

Building your own hosting environment

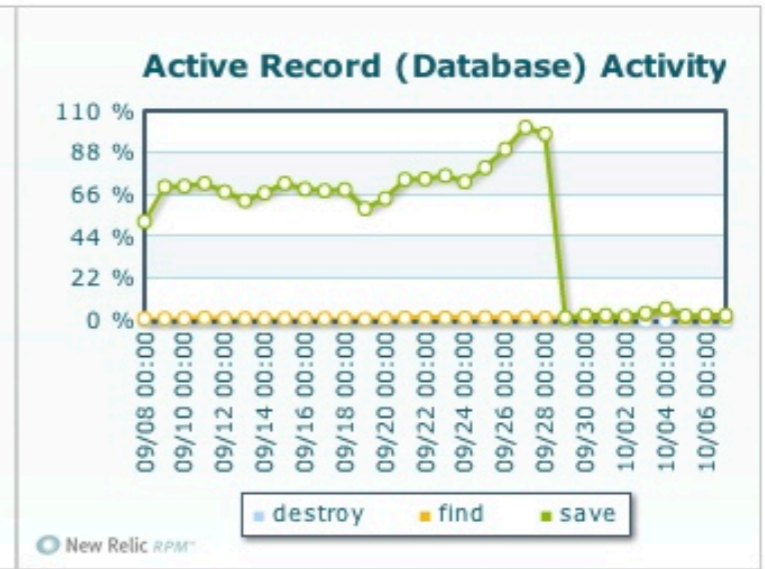
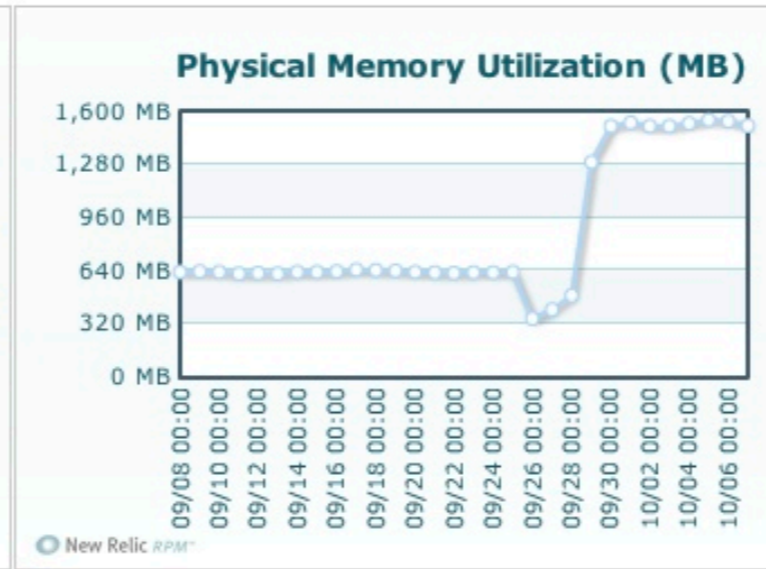
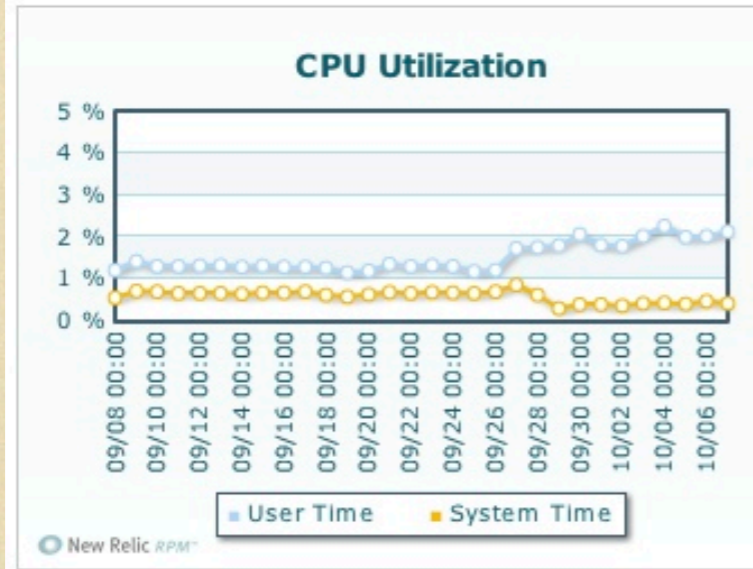
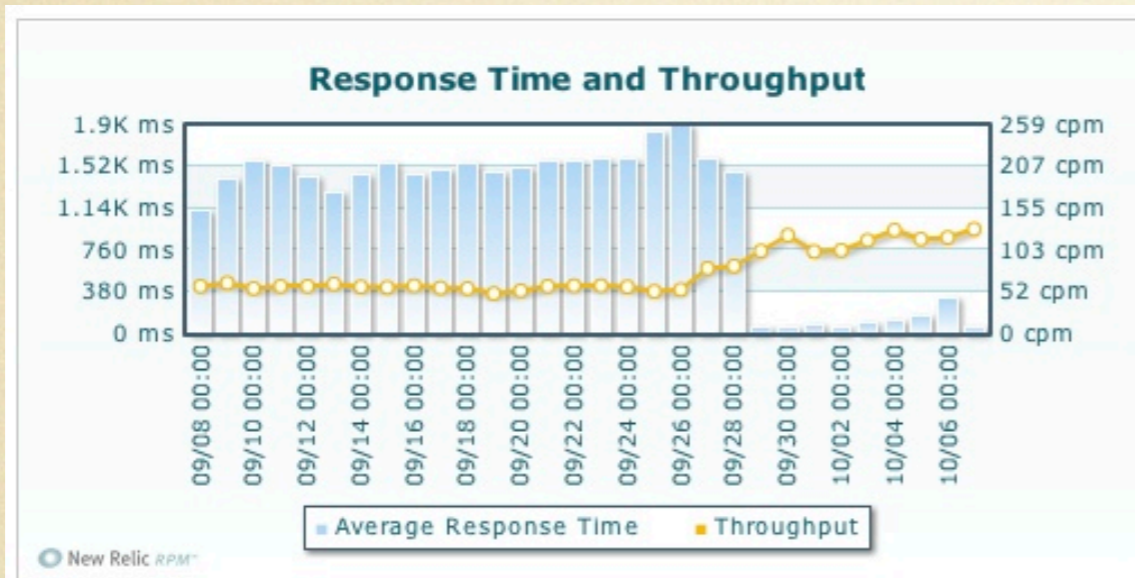
Nic Benders

