Monitoring your Network with Linux

WAVV 2005
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Agenda

- Why monitor the network?

- Hobbit Network Monitor

- Hobbit concepts

- Installing and configuring Hobbit

- Extending Hobbit

- Hobbit operations

Why monitor the network?

- Monitoring packages available for our systems
  - CICS, VSE, VM, Linux
  - Designed to monitor internals (tasks, jobs)
- Networks are getting more complex
- Systems are very interconnected
- We rely much more on varying types of systems

Why monitor the network?

- Many machines perform 'business critical' functions
- Network administrators need to know when these systems are down
  - Or running degraded
- Notification of administrators off shift

Hobbit Network Monitor

- Network availability monitor

- Web based display

- Uses colored icons and backgrounds

- Can perform any number of tests on any number of hosts

- Reports test results as a state
  - Up, down, on, off, red, green

- Marginal state used for impending trouble
  - yellow

Hobbit Network Monitor

- Network tests run every 5 minutes

- The web page updates are done every minute

- If a test fails, it is re-tested every minute for 30 minutes

  - Reduces the need to change the test time

Hobbit History

- Originally called 'bb-gen toolkit'

- Offered as an enhancement to Big Brother (http://bb4.com)

- Big Brother runs on various Unix systems

  - Implemented almost entirely as shell scripts

  - Easy to write and fairly universal, but not the best performance

  - Not an open source license

  - Development focused on commercial product

- bb-gen reimplemented the core of bb in C

Hobbit History

- Development of the 'free' version of bb stagnated

- Henrik Stoerner evolved bb-gen into a stand-alone package

- Hobbit 4.0 was released on Mar 31, 2005

- Very active development

  - 4.0.3 is current

Hobbit features

- Developed to monitor thousands of hosts

  – Handles big or small networks with ease

- Text file configuration

  – Web based configuration is planned

- Notification feature

  – Email (including cell phone), SMS

- Extensible through external scripts or clients

Hobbit features

- Networked applications can be monitored
  - Connections are mimicked and typical responses watched

- Common protocols are available
  - FTP, Telnet, HTTP, DNS, LDAP, SMTP, etc
  - SSL testing of any protocols

- Testing of multiple servers can be combined into a single report

Hobbit features

- "Green is good, Red is bad"

    – Simple web based front end

- Hosts can be grouped together

    – Based on logical or physical relationships

    – Groups can be in separate sections, web pages or both

- Tests for certain hosts can be on a separate page specifically suited to a NOC.

Hobbit features

- In addition to HTML...

  - PDAs can be used via WAP/WML

  - RSS Feeds can be set up

  - XML format is also available

- Integrated trend analysis via LARRD

  - Generates graphs

- Event history is available

  - Can be used for SLA reporting

- Hosts can be disabled for planned downtime

Hobbit installation

- Fairly standard Linux application install
  - RPMs available for x86 architecture
  - Source RPMs available
  - Source also available via tarball
- Available from
  - http://hobbitmon.sourceforge.net
- If installing on x86, use the RPM
- For zSeries, install the source RPM
  - Or 'build your own'
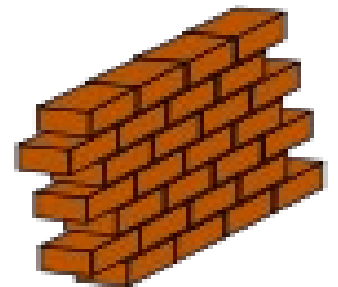
Hobbit installation

- Prerequisites

  - A Unix-like operating system

  - Apache webserver

  - Working compiler and GNU make

  - PCRE, RRDTool, libpng and fping

    - Regular expression matching

    - Graphing

    - Fast connection test

  - For SSL support

    - Open SSL

  - For LDAP support

    - Open LDAP
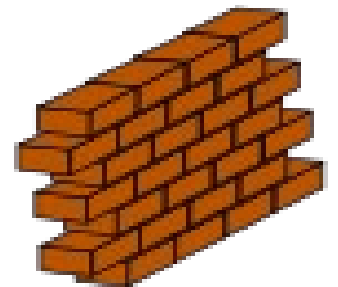
Hobbit installation

- Create a 'hobbit' user

- Use RPM or configure/make to build

- During the configuration, a number of questions are asked

  - The defaults are sensible

  - Only had to answer the location of fping and IP address prompts

- Use make to build the package

- As root 'make install'
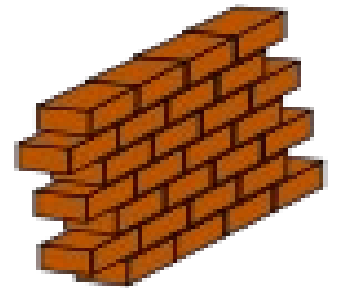
Apache configuration

- An Apache configuration file is included with Hobbit

  - ~/server/etc/hobbit-apache.conf

- Copy to /etc/apache2/sysconfig.d

- Edit /etc/sysconfig/apache2

  - Put the local hostname in APACHE_SERVERNAME

  - The path to the configuration file in APACHE_CONF_INCLUDE_FILES

```
APACHE_CONF_INCLUDE_FILES=/etc/apache2/sysconfig.d/hobbit-apache.conf
```

Apache configuration

- Start Apache
  - /etc/rc.d/apache2 start
- Test access to webserver
- Set up Apache to start at boot
  - chkconfig apache2 on
  - YaST
- Use htpasswd to create users for access secured Hobbit administration functions
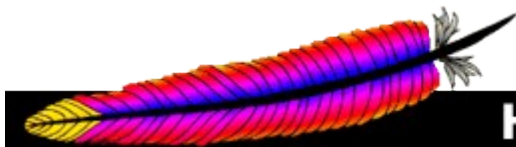
Hobbit startup

- Sign on as 'hobbit' user

- Use the command

    - ./server/hobbit.sh start

- The response should be 'Hobbit started'

