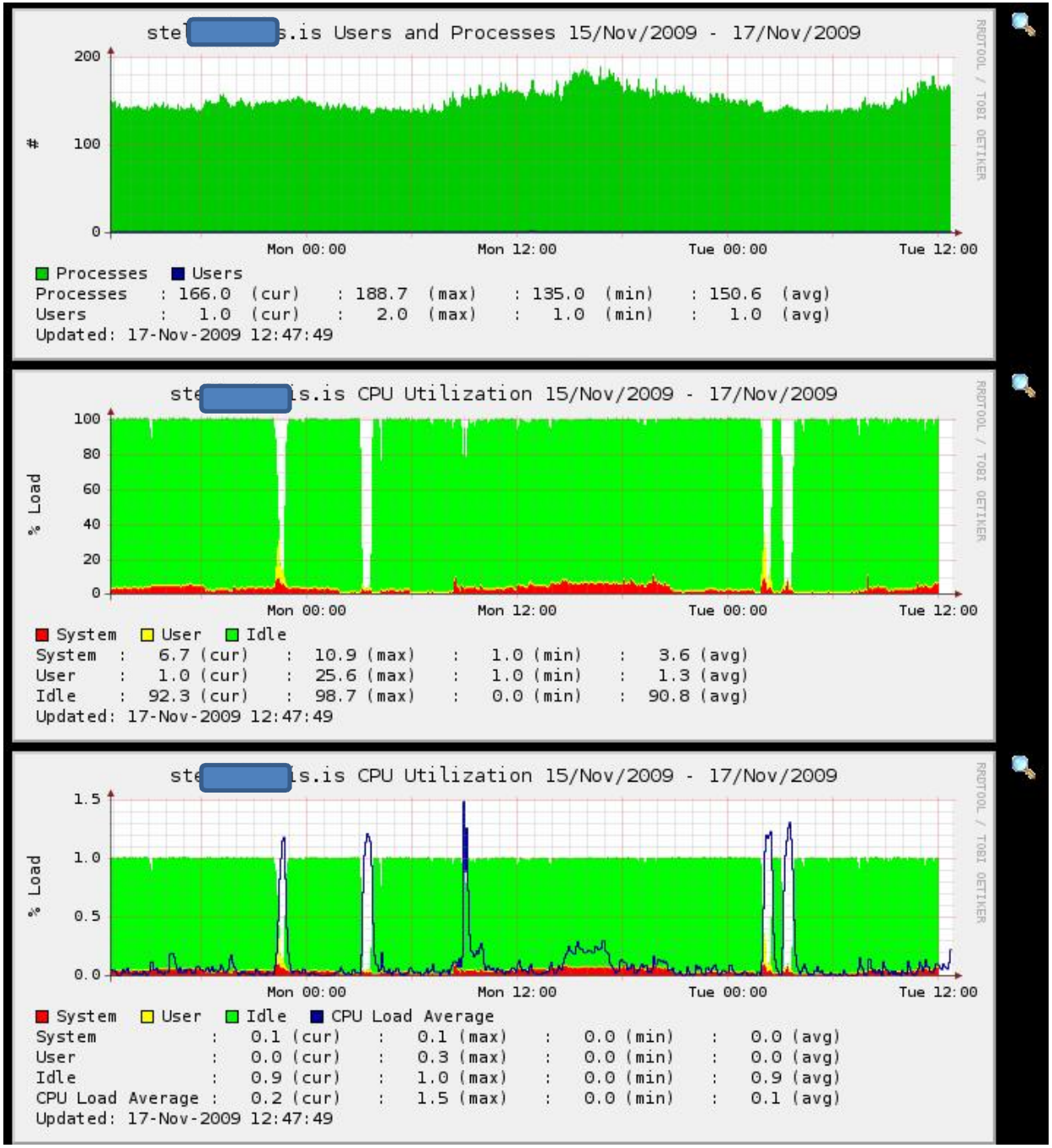
- Free as in freedom
- Free as in beer
- Framtíðar trygging fyrir tilvist Xymon
- Eyddu peningum í aðhæfinguna
  - Ekki leyfið!
- Gjaldeyrissparandi er bónus núna
- Af nördum fyrir nörda