<http://nicbenders.com/hosting>

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Server Checklist

- Hardware RAID + Hot Swap drives
- Remote console
- Redundant power supply
- Xeon CPU
- Linux distro with Long Term Support
- Apache + Phusion Passenger
- Working backups
- Gigabit Ethernet
- Monitoring

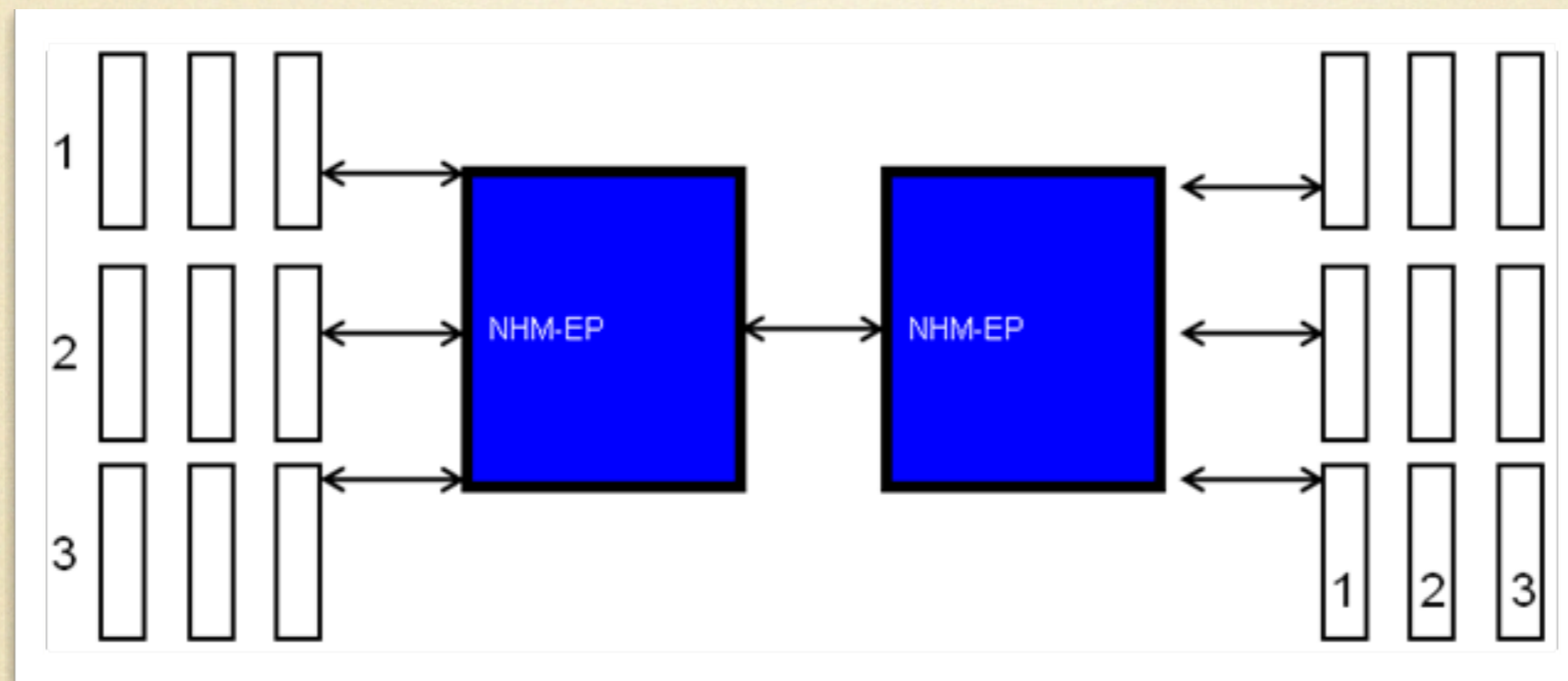


Switch from Software RAID-5 to Hardware RAID-1

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Nehalem Memory Architecture



- Each CPU has 3 channels
- Each channel has up to 3 banks (slots)

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Dell R710

(about \$4,000)

- Dual Xeon E5520 (8 cores total)
- 12G RAM (6x2G, 1066 MHz RDIMM)
- RAID with 256M cache and battery backup
- 2x 146G, 15k RPM SAS drives
- Redundant power supplies
- Remote Console

Linux Distro

Red Hat Enterprise Linux
or CentOS

Ubuntu Server (LTS)

5.x (Tikanga)
Released in 2007
Supported until 2014

8.04 (Hardy Heron)
Released in 2008
Supported until 2013

Other Linux Tips

- Only install what you need
- Use LVM, especially for the root partition
- Use ext3 with “noatime”
- Everything you need should be in /etc/hosts
- Use iptables, even if you have a firewall
- Make sure root’s mail is being forwarded
- Learn Chef

conf.d/app.example.com.conf

```
1 <VirtualHost *:80>
2     ServerName app.example.com
3     ServerAlias app app.*
4     UseCanonicalName On
5
6     DocumentRoot /srv/appuser/app/current/public
7
8     <Directory "/srv/appuser/app/current/public">
9         Options FollowSymLinks
10        AllowOverride None
11        Order allow,deny
12        Allow from all
13    </Directory>
14
15    # Deflate
16    AddOutputFilterByType DEFLATE text/html text/plain text/xml