- A number of process will be running

    - An explanation of what they do is in the documentation

- After a few minutes use your web browser to navigate to your Hobbit server

    - http://192.168.201.12/hobbit/

Hobbit web page
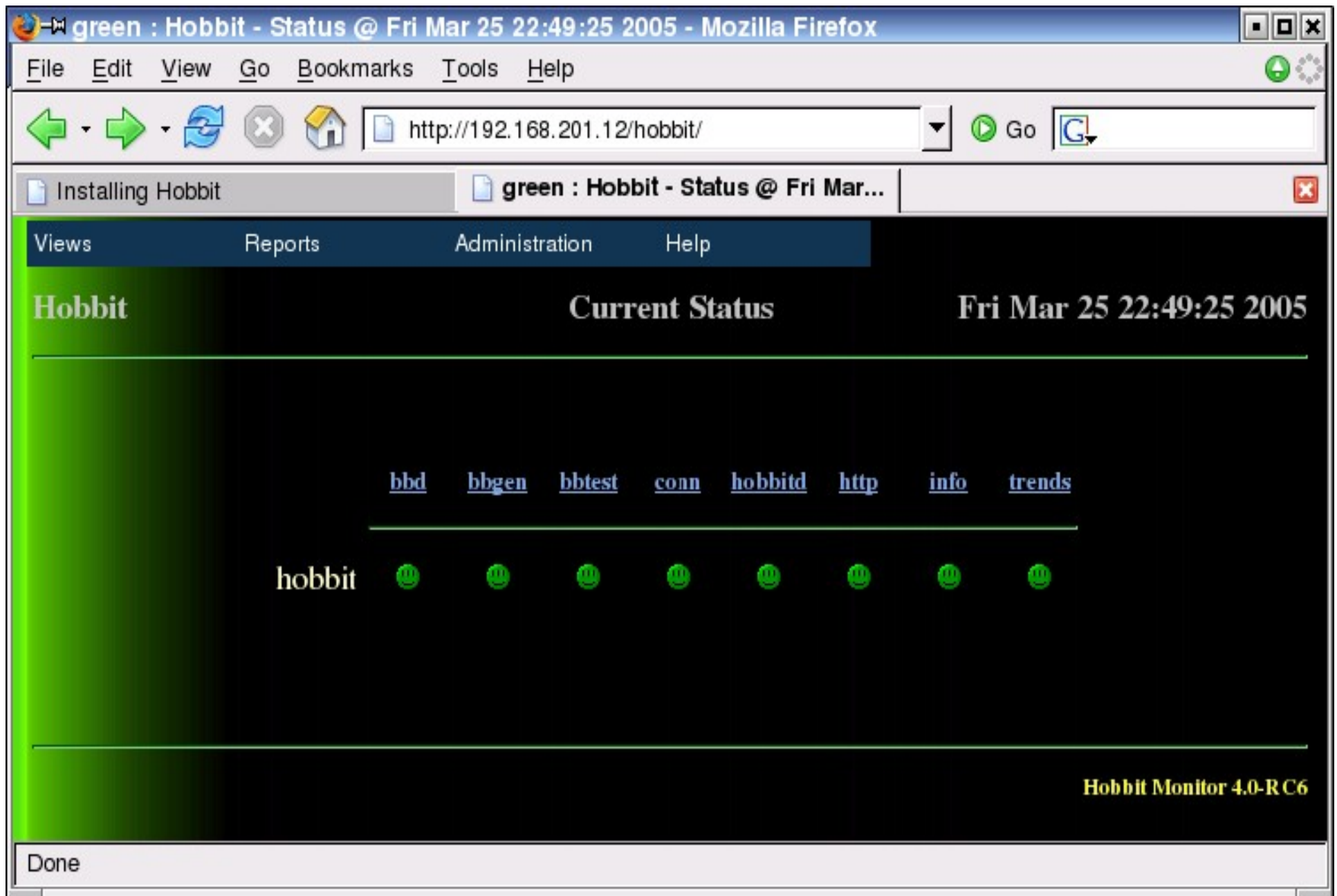
Hobbit web page

- Provides the status of the Hobbit server

- Clicking on an icon provides more information

- Including trending graphs

Hobbit web page

Configuring Hobbit

- Configuration involves editing text files

    - Web based configuration is planned

- Primarily ~/server/etc/bb-hosts

- Changes automatically take affect during the next test cycle

Hobbit configuration file

```
group Hobbit Servers
192.168.201.12    hobbit            # BBDISPLAY BBPAGER BBNET bbd http://hobbit/
group Linux for zSeries
192.168.201.8     conn2             # ftp dialup
192.168.201.9     db2b              # ftp NK:ftp
group VM/VSE systems
192.168.201.1     vm1               # ftp NK:conn,procs
192.168.201.2     vse1              # dialup
```

Hobbit configuration file

```
group Hobbit Servers
192.168.201.12      hobbit          # BBDISPLAY BBPAGER BBNET bbd http://hobbit/
group Linux for zSeries
192.168.201.8       conn2           # ftp dialup
192.168.201.9       db2b            # ftp NK:ftp
group VM/VSE systems
192.168.201.1       vm1             # ftp NK:conn,procs
192.168.201.2       vse1            # dialup
```

IP Address of a monitored host

Hobbit configuration file

```
group Hobbit Servers
192.168.201.12    hobbit          # BBDISPLAY BBPAGER BBNET bbd http://hobbit/
group Linux for zSeries
192.168.201.8     conn2           # ftp dialup
192.168.201.9     db2b            # ftp NK:ftp
group VM/VSE systems
192.168.201.1     vm1             # ftp NK:conn,procs
192.168.201.2     vse1            # dialup
```

Host name of a monitored host
fully qualified or not

Hobbit configuration file

```
group Hobbit Servers
192.168.201.12    hobbit        # BBDISPLAY BBPAGER BBNET bbd http://hobbit/
group Linux for zSeries
192.168.201.8     conn2         # ftp dialup
192.168.201.9     db2b          # ftp NK:ftp
group VM/VSE systems
192.168.201.1     vm1           # ftp NK:conn,procs
192.168.201.2     vse1          # dialup
```

Directives used for Big Brother compatibility

Hobbit configuration file

```
group Hobbit Servers
192.168.201.12    hobbit         # BBDISPLAY BBPAGER BBNET bbd http://hobbit/
group Linux for zSeries
192.168.201.8     conn2          # ftp dialup
192.168.201.9     db2b           # ftp NK:ftp
group VM/VSE systems
192.168.201.1     vm1            # ftp NK:conn,procs
192.168.201.2     vse1           # dialup
```

