



When the Fur Flies

Dev/Ops Cooperation at the Worst Possible Times

Michael T. Nygard

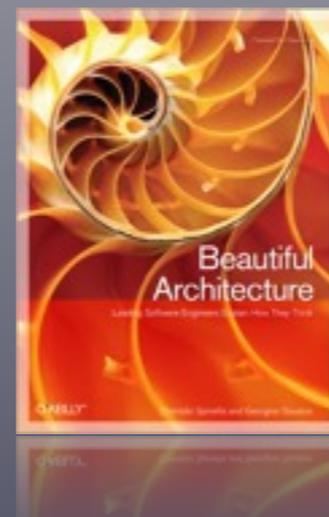
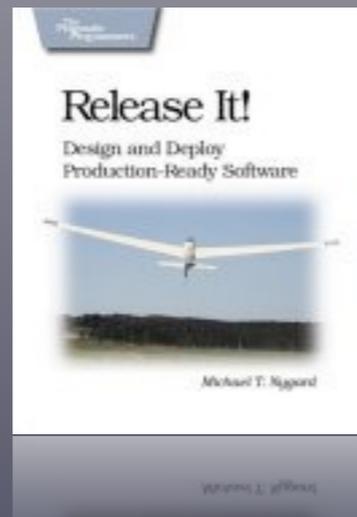
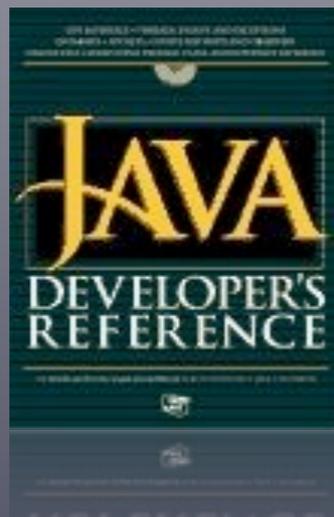
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About The Speaker