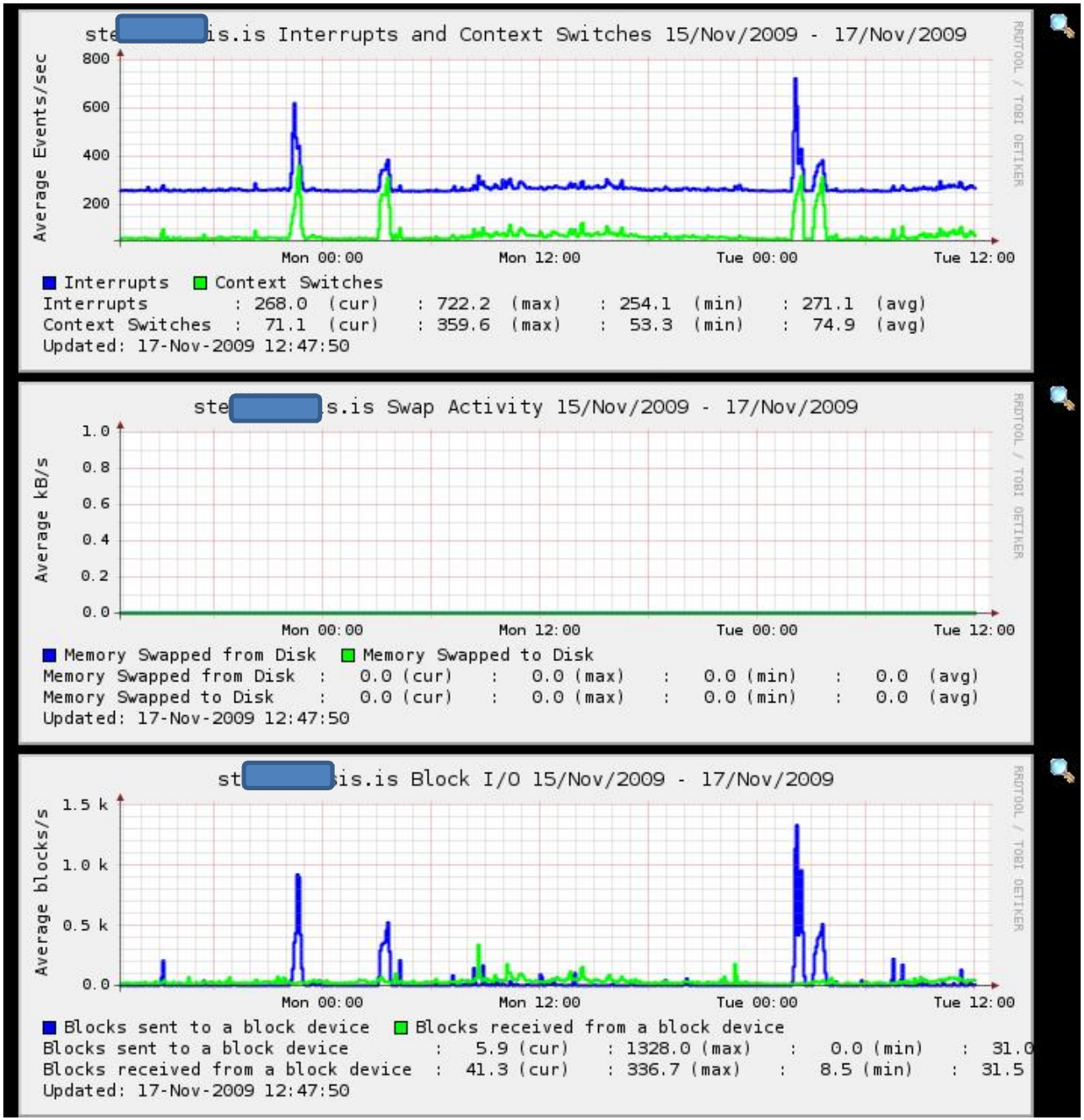
Administration
Help
Current Status
Tue No
Hobbit
bbd bbgen bbtest conn cpu dbcheck disk dm files hobbitd http info iso memory msgs ports procs rancid ssh2 testcall trends updates
DNS/Mail
conn cpu disk dns files http info iso mailconf memory misc msgs ports postfix procs raid smtp ssh2 trends updates
MailServers
conn cpu disk files ftp http imap info iso ldap ldaps memory misc msgs ntp pop ports procs smtp ssh2 sslcert trends updates
TSMServers
conn cpu disk errpt files info iso memory misc msgs netstat ports procs raid ssh2 svcs trends tsm tsmout updates uptime who


Hobbit
Current Status
Wed Aug 22 14:05:44 2007
Management
Blade Servers
ESX Servers
Other equipment
Storage Systems
Offsite Servers
tsm2.cag.chop.edu
Offsite Storage Systems
Cluster Choice