Identifies this system as the hobbit server

Hobbit configuration file

```
group Hobbit Servers
192.168.201.12    hobbit      # BBDISPLAY BBPAGER BBNET bbd http://hobbit/
group Linux for zSeries
192.168.201.8     conn2       # ftp dialup
192.168.201.9     db2b        # ftp NK:ftp
group VM/VSE systems
192.168.201.1     vm1         # ftp NK:conn,procs
192.168.201.2     vse1        # dialup
```

Monitor Hobbit's own web site

Hobbit configuration file

```
group Hobbit Servers
192.168.201.12     hobbit        # BBDISPLAY BBPAGER BBNET bbd http://hobbit/
group Linux for zSeries
192.168.201.8      conn2         # ftp dialup
192.168.201.9      db2b          # ftp NK:ftp
group VM/VSE systems
192.168.201.1      vm1           # ftp NK:conn,procs
192.168.201.2      vse1          # dialup
```

Monitor ftp on conn2, db2b and vm1

Hobbit configuration file

```
group Hobbit Servers
192.168.201.12    hobbit        # BBDISPLAY BBPAGER BBNET bbd http://hobbit/
group Linux for zSeries
192.168.201.8     conn2         # ftp dialup
192.168.201.9     db2b          # ftp NK:ftp
group VM/VSE systems
192.168.201.1     vm1           # ftp NK:conn,procs
192.168.201.2     vse1          # dialup
```
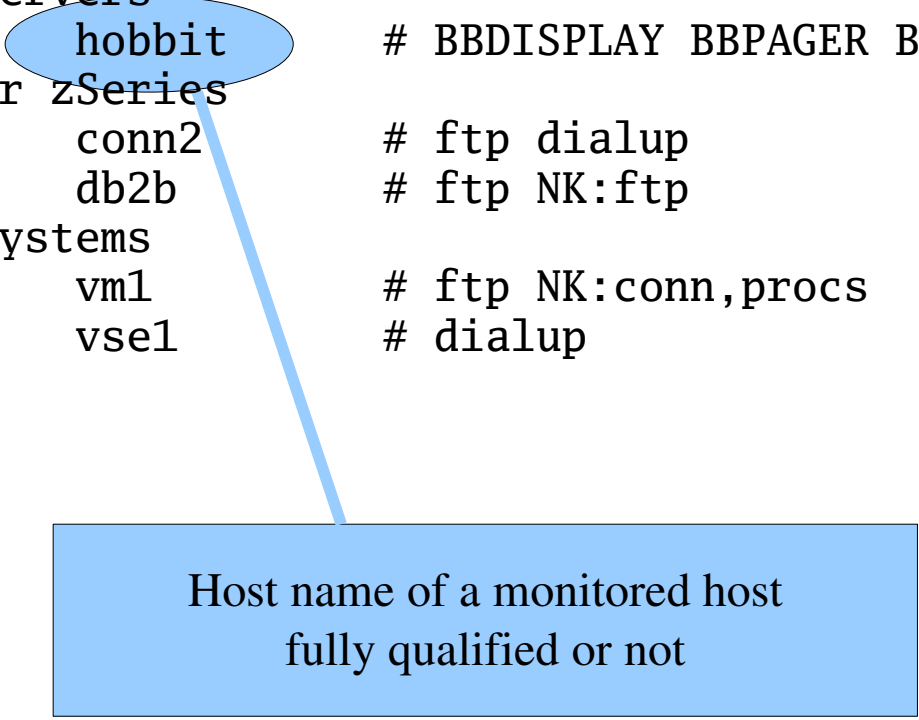
Treat conn2 and vse1 as dialup links
If they are unreachable, no notifications

Hobbit configuration file
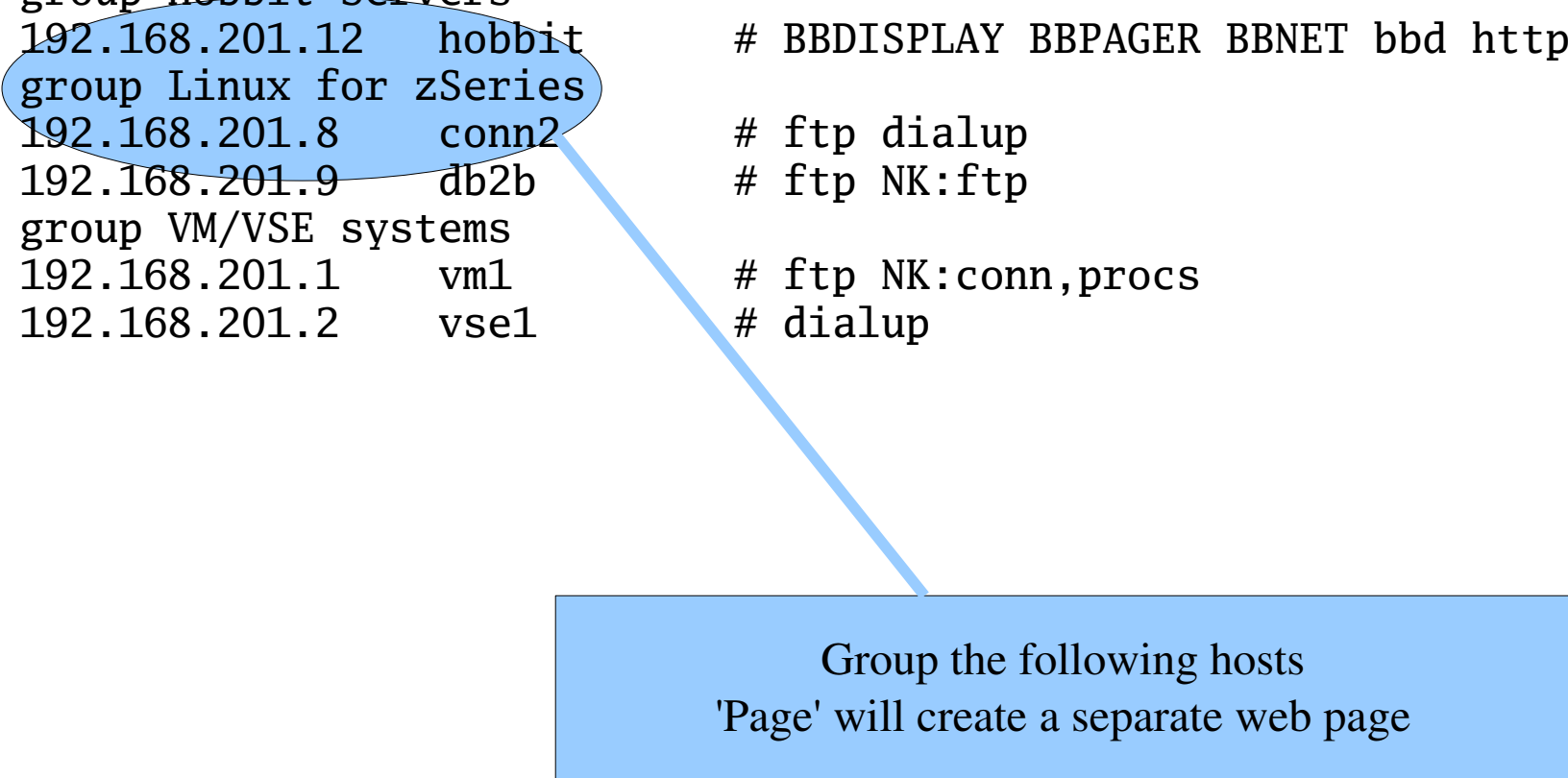
```
group Hobbit Servers
192.168.201.12    hobbit        # BBDISPLAY BBPAGER BBNET bbd http://hobbit/
group Linux for zSeries
192.168.201.8     conn2         # ftp dialup
192.168.201.9     db2b          # ftp NK:ftp
group VM/VSE systems
192.168.201.1     vm1           # ftp NK:conn,procs
192.168.201.2     vse1          # dialup
```