Application Developer/Architect – 20 years

Web Developer – 15 years

IT Operations – 7 years



Reaching Across the Aisle



Reaching Across the Aisle

Reaching Across the Aisle

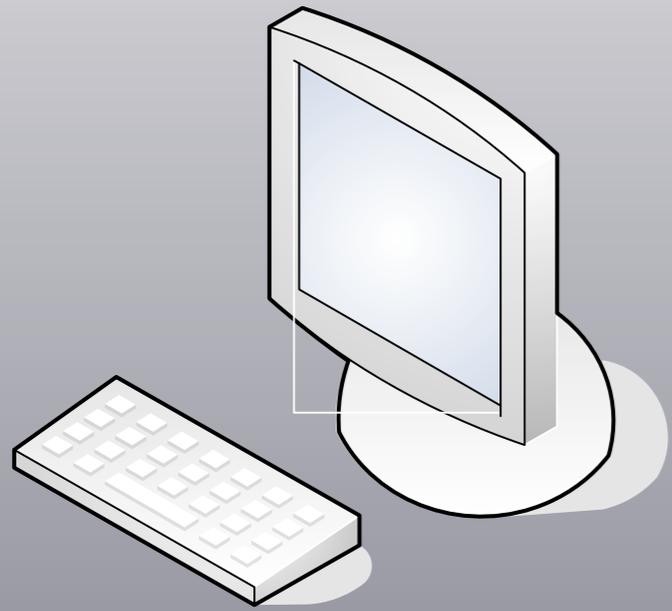


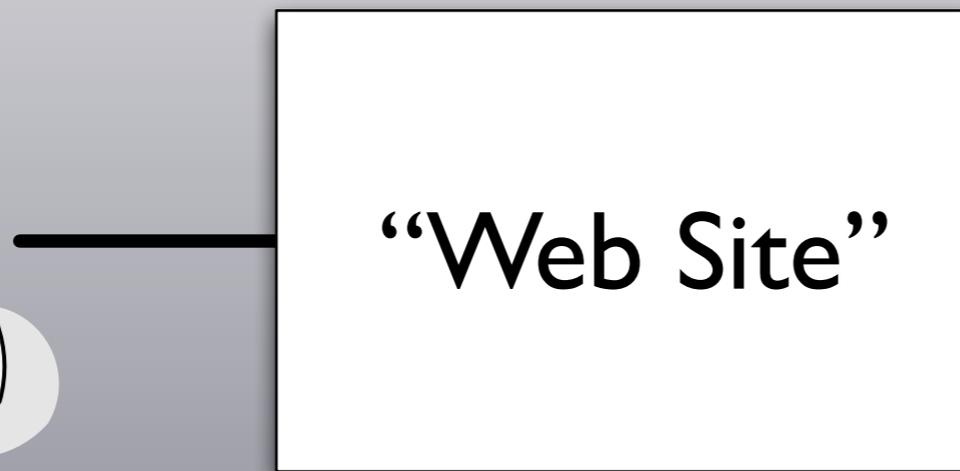
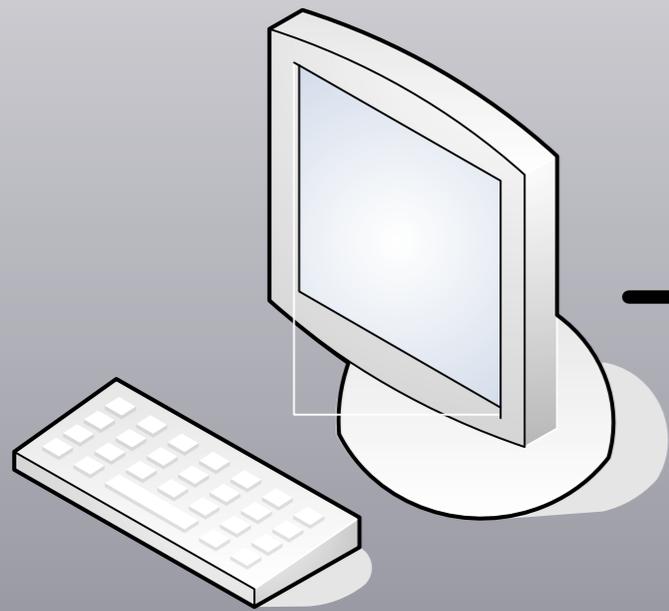
Reaching Across the Aisle