Hobbit
- trends
Wed Aug 22 14:09:02 2007
CPU Load Last 48 Hours
Disk Utilization Last 48 Hours
Disk Utilization Last 48 Hours
Disk Utilization Last 48 Hours
Process counts Last 48 Hours
Memory Utilization Last 48 Hours
Users and Processes Last 48 Hours
CPU Utilization Last 48 Hours
TCP Connection Times Last 48 Hours
Network I/O Last 48 Hours


st[redacted]is.is CPU Load 15/Nov/2009 - 17/Nov/2009
Load
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
CPU Load Average : 0.2 (cur) : 1.5 (max) : 0.0 (min) : 0.1 (avg)
Updated: 17-Nov-2009 12:47:49
RRDTOOL / TOBI OETIKER
ste[redacted]s.is Disk Utilization 15/Nov/2009 - 17/Nov/2009
% Full
100
80
60
40
20
0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
/ : 74.0 (cur) : 74.0 (max) : 74.0 (min) : 74.0 (avg)
/boot : 11.0 (cur) : 11.0 (max) : 11.0 (min) : 11.0 (avg)
/var : 43.0 (cur) : 43.0 (max) : 43.0 (min) : 43.0 (avg)
/var.new : nan (cur) : nan (max) : nan (min) : nan (avg)
/var2 : nan (cur) : nan (max) : nan (min) : nan (avg)
Updated: 17-Nov-2009 12:47:49
RRDTOOL / TOBI OETIKER
ste[redacted]s.is Memory Utilization 15/Nov/2009 - 17/Nov/2009
% Used
100
80
60
40
20
0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
actual : 12.0 (cur) : 14.0 (max) : 11.0 (min) : 12.1 (avg)
real : 81.7 (cur) : 98.0 (max) : 70.0 (min) : 84.0 (avg)
swap : 0.0 (cur) : 0.0 (max) : 0.0 (min) : 0.0 (avg)
Updated: 17-Nov-2009 12:47:49
RRDTOOL / TOBI OETIKER


ste[redacted]s.is Users and Processes 15/Nov/2009 - 17/Nov/2009
200
100
0
#
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Processes Users
Processes : 166.0 (cur) : 188.7 (max) : 135.0 (min) : 150.6 (avg)
Users : 1.0 (cur) : 2.0 (max) : 1.0 (min) : 1.0 (avg)
Updated: 17-Nov-2009 12:47:49
RRDTOOL / TOBI OETIKER
ste[redacted]s.is CPU Utilization 15/Nov/2009 - 17/Nov/2009
100
80
60
40
20
0
% Load
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
System User Idle
System : 6.7 (cur) : 10.9 (max) : 1.0 (min) : 3.6 (avg)
User : 1.0 (cur) : 25.6 (max) : 1.0 (min) : 1.3 (avg)
Idle : 92.3 (cur) : 98.7 (max) : 0.0 (min) : 90.8 (avg)
Updated: 17-Nov-2009 12:47:49
RRDTOOL / TOBI OETIKER
ste[redacted]s.is CPU Utilization 15/Nov/2009 - 17/Nov/2009
1.5
1.0
0.5
0.0
% Load
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
System User Idle CPU Load Average
System : 0.1 (cur) : 0.1 (max) : 0.0 (min) : 0.0 (avg)
User : 0.0 (cur) : 0.3 (max) : 0.0 (min) : 0.0 (avg)
Idle : 0.9 (cur) : 1.0 (max) : 0.0 (min) : 0.9 (avg)
CPU Load Average : 0.2 (cur) : 1.5 (max) : 0.0 (min) : 0.1 (avg)
Updated: 17-Nov-2009 12:47:49
RRDTOOL / TOBI OETIKER