Special directive for the NK View page

Hobbit configuration file

```
group Hobbit Servers
192.168.201.12    hobbit        # BBDISPLAY BBPAGER BBNET bbd http://hobbit/
group Linux for zSeries
192.168.201.8     conn2         # ftp dialup
192.168.201.9     db2b          # ftp NK:ftp
group VM/VSE systems
192.168.201.1     vm1           # ftp NK:conn,procs
192.168.201.2     vse1          # dialup
```
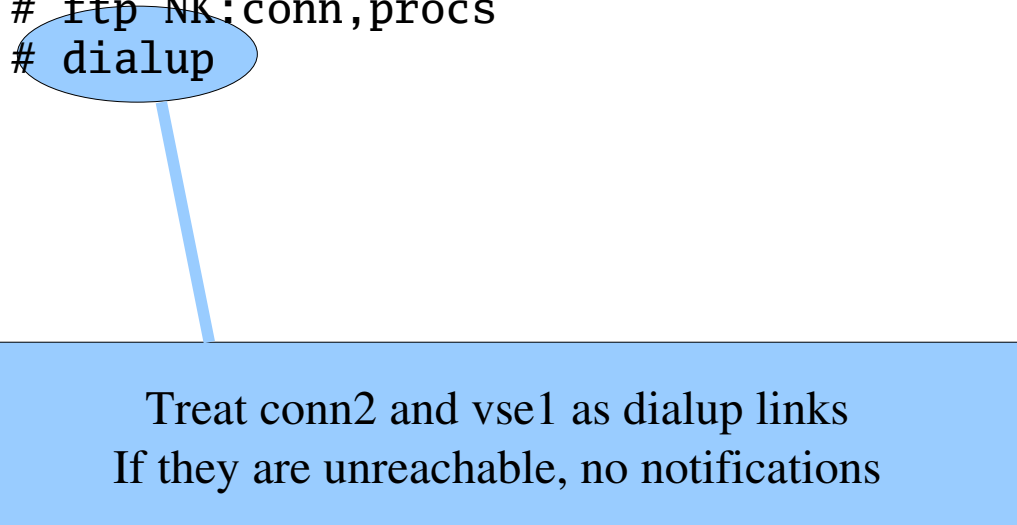
Group the following hosts
'Page' will create a separate web page

Views   Reports   Administration   Help

Hobbit   **Current Status**   **Fri Apr 22 15:30:29 2005**

Hobbit Servers	bbd	bbgen	bbtest	conn	hobbitd	http	info	trends
hobbit	◆	☺	◆	◆	☺	◆	◆	◆

Linux for zSeries	conn	ftp	info	trends
conn2	▦	▦	◆	◆
db2b	☺	☺	◆	◆

VM/VSE systems	conn	cpu	ftp	getvis	info	paging	pg_util	procs	sp_util	trends
vm1	◆	◆	◆	-	◆	◆	◆	◆	◆	◆
vse1	▦	-	-	-	◆	-	-	-	-	◆
vse2	◆	-	-	◆	◆	-	-	◆	◆	◆

Hobbit Monitor 4.0

Done

Host or service failure

- Detected by Hobbit during it's network test cycle

- Turns the icon and web page background red

- Shows 'red' in the web page title bar

- Notifies appropriate administrator via email or page

File   Edit   View   Go   Bookmarks   Tools   Help

http://192.168.201.12/hobbit/

Views   Reports   Administration   Help

Hobbit   **Current Status**   **Fri Apr 22 15:55:06 2005**

Hobbit Servers	bbd	bbgen	bbtest	conn	hobbitd	http	info	trends
hobbit	◆	☺	◆	◆	☺	◆	◆	◆

Linux for zSeries	conn	ftp	info	trends
conn2	▣	▣	◆	◆
db2b	☺	☻	◆	◆

VM/VSE systems	conn	cpu	ftp	getvis	info	paging	pg_util	procs	sp_util	trends
vm1	◆	◆	◆	-	◆	◆	◆	◆	◆	◆
vse1	▣	-	-	-	◆	-	-	-	-	◆
vse2	◆	-	-	◆	◆	-	-	◆	◆	◆

Hobbit Monitor 4.0

Done

Other views of the network

- Three different views
  - Main View
  - All non-green view
    - All systems that are currently not green
    - Shows last 6 hours or last 25 state transitions
  - NK view
    - Systems currently not green identified by NK tag