Reaching Across the Aisle



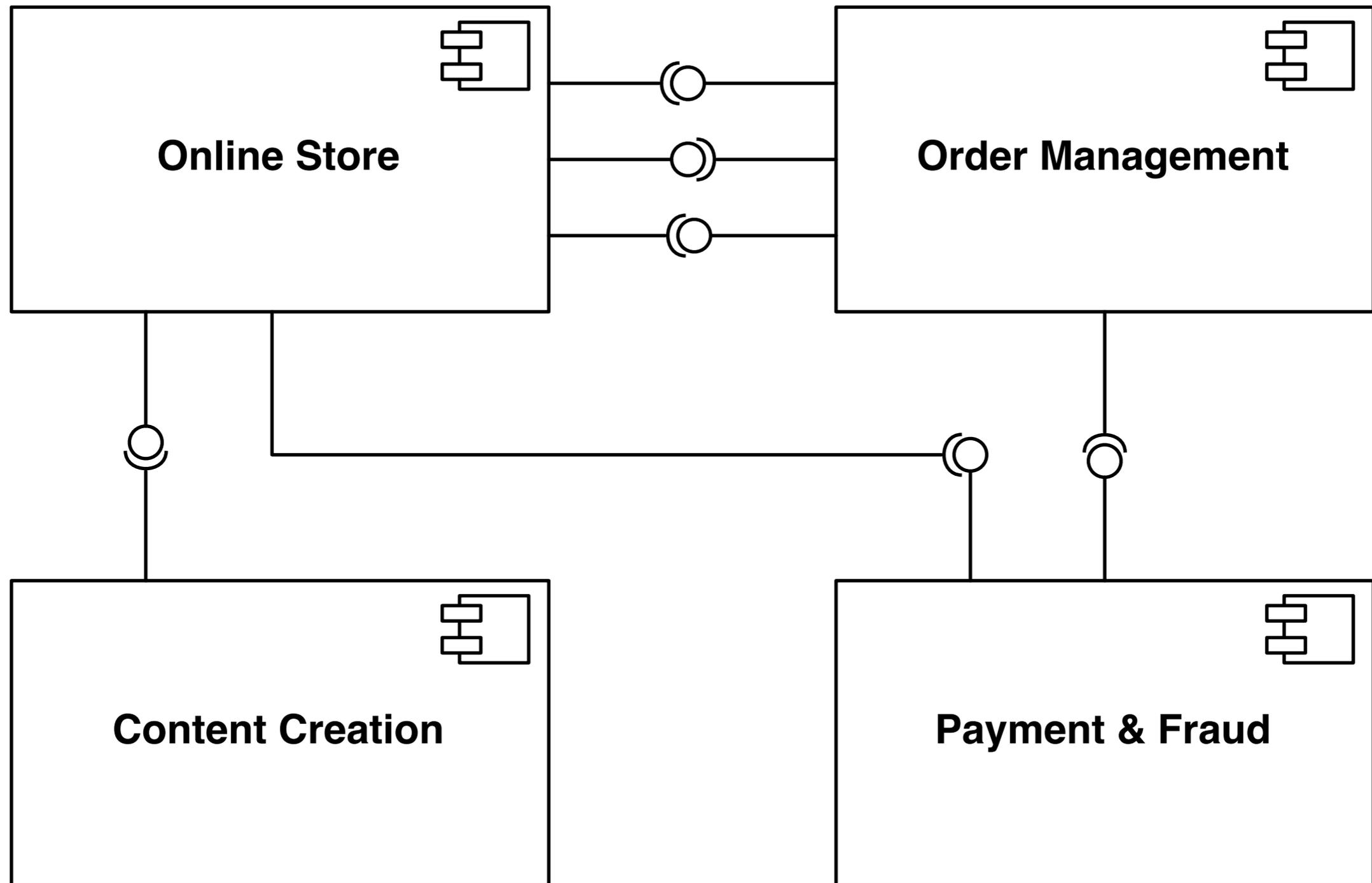




“Web Site”