st[redacted]is.is Interrupts and Context Switches 15/Nov/2009 - 17/Nov/2009
Average Events/sec
800
600
400
200
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Interrupts
Context Switches
Interrupts : 268.0 (cur) : 722.2 (max) : 254.1 (min) : 271.1 (avg)
Context Switches : 71.1 (cur) : 359.6 (max) : 53.3 (min) : 74.9 (avg)
Updated: 17-Nov-2009 12:47:50
RRDTOOL / TOBI OETIKER
st[redacted]s.is Swap Activity 15/Nov/2009 - 17/Nov/2009
Average kB/s
1.0
0.8
0.6
0.4
0.2
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Memory Swapped from Disk
Memory Swapped to Disk
Memory Swapped from Disk : 0.0 (cur) : 0.0 (max) : 0.0 (min) : 0.0 (avg)
Memory Swapped to Disk : 0.0 (cur) : 0.0 (max) : 0.0 (min) : 0.0 (avg)
Updated: 17-Nov-2009 12:47:50
RRDTOOL / TOBI OETIKER
st[redacted]is.is Block I/O 15/Nov/2009 - 17/Nov/2009
Average blocks/s
1.5 k
1.0 k
0.5 k
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Blocks sent to a block device
Blocks received from a block device
Blocks sent to a block device : 5.9 (cur) : 1328.0 (max) : 0.0 (min) : 31.0
Blocks received from a block device : 41.3 (cur) : 336.7 (max) : 8.5 (min) : 31.5
Updated: 17-Nov-2009 12:47:50
RRDTOOL / TOBI OETIKER

Ýmis dæmi

HISTORY

Tue Nov 17 12:29:37 2009

Phase 1 active tunnels

Alarming on (active,active,active,active,active,active,active,active,active)

Alarming on (active)

Status	Local Address	Remote Address	Uptime	Nego Mode	DH Group	Encryption	Hash	Key Lifetime
active	88[redacted]250	15[redacted].66	497 days, 11:44:45	main	dhGroup1	3des	sha	86400
active	88[redacted]250	21[redacted].133	497 days, 05:03:18	aggressive	dhGroup1	3des	sha	86400
active	88[redacted]250	8[redacted]88	497 days, 03:56:37	aggressive	dhGroup1	3des	sha	86400
active	88[redacted]250	8[redacted].141	497 days, 03:53:08	aggressive	dhGroup1	3des	sha	86400
active	88[redacted]250	8[redacted].133	497 days, 02:40:34	aggressive	dhGroup1	3des	sha	86400

Devmon version 0.3.1-beta1 running on nag

Dæmi...