Views   Reports   Administration   Help

Hobbit   **Current non-green Systems**   **Fri Apr 22 16:37:23 2005**

All Monitored Systems OK

5 events received in the past 75 minutes

Fri Apr 22 16:37:12 2005 db2b ftp

Fri Apr 22 15:41:57 2005 db2b ftp

Fri Apr 22 15:36:54 2005 db2b ftp

Fri Apr 22 15:21:46 2005 db2b ftp

Fri Apr 22 15:21:46 2005 db2b conn

No events acknowledged in the last 240 minutes

Hobbit Monitor 4.0

Done

Views   Reports   Administration   Help

Main view
All non-green view
NK view

Current non-green Systems   Fri Apr 22 15:56:08 2005

ftp   info   trends

db2b

4 events received in the past 34 minutes

Fri Apr 22 15:41:57 2005 db2b ftp

Fri Apr 22 15:36:54 2005 db2b ftp

Fri Apr 22 15:21:46 2005 db2b ftp

Fri Apr 22 15:21:46 2005 db2b conn

No events acknowledged in the last 240 minutes

Hobbit Monitor 4.0

File Edit View Go Bookmarks Tools Help

http://192.168.201.12/hobbit/bbnk.html

Views   Reports   Administration   Help

Main view
All non-green view
NK view

Current Critical Systems   Fri Apr 22 16:04:31 2005

ftp   info   trends

db2b

Hobbit Monitor 4.0

Host or service return

- When a host or service becomes available

- Icons and page background turn green

- An optional notification can be sent out

- Non-green page shows the transition

Extending Hobbit

- Hobbit provides a lot of information by itself

- Designed to retain compatibility with Big Brother

- Big Brother has a large number of 'add-on' packages and clients for other operating systems

Extending Hobbit

- Big Brother extensions are available at
  http://www.deadcat.net

- Community contributions to extend/improve monitoring

- A large number of categories of packages

  – Backup, Clusters, Databases, LDAP, Windows, performance, processes, SNMP, disk, email, files, memory, RAID, power, security, routers, logging, NFS, skins

Extending Hobbit

- The majority of these should be compatible with Hobbit

- Clients for other operating systems

    - OS/400

    - OS/390 z/OS

    - Netware

    - Alpha OpenVMS

    - z/VM

Extending Hobbit

- z/VM client

  - Runs in a virtual machine

  - Written in REXX

  - Reports CPU Utilization, Paging, Page and Spool Utilization and running virtual machines

Extending Hobbit

- z/OS client

  – Runs as a started task

  – Written in REXX and assembler

  – Reports CPU Utilization, Spooling, Paging, running processes, disk volume utilization, storage

Extending Hobbit

- Hobbit provides a well defined interface for reporting status messages

  – The same interface Big Brother used

  – Status can be reported

    - Locally (on the Hobbit server) via a command
    - Via a socket connection over port 1984

- Open a socket to the Hobbit server

- Send a status message:

```
status vm1.cpu green 30 Mar 2005 08:20:06   CPU Utilization   25%

z/VM Version 4, Release 4.0, service level 0402 (32-bit)

AVGPROC-025% 01
```

File   Edit   View   Go   Bookmarks   Tools   Help

http://192.168.201.12/hobbit-cgi/bb-hostsvc.sh?HOSTSVC=vm1.

Views   Reports   Administration   Help

Hobbit   **vm1 - cpu**   **Thu Apr 28 15:27:23 2005**

HISTORY

28 Apr 2005 15:27:23 CPU Utilization 31%

z/VM Version 4 Release 4.0, service level 0402 (32-bit)
AVGPROC-031% 01

Status unchanged in 28 days,5 hours, 47 minutes
Status message received from 192.168.201.1

hobbit graph la

Hobbit Monitor 4.0

Done

When clients don't respond

- Hobbit expects clients to communicate at regular intervals

- Most default to the standard Hobbit interval of 5 minutes

- If a status report is not received after 30 minutes, Hobbit turns the client tests purple

- If properly configured a notification will be sent out

- Green is restored when the client is restarted

File Edit View Go Bookmarks Tools Help

http://192.168.201.12/hobbit/bb.html

Views   Reports   Administration   Help

Hobbit   Current Status   Thu Apr 28 16:38:07 2005

Hobbit Servers	bbd	bbgen	bbtest	conn	hobbitd	http	info	trends
hobbit	◆	◆	◆	◆	☺	◆	◆	◆

Linux for zSeries	conn	ftp	info	trends
conn2	▦	▦	◆	◆
db2b	◆	◆	◆	◆

VM/VSE systems	conn	cpu	ftp	getvis	info	paging	pg_util	procs	sp_util	trends
vm1	◆	☹	◆	-	◆	☹	☹	☹	☹	◆
vse1	▦	-	-	-	◆	-	-	-	-	◆
vse2	☺	-	-	☺	◆	-	-	☺	☺	◆

Hobbit Monitor 4.0

Done

Hobbit operations

- Starting and stopping

- Outage notification

- Alert Acknowledgment

- Enable/Disable

- Reporting

Starting and stopping Hobbit

- The traditional Linux start/stop process can be used

- Script is not provided, easy to create

- Copy existing script (like cron) to hobbit

- Will appear in output of `chkconfig --list` so that startup can be turned on or off

Starting and stopping Hobbit

```sh
#! /bin/sh
### BEGIN INIT INFO
# Provides:        hobbit
# Required-Start: network
# Required-Stop:  network
# Default-Start:  3 5
# Default-Stop:   3
# Description:     Start the hobbit network monitor
### END INIT INFO

case "$1" in
    start)
        echo "Starting Hobbit"
        su - hobbit -c "cd /home/hobbit/server; ./hobbit.sh start"
        ;;
    stop)
        echo "Stopping Hobbit"
        su - hobbit -c "cd /home/hobbit/server; ./hobbit.sh stop"
        ;;
    restart)
        $0 stop
        $0 start
        rc_status
        ;;
    *)
        echo "Usage: $0 {start|stop|restart}"
        exit 1
        ;;
esac
```