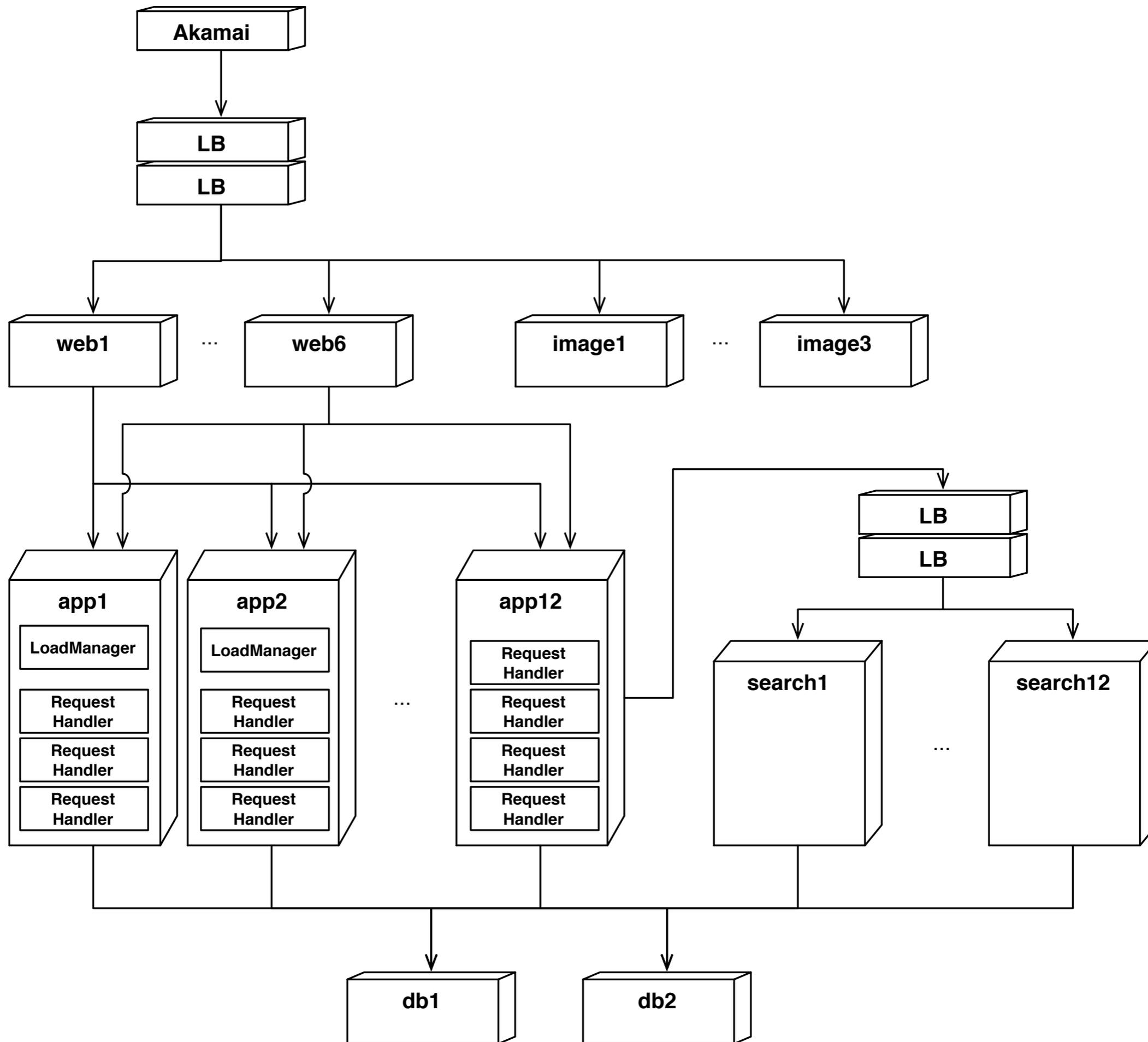


“Web Site”





Online Store



LISA'09

23RD LARGE INSTALLATION SYSTEM ADMINISTRATION CONFERENCE

BALTIMORE, MD
NOV. 1-6, 2009

SPONSORED BY
USENIX & [sage]
IN COOPERATION WITH LOPSA & SNIA

USENIX Home

Conferences

Publications

Membership

↳ LISA '09 Home

↳ Registration

↳ Discounts

↳ Organizers

↳ Invitation

↳ At a Glance

↳ Calendar

↳ Training

↳ Tech Sessions

↳ **Workshops**

↳ Data Storage Day

↳ Posters

↳ BoFs

↳ Exhibition

↳ Sponsors

↳ Activities

↳ Hotel/Travel

↳ Services

↳ Call for Bloggers

↳ Students

↳ Questions?

↳ Help Promote!

↳ Flyer PDF

WORKSHOPS

Workshops Schedule

SUNDAY:

[Flay 'em and Slay 'em: Help Desk Processes at Scale](#) |

[High Performance Log File Tailing](#) |

[Password Security Today: 32 Characters is Not Enough](#)

MONDAY:

[Dirty Secrets of ITIL: No Changes Happen in Change Control](#) |

[Protecting Defenseless Systems From Multitool-Wielding Zombie Hordes](#) |

[Cuckoo for Crypto](#) |

[Puppet](#) | [Marionette](#) | [Manacles](#)

TUESDAY:

[Make Room For Logs: Disk Limits on Application Noise](#) | [Security Today](#)





Wednesday, November 3, 2010





The Machine that goes "Ping"

1



Artifact



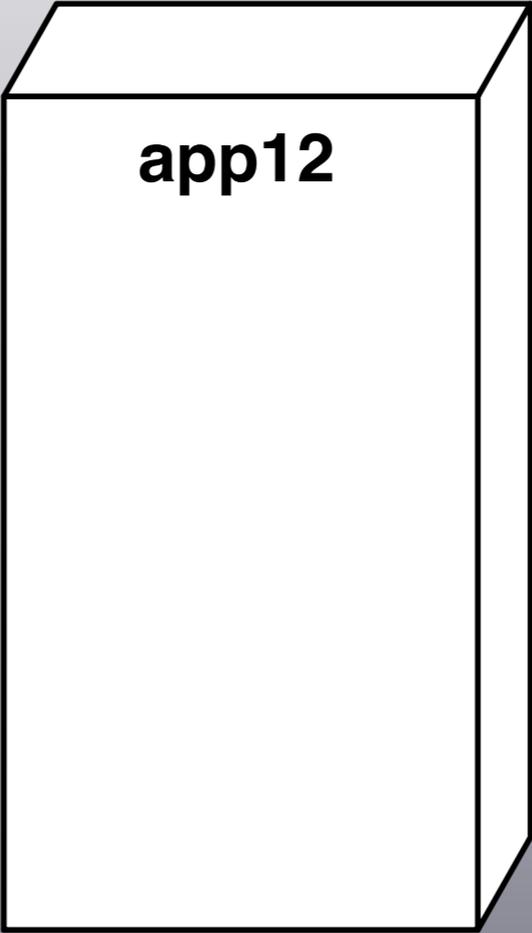
①: At end of turn, If target creature is still in play, gain 1 life. If not, sacrifice The Machine that goes "Ping". Use this ability only during any players upkeep, and only once each turn.