17    . application/xml application/xhtml+xml text/javascript text/css
18    . application/x-javascript application/json
19    BrowserMatch ^Mozilla/4 gzip-only-text/html
20    BrowserMatch ^Mozilla/4.0[678] no-gzip
21    BrowserMatch bMSIE !no-gzip !gzip-only-text/html
22 </VirtualHost>
```

conf.d/00-passenger.conf

```
1 LoadModule passenger_module
  · <your-passenger-root-path>/ext/apache2/mod_passenger.so
2 PassengerRoot <your-passenger-root-path>
3
4 PassengerUseGlobalQueue on
5
6 PassengerMaxPoolSize 16
7
8 PassengerPoolIdleTime 0
9 PassengerMaxRequests 1000
10
11 PassengerRuby /usr/local/sbin/ree_wrapper
```

/usr/local/sbin/ree_wrapper

```
1 #!/bin/sh
2
3 #
4 # Settings from Evan Weaver
5 # http://blog.evanweaver.com/articles/2009/04/09/ruby-gc-tuning/
6 #
7 RUBY_HEAP_MIN_SLOTS=500000
8 RUBY_HEAP_SLOTS_INCREMENT=250000
9 RUBY_HEAP_SLOTS_GROWTH_FACTOR=1
10 RUBY_GC_MALLOC_LIMIT=50000000
11 export RUBY_HEAP_MIN_SLOTS RUBY_HEAP_SLOTS_INCREMENT
12 . RUBY_HEAP_SLOTS_GROWTH_FACTOR RUBY_GC_MALLOC_LIMIT
13 exec "/opt/ree/bin/ruby" "$@"
14
```

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Gigabit Switches

| Cisco 3750G | Cisco (Linksys) SLM2008 |
|---|--|
| <ul style="list-style-type: none">• About \$4,000• 24 or 48 ports• Very fast backplane• Stackable, forms single logical switch | <ul style="list-style-type: none">• About \$100• 4 or 8 ports• Offers some remote management |

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Monitoring

| Alerting | Performance |
|---|--|
| <ul style="list-style-type: none">• Nagios• Pingdom (\$) | <ul style="list-style-type: none">• Cacti• New Relic RPM (\$\$) |

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