Outage Notification

- A page or email is sent out when a non-green condition occurs

- Most cell phones are email capable

- Very configurable and flexible

- Very good information in the docs

- Configuration data in ~/server/etc/hobbit-alerts.cfg

- File contains rules about the host and service and who is notified

Outage Notification

- Simple example

```
HOST=vse2
      MAIL rsmrcina@vmassist.com
```

- Sends an email to rsmrcina@vmassist.com if any test related to vse2 fails

Outage Notification
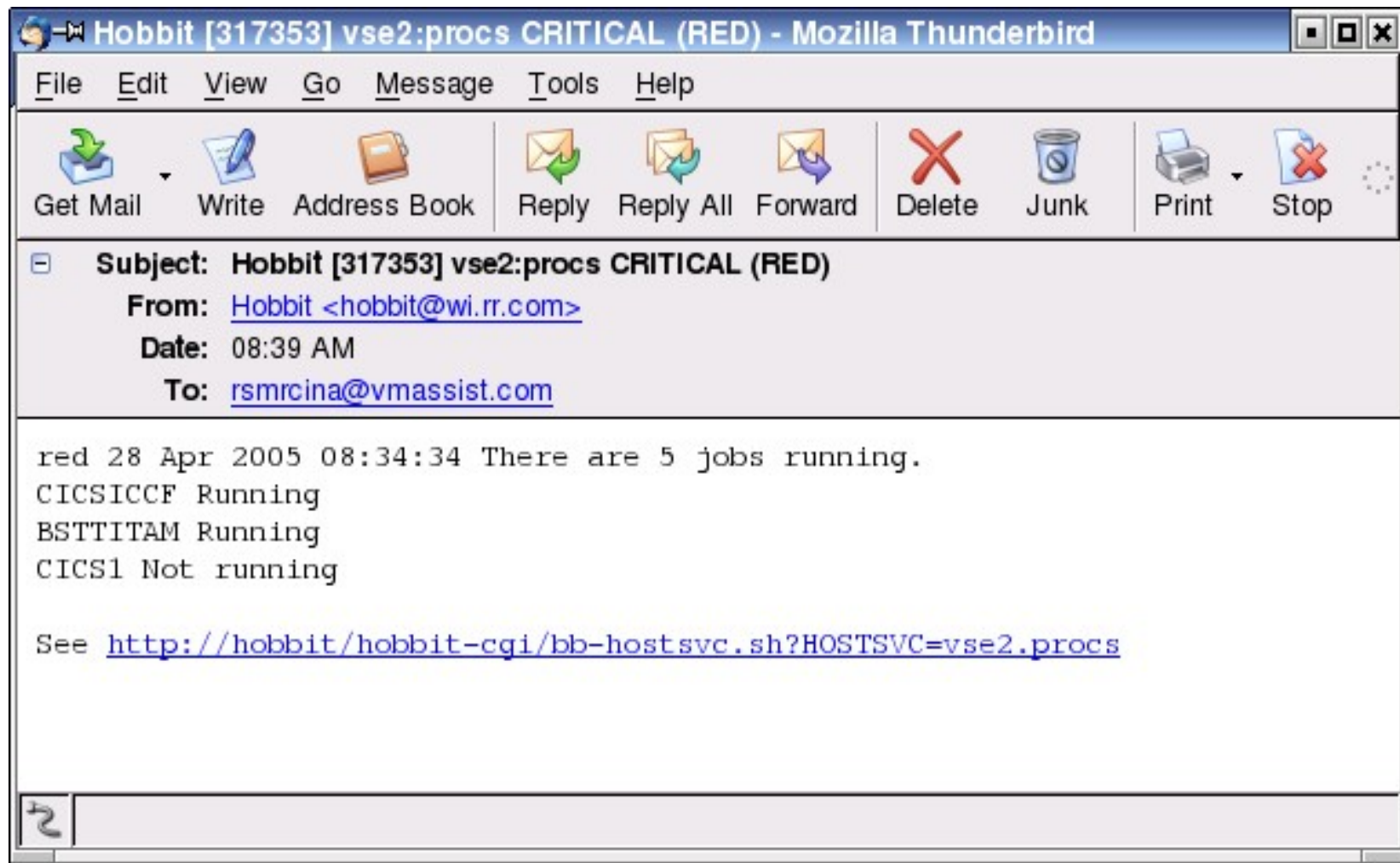
Outage Notification

- SERVICE – notify for one or more services

    – SERVICE=conn,http,ftp

- REPEAT – repeat notification, default 30m

    – REPEAT=1h

- TIME – time range for notification

    – TIME=*:0730:2100

- COLOR – only notify for certain color

    – COLOR=red

Outage Notification

- DURATION – Only alert if outage is longer than time indicated
    - DURATION>10m
    - DURATION<2h
- RECOVERED – Sends alert when host/service returns
- SCRIPT – Used to code alternative alert mechanism, eg. SMS page

Outage Notification

- Wildcards can be used in the hostname and service name

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

- To save typing, macros are supported

  - $ZLINUX=%(conn2|db2b) $VSE=%(vse1|vse2)

  - Anywhere a macro is used, it is replaced

  - Works with recipients also

  - $ZSUPPORT=%(rsmrcina|jdoe|helpdesk)@vmassist.com

Outage Notification

HOST=conn2,db2b

    MAIL rsmrcina@vmassist.com

    MAIL jdoe@vmassist.com

    MAIL helpdesk@vmassist.com

$ZLINUX=%(conn|db2b)

$ZSUPPORT=%(rsmrcina|jdoe|helpdesk)@vmassist.com

HOST=$ZLINUX

    MAIL $ZSUPPORT

Alert Acknowledgment

- An administrator can acknowledge an alert

  - Stops notification

  - Changes web page

  - Let's users know that a resolution is near

- Each alert includes an acknowledgment code
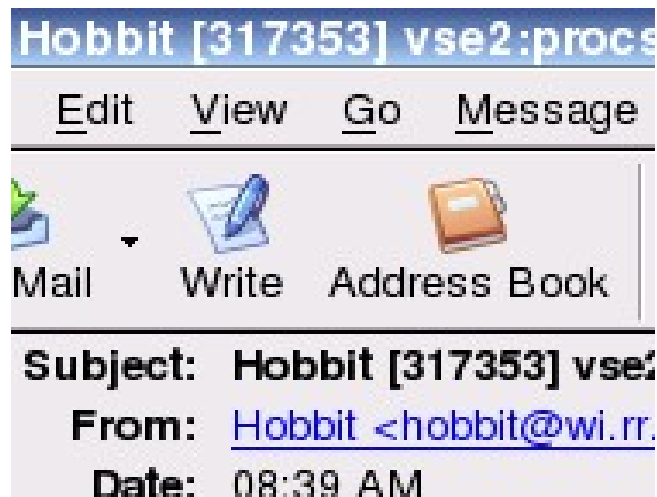
Alert Acknowledgment