"You see? That means your baby is still alive!"

Monty Python's Meaning of Life

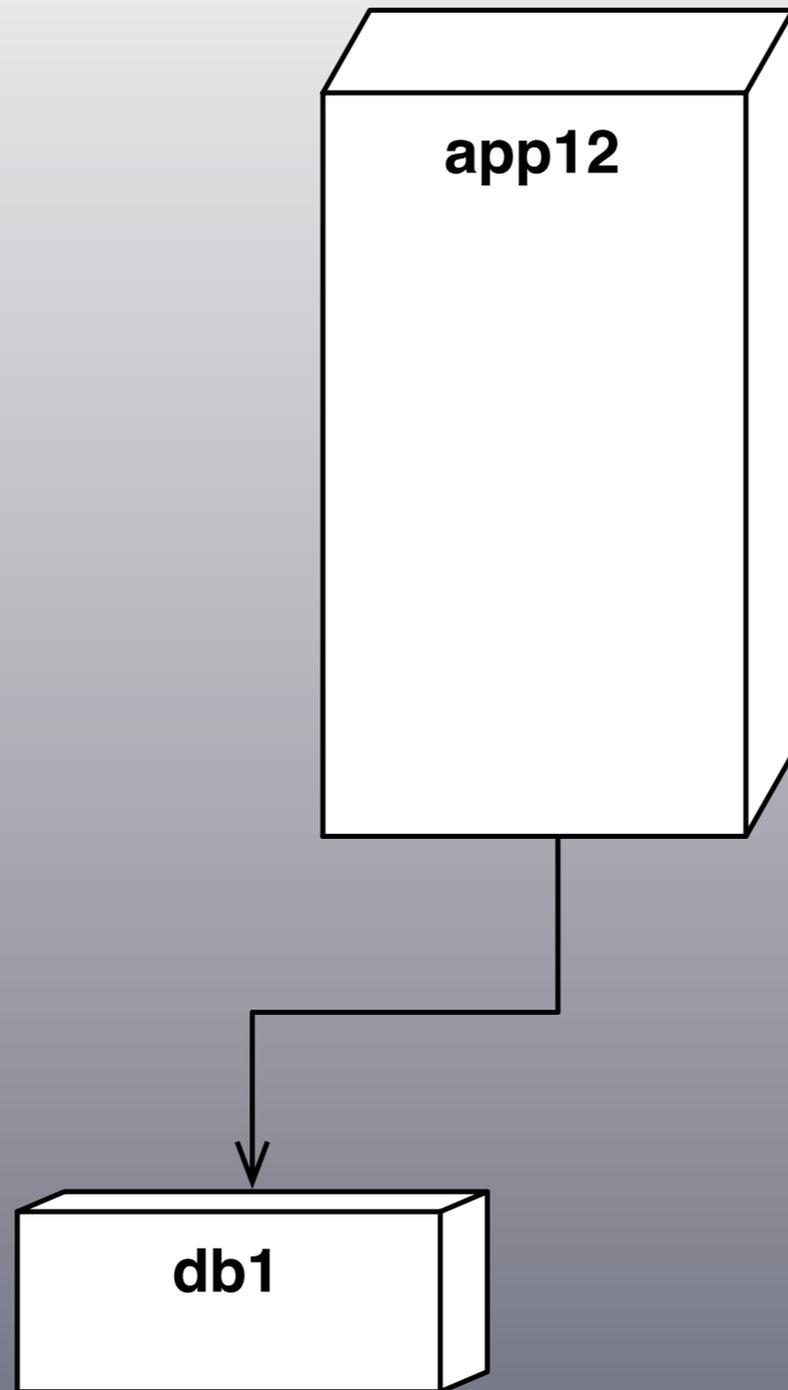
(c) Oliver Weikopf 140/143