HISTORY

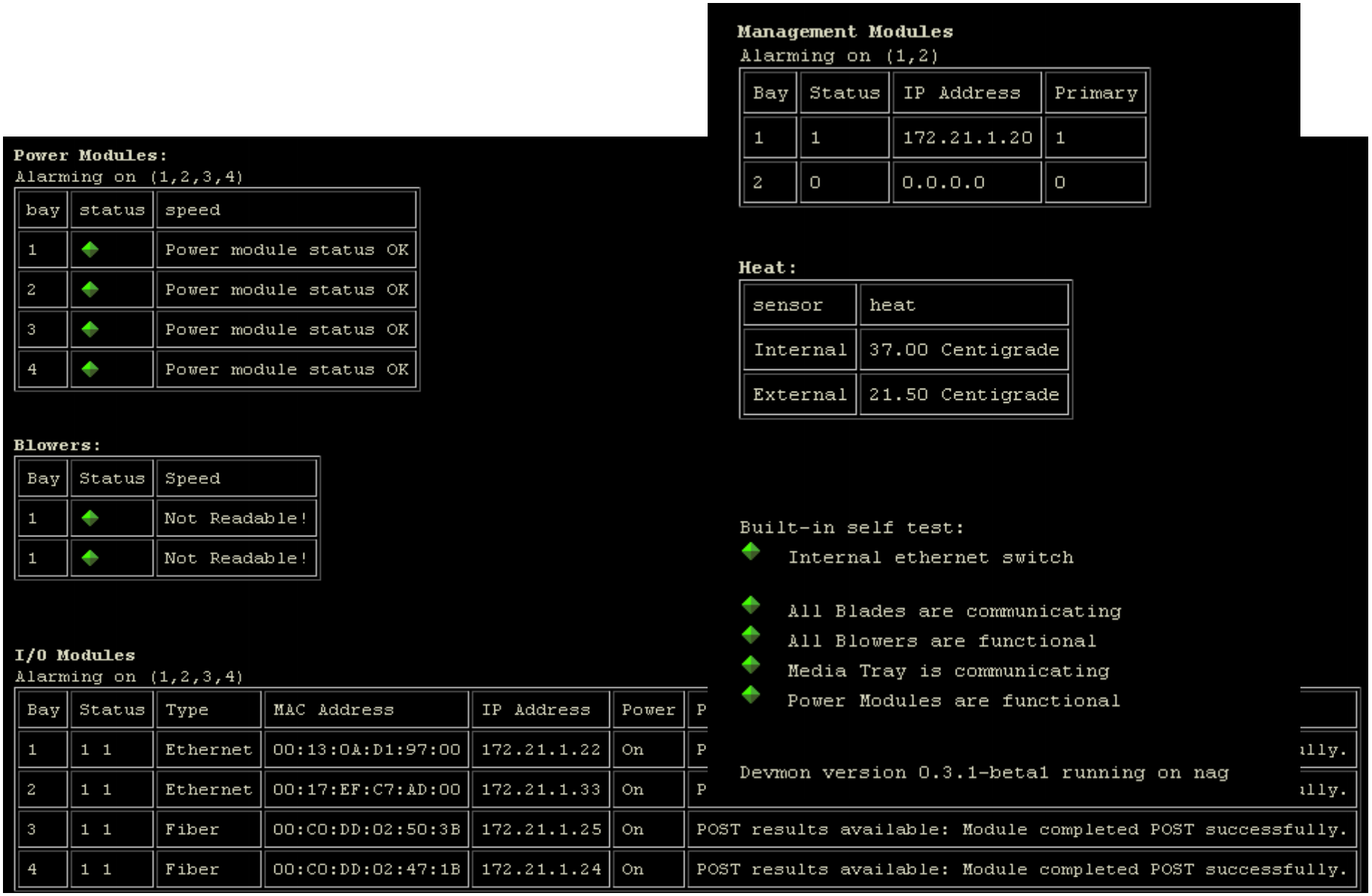
Tue Nov 17 12:31:08 2009

Tablespace check (def. warning Use% >= 90%, def. alert Use% >= 95%)

TableSpace/DBSpace	Size	Used	Free	Use%	Autoextent(Size)
INDX	25.0M	64.0K	24.9M	0%	YES (32.0G)
LHTODRO1	3.0G	1.2G	1.8G	41%	NO
SCANIMAGES	36.0G	33.9G	2.1G	94%	NO
SCANIMAGES_INDEX	1.0G	201.1M	822.9M	20%	NO
STATSPACK	96.0M	91.8M	4.2M	96%	YES (2.0G)
SYSTEM	512.0M	337.5M	174.5M	66%	YES (32.0G)
TOOLS	10.0M	64.0K	9.9M	1%	YES (32.0G)
UNDOTBS1	5.9G	105.3M	5.8G	2%	YES (32.0G)
USERS	200.0M	157.0M	43.0M	79%	YES (32.0G)
XALIDX	12.0G	8.7G	3.3G	73%	NO
XALTAB	8.0G	7.0G	1.0G	87%	NO

dbcheck.pl version 1.08 - column TblSpace lifetime 60, tested in ~ 00:00:00 (max 01:00:00)

```
Microsoft Exchange Server - Enterprise  Version 6.5 (Build 7638.2: Service Pack 2)
Administrative Group: First Administrative Group


Queue Status:
-------------------------

 PendingRerouteQ - 0
 SMTP (EX1-{CA5DA5A6-67B3-494B-BE0D-BB2CB31B796E}) - 0
 LocalAsyncQueue - 0
 PreSubmissionQueue - 0
 PreCatQueue - 0
 PreRoutingQueue - 0
 PostDSNGenerationQueue - 0
 DeferredDeliveryQueue - 0
 FailedMessageQueue - 0


Mailbox Stores:
-------------------------

Mailbox Store (FEX1) -   #Mailboxes: 3   EDBSize(GB): ,00   STMSize(GB): ,00    Total(GB): 0,01
 Freespace on EDB Drive (C:) :4 GB    Percent Left :33 %
 Freespace on STM Drive (C:) :4 GB    Percent Left :33 %

Mailbox Store (FEX2) -   #Mailboxes: 3   EDBSize(GB): ,00   STMSize(GB): ,00    Total(GB): 0,00
 Freespace on EDB Drive (C:) :3 GB    Percent Left :25 %
 Freespace on STM Drive (C:) :3 GB    Percent Left :25 %

Mailbox Store (EX1) -   #Mailboxes: 160   EDBSize(GB): 82,83   STMSize(GB): 46,44    Total(GB): 129,27
 Freespace on EDB Drive (E:) :66 GB   Percent Left :27 %
 Freespace on STM Drive (E:) :66 GB   Percent Left :27 %

Mailbox Store (EX2) -   #Mailboxes: 62   EDBSize(GB): 133,18   STMSize(GB): 42,73    Total(GB): 175,91
 Freespace on EDB Drive (E:) :24 GB   Percent Left :12 %
 Freespace on STM Drive (E:) :24 GB   Percent Left :12 %
```



Management Modules
Alarming on (1,2)

Bay	Status	IP Address	Primary
1	1	172.21.1.20	1
2	0	0.0.0.0	0

Power Modules:
Alarming on (1,2,3,4)

bay	status	speed
1	◆	Power module status OK
2	◆	Power module status OK
3	◆	Power module status OK
4	◆	Power module status OK

Heat:

sensor	heat
Internal	37.00 Centigrade
External	21.50 Centigrade

Blowers:

Bay	Status	Speed
1	◆	Not Readable!
1	◆	Not Readable!