- On the Hobbit 'Administration Menu' click Acknowledge Alert

Alert Acknowledgment

- Enter
  - Duration of outage
  - Explanation
  - Acknowledgment code
- Hit Send
- Red icon turns to a check mark to indicate acknowledgment

File   Edit   View   Go   Bookmarks   Tools   Help

http://192.168.201.12/hobbit/bb.html

Views   Reports   Administration   Help

Hobbit   **Current Status**   **Thu Apr 28 13:27:36 2005**

Hobbit Servers	bbd	bbgen	bbtest	conn	hobbitd	http	info	trends
hobbit	◆	◆	◆	◆	☺	◆	◆	◆

Linux for zSeries	conn	ftp	info	trends
conn2	▣	▣	◆	◆
db2b	◆	◆	◆	◆

VM/VSE systems	conn	cpu	ftp	getvis	info	paging	pg_util	procs	sp_util	trends
vm1	◆	◆	◆	-	◆	◆	◆	◆	◆	◆
vse1	▣	-	-	-	◆	-	-	-	-	◆
vse2	✓	-	-	◆	◆	-	-	◉	◆	◆

Hobbit Monitor 4.0

Done

File   Edit   View   Go   Bookmarks   Tools   Help

http://192.168.201.12/hobbit-cgi/bb-hostsvc.sh?HOSTSVC=vse2

Views   Reports   Administration   Help
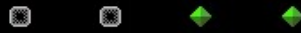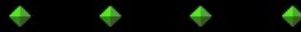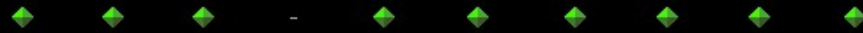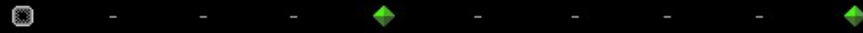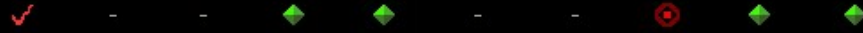
Hobbit   **vse2 - conn**   **Thu Apr 28 13:29:44**
2005

HISTORY

Thu Apr 28 13:29:39 2005 conn NOT ok

Service conn on vse2 is not OK : Host does not respond to ping

System unreachable for 3 poll periods (428 seconds)

⊙ 192.168.201.3 is unreachable

Status unchanged in 0 hours, 7 minutes
Status message received from 192.168.201.12
Current acknowledgment: System abend
Acked by: rks0 (192.168.1.101)
Next update at: 14:25 2005-04-28

vse2 TCP Connection Times Last 48 Hours

300 m

200 m

100 m

0

Seconds

18:00   00:00   06:00   12:00   18:00   00:00   06:00   12:00

■ conn :   0.0 (cur) : 282.0m (max) :   0.0 (min) : 21.5m (avg)
Updated: 28-Apr-2005 13:30:20

Done
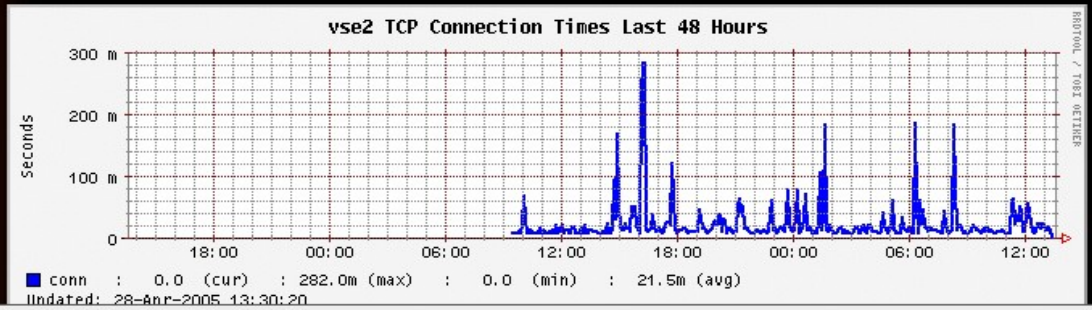
Enable/Disable

- Stop or start the test for a service

- Use for planned outages

Enable/Disable

- Select the host and test to disable

- Enter a reason and timeframe

- Indicate whether to disable now or schedule for another time

- Press disable button

http://192.168.201.12/hobbit-seccgi/maint.pl

Views   Reports   Administration   Help

Hobbit   **Maintenance**   **Thu May 19 20:53:35 2005**

Big Brother Disabling and Enabling

Refresh Display

Status	**Hosts**	**Tests**
No changes made	ALL conn2 db2b hobbit vm1 vse1 vse2	ALL conn ftp

Show Instructions

Reason: Upgrade to z/VSE 3.1

Username: rks0 at 192.168.200.253

Duration: 4   hours

Currently Disabled Tests

None

● Disable Now
○ Schedule for Disable

Year	Month	Day	Hour	Min
2005	05	24	08	00

Scheduled Disabled Tests ("at" queue on hobbit)

None

Disable   Reset

Done

File Edit View Go Bookmarks Tools Help

http://192.168.201.12/hobbit-seccgi/maint.pl

Views   Reports   Administration   Help

Hobbit   **Maintenance**   **Thu May 19 20:57:43 2005**

Big Brother Disabling and Enabling

Refresh Display

Status

Processing...

Disabled [conn2.conn] on [192.168.201.12]
Disabled [conn2.ftp] on [192.168.201.12]

Show Instructions

Currently Disabled Tests

Enable?	Host	Test	Offline Until
☐	conn2	conn	
		ftp	
☐ Check All		Re-enable _All tests for each selected host will be re-enabled_	

Scheduled Disabled Tests ("at" queue on hobbit)

None

Hosts

ALL
conn2
db2b
hobbit
vm1
vse1
vse2

Tests

Pick a host...