Built-in self test:
◆ Internal ethernet switch

◆ All Blades are communicating
◆ All Blowers are functional
◆ Media Tray is communicating
◆ Power Modules are functional

Devmon version 0.3.1-beta1 running on nag

I/O Modules
Alarming on (1,2,3,4)

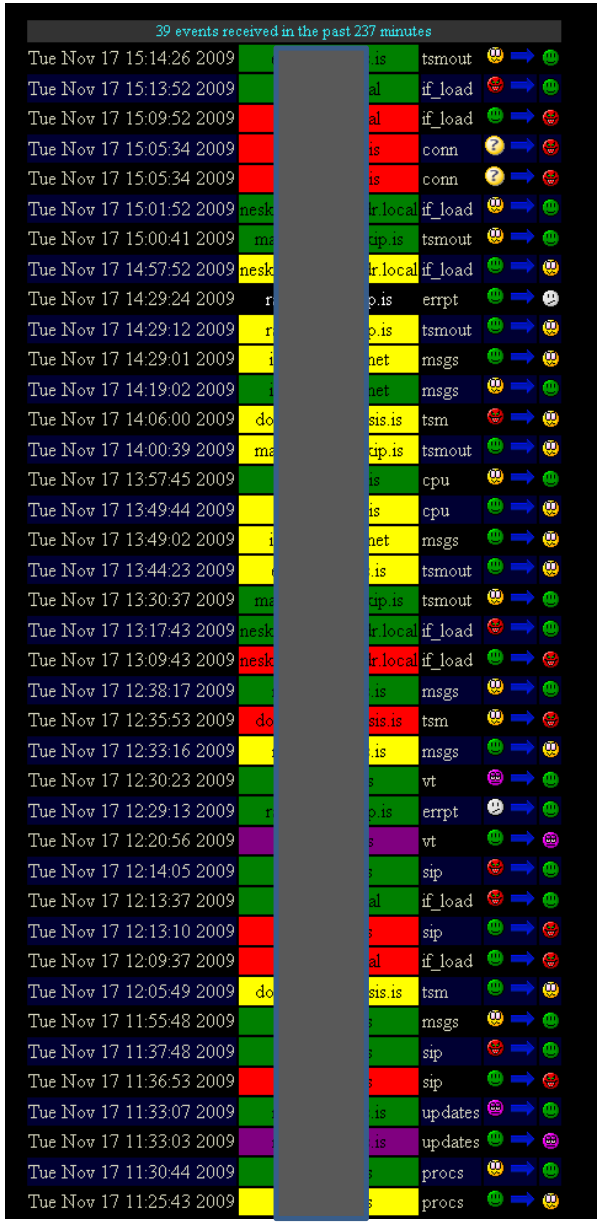
Bay	Status	Type	MAC Address	IP Address	Power	P
1	1 1	Ethernet	00:13:0A:D1:97:00	172.21.1.22	On	P ...illy.
2	1 1	Ethernet	00:17:EF:C7:AD:00	172.21.1.33	On	P ...illy.
3	1 1	Fiber	00:C0:DD:02:50:3B	172.21.1.25	On	POST results available: Module completed POST successfully.
4	1 1	Fiber	00:C0:DD:02:47:1B	172.21.1.24	On	POST results available: Module completed POST successfully.

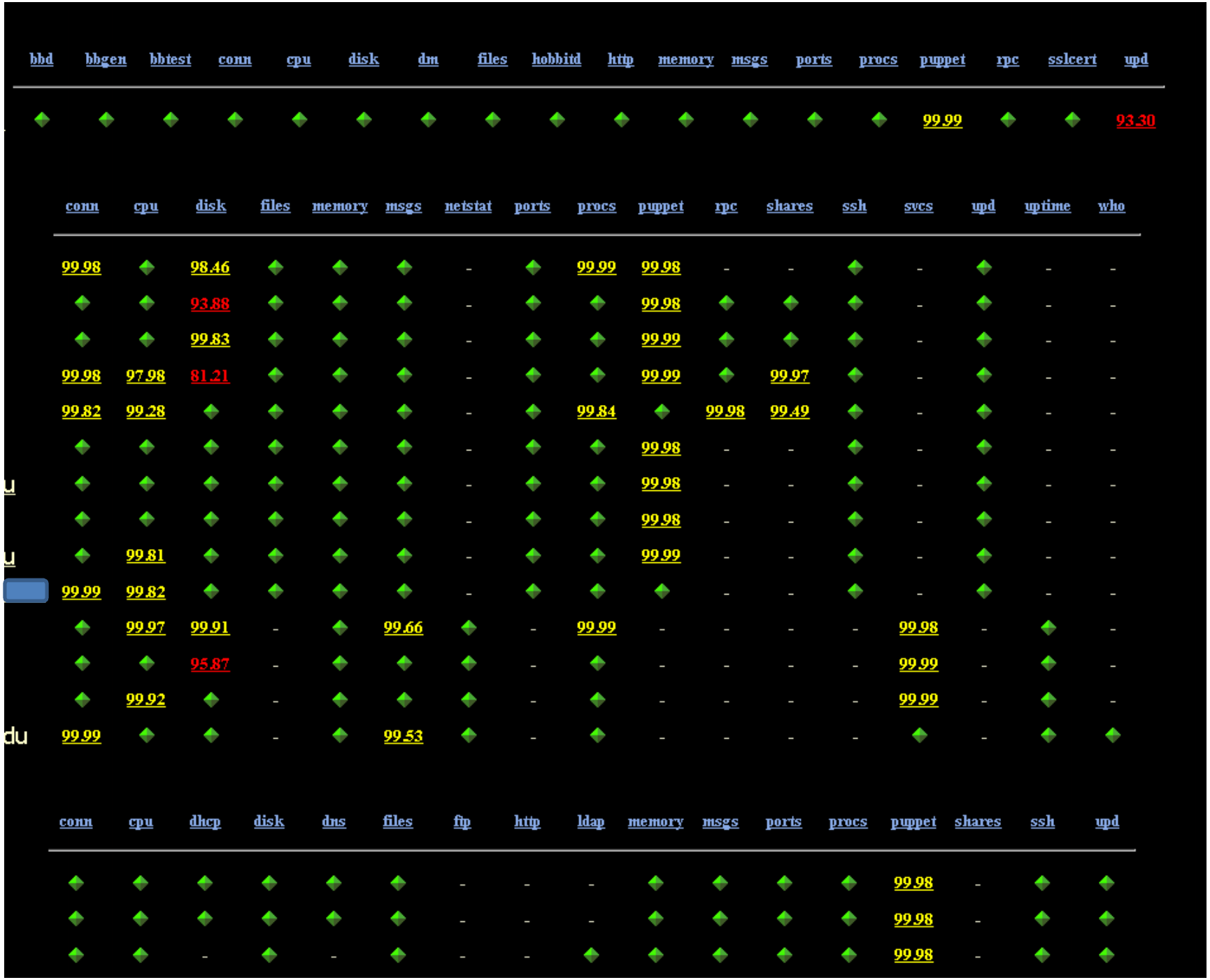
Sat Nov 8 14:30:28 EST 2008

```
   ds4000 is marginal
   Performing syntax check...

Syntax check complete.

Executing script...

The following failures have been found:
Degraded Logical Drive
Storage Subsystem: sa0[redacted]
Array: 10
  RAID level: 1
  Enclosure: Drive enclosure 8
    Affected drive slot(s): 6
    Service action (removal) allowed: Yes
    Service action LED on component: Yes
  Logical Drives: TSM_04_temporary_for_tsm2
    Status: Degraded - partially complete array

Logical Drive - Hot Spare In Use
Storage Subsystem: sa00100
Array: 10
  Failed drive at: enclosure 8, slot 6
    Service action (removal) allowed: Yes
    Service action LED on component: Yes
  Replaced by drive at: enclosure 1, slot 15
  Logical Drives: TSM_04_temporary_for_tsm2
    RAID level: 1
    Status: Degraded - partially complete array

Script execution complete.

SMcli completed successfully.
```