Reason:

Username: rks0 at 192.168.200.253

Duration: 4 hours

● Disable Now
○ Schedule for Disable

Year	Month	Day	Hour	Min
2005	05	19	20	57

Disable   Reset

Done

http://192.168.201.12/hobbit/bb.html

| Views | Reports | Administration | Help |

Hobbit

Current Status

Thu May 19 21:18:14 2005

Hobbit Servers

	bbd	bbgen	bbtest	conn	hobbitd	http	info	trends
hobbit	◆	◆	◆	◆	☺	☺	☺	☺

Linux for zSeries

	conn	ftp	info	trends
conn2	🔵	🔵	☺	☺
db2b	◆	◆	☺	☺

VM/VSE systems

	conn	cpu	ftp	getvis	info	paging	pg_util	procs	sp_util	trends
vm1	◆	◆	◆	-	☺	◆	◆	◆	◆	☺
vse1	◆	-	-	-	☺	-	-	-	-	☺
vse2	◆	-	-	☺	☺	-	-	☺	☺	☺

Hobbit Monitor 4.0.3rc2

Done

Hobbit reports

- Event Log report is similar to the non-green view
    - You can control how far back to go
    - You can control how many events to show

File Edit View Go Bookmarks Tools Help

http://192.168.201.12/hobbit-cgi/bb-eventlog.sh

Views   Reports   Administration   Help

Hobbit   Eventlog   Wed Apr 27 11:05:26 2005

How long to go back in time: `6000`   minutes

Max. number of events   `100`

[View log]

Hobbit Monitor 4.0

Done

File   Edit   View   Go   Bookmarks   Tools   Help

http://192.168.201.12/hobbit-cgi/bb-eventlog.sh?MAXTIME=6000&MAXCOL

Views   Reports   Administration   Help

Hobbit   **Eventlog**   **Wed Apr 27 11:08:07 2005**

23 events received in the past 5925 minutes			
Wed Apr 27 10:09:05 2005	db2b	ftp	
Wed Apr 27 10:09:05 2005	db2b	conn	
Wed Apr 27 09:38:46 2005	hobbit	hobbitd	
Wed Apr 27 09:38:46 2005	vse2	getvis	
Wed Apr 27 09:38:46 2005	vse2	procs	
Wed Apr 27 09:38:46 2005	vse2	sp_util	
Wed Apr 27 09:33:43 2005	hobbit	hobbitd	
Wed Apr 27 09:30:55 2005	hobbit	http	
Wed Apr 27 09:29:01 2005	hobbit	http	
Sat Apr 23 15:36:59 2005	hobbit	bbtest	
Sat Apr 23 15:32:26 2005	hobbit	bbtest	
Sat Apr 23 13:56:58 2005	hobbit	bbtest	
Sat Apr 23 13:51:49 2005	hobbit	bbtest	
Sat Apr 23 12:21:33 2005	hobbit	bbtest	
Sat Apr 23 12:16:21 2005	hobbit	bbtest	
Sat Apr 23 08:45:49 2005	vse2	procs	
Sat Apr 23 08:44:34 2005	hobbit	hobbitd	
Sat Apr 23 08:39:34 2005	hobbit	hobbitd	
Sat Apr 23 08:36:54 2005	hobbit	http	

Done

Hobbit reports

- Availability report will show the percentage of time that each host and service is available

- Enter a date range and one of three options

    - Critical events (red)

    - Non-green events

    - All events

Views   Reports   Administration   Help

Event log Report
Availability Report
Snapshot Report

Hobbit   **Availability Report**   **Wed Apr 27 11:18:44 2005**

Hobbit Monitor Availability Report

April ▼ 17 ▼ 2005 ▼ - to - April ▼ 23 ▼ 2005 ▼ Display non-green events ▼

Generate Report

Hobbit Monitor 4.0

http://192.168.201.12/hobbit/rep/1536-1114619762/

Views   Reports   Administration   Help

Hobbit   Availability Report   Apr 17 2005 - Apr 23 2005

Hobbit Servers	bbd	bbgen	bbtest	conn	hobbitd	http
hobbit	◆	◆	◆	◆	◆	99.98

Linux for zSeries	conn	ftp
conn2	◆	◆
db2b	90.82	99.45

VM/VSE systems	conn	cpu	ftp	getvis	paging	pg_util	procs	sp_util
vm1	◆	◆	◆	-	◆	◆	◆	◆
vse1	◆	-	-	-	-	-	-	-
vse2	◆	-	-	◆	-	-	99.77	◆

Hobbit Monitor 4.0

Hobbit reports

- Snapshot report

  - A point in time image of how the Hobbit web page looked at a point in the past

  - Enter a date and time

File   Edit   View   Go   Bookmarks   Tools   Help

http://192.168.201.12/hobbit-cgi/bb-snapshot.sh

Views   Reports   Administration   Help

Hobbit   **Snapshot Report**   **Wed Apr 27 11:37:57 2005**

Hobbit Snapshot Report

April ▼   23 ▼   2005 ▼   8 ▼   45 ▼   00 ▼

Generate Report

Hobbit Monitor 4.0

Done

File   Edit   View   Go   Bookmarks   Tools   Help

http://192.168.201.12/hobbit/snap/1690-1114620646/

Views   Reports   Administration   Help

Hobbit   **Snapshot Report**   **Sat Apr 23 08:45:00 2005**

Hobbit Servers	bbd	bbgen	bbtest	conn	hobbitd	http
hobbit	◆	◆	◆	◆	◆	◆

Linux for zSeries	conn	ftp
conn2	▦	▦
db2b	◉	▦

conn:red:10.10 minutes

VM/VSE systems	conn	cpu	ftp	getvis	paging	pg_util	procs	sp_util
vm1	◆	◆	◆	-	◆	◆	◆	◆
vse1	▦	-	-	-	-	-	-	-
vse2	◆	-	-	◆	-	-	◉	◆

Wrapping up...

- Enterprise class monitoring solution

- Open Source

- Under heavy development, but feature rich

- Runs on Linux (including zSeries!)

- Can be well integrated into the zSeries environment

- Easy to install and configure

- Expandable, very useful and performs well

Questions...

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