Alarming on (Gi2/3,Gi3/1,Gi3/3,Gi3/4,Gi3/5,Gi3/6,Gi3/7,Gi3/8,Gi3/9,Gi3/15)
Alarming on (Gi3/16,Gi3/17,Gi3/19,Gi3/21,Gi3/22,Gi3/23,Gi3/24)
Alarming on (Gi3/25,Gi3/27,Gi3/28,Gi3/29,Gi3/30,Gi3/31,Gi3/33)
Alarming on (Gi3/34,Gi3/39,Gi3/40,Gi3/41,Gi3/43,Gi3/44,Gi3/45)
Alarming on (Gi3/46,Gi3/47,Gi3/48,Gi4/1,Gi4/2,Gi4/5,Gi4/6,Gi4/8)
Alarming on (Gi4/9,Gi4/15,Gi4/16,Gi4/17,Gi4/19,Gi4/21,Gi4/22)
Alarming on (Gi4/23,Gi4/24,Gi4/25,Gi4/27,Gi4/28,Gi4/29,Gi4/30)
Alarming on (Gi4/31,Gi4/33,Gi4/34,Gi4/39,Gi4/40,Gi4/41,Gi4/46)
Alarming on (Gi4/47,Gi4/48,Po2,Po11,Po12,Po21,Po22,Po31,Po32)
Alarming on (Fa1)

Ifc name	Ifc speed	Ifc status
Gi1/3 [West Link to no[redacted]n]	1000.00 Mbps	up
Gi1/4	1000.00 Mbps	down
Gi1/5	1000.00 Mbps	down
Gi1/6	1000.00 Mbps	down
Gi2/3 [East Link to no[redacted]n]	1000.00 Mbps	up
Gi2/4	1000.00 Mbps	down
Gi2/5	1000.00 Mbps	down
Gi2/6	1000.00 Mbps	down
Gi3/1 [SA00101]	100.00 Mbps	up
Gi3/2	1000.00 Mbps	down


39 events received in the past 237 minutes
Tue Nov 17 15:14:26 2009 tsmout
Tue Nov 17 15:13:52 2009 if_load
Tue Nov 17 15:09:52 2009 if_load
Tue Nov 17 15:05:34 2009 conn
Tue Nov 17 15:05:34 2009 conn
Tue Nov 17 15:01:52 2009 if_load
Tue Nov 17 15:00:41 2009 tsmout
Tue Nov 17 14:57:52 2009 if_load
Tue Nov 17 14:29:24 2009 errpt
Tue Nov 17 14:29:12 2009 tsmout
Tue Nov 17 14:29:01 2009 msgs
Tue Nov 17 14:19:02 2009 msgs
Tue Nov 17 14:06:00 2009 tsm
Tue Nov 17 14:00:39 2009 tsmout
Tue Nov 17 13:57:45 2009 cpu
Tue Nov 17 13:49:44 2009 cpu
Tue Nov 17 13:49:02 2009 msgs
Tue Nov 17 13:44:23 2009 tsmout
Tue Nov 17 13:30:37 2009 tsmout
Tue Nov 17 13:17:43 2009 if_load
Tue Nov 17 13:09:43 2009 if_load
Tue Nov 17 12:38:17 2009 msgs
Tue Nov 17 12:35:53 2009 tsm
Tue Nov 17 12:33:16 2009 msgs
Tue Nov 17 12:30:23 2009 vt
Tue Nov 17 12:29:13 2009 errpt
Tue Nov 17 12:20:56 2009 vt
Tue Nov 17 12:14:05 2009 sip
Tue Nov 17 12:13:37 2009 if_load
Tue Nov 17 12:13:10 2009 sip
Tue Nov 17 12:09:37 2009 if_load
Tue Nov 17 12:05:49 2009 tsm
Tue Nov 17 11:55:48 2009 msgs
Tue Nov 17 11:37:48 2009 sip
Tue Nov 17 11:36:53 2009 sip
Tue Nov 17 11:33:07 2009 updates
Tue Nov 17 11:33:03 2009 updates
Tue Nov 17 11:30:44 2009 procs
Tue Nov 17 11:25:43 2009 procs


bbd bbgen bbtest conn cpu disk dm files hobbitd http memory msgs ports procs puppet rpc sslcert upd
99.99 93.30
conn cpu disk files memory msgs netstat ports procs puppet rpc shares ssh svcs upd uptime who
99.98 98.46 99.99 99.98 99.98 93.88 99.98 99.98 99.83 99.99 99.98 97.98 81.21 99.99 99.97 99.82 99.28 99.84 99.98 99.49 99.98 99.98 99.98 99.81 99.99 99.99 99.82 99.97 99.91 99.66 99.99 99.98 95.87 99.99 99.92 99.98 99.99 99.53
conn cpu dhcp disk dns files ftp http ldap memory msgs ports procs puppet shares ssh upd
99.98 99.98 99.98

Spurningar ?

Takk fyrir