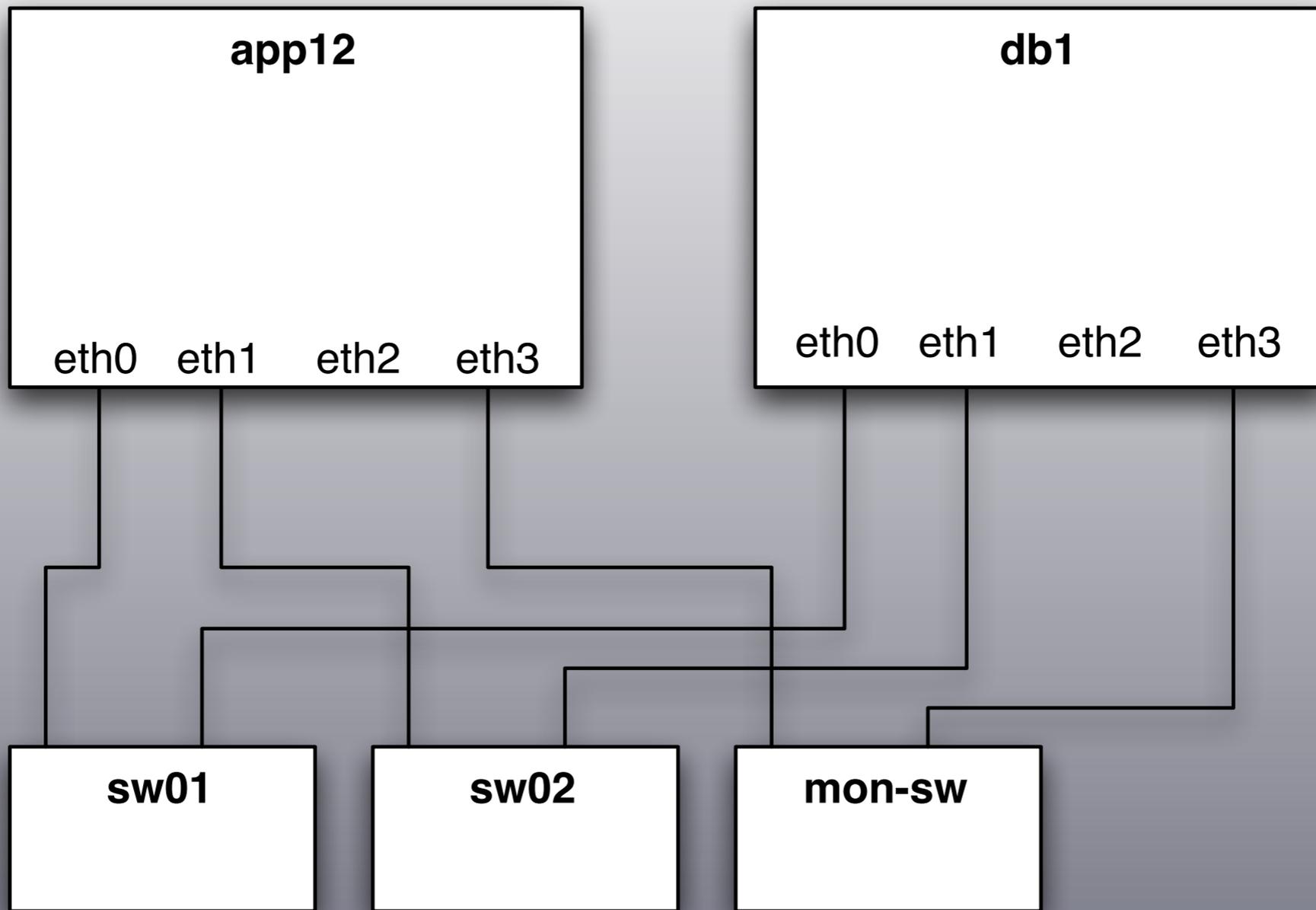




app12

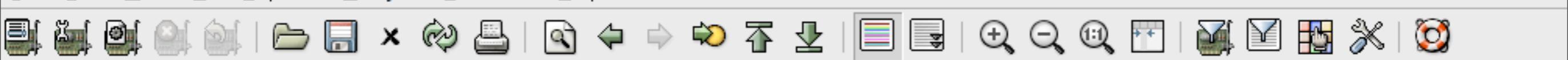






When in doubt,

When in doubt,
biopsy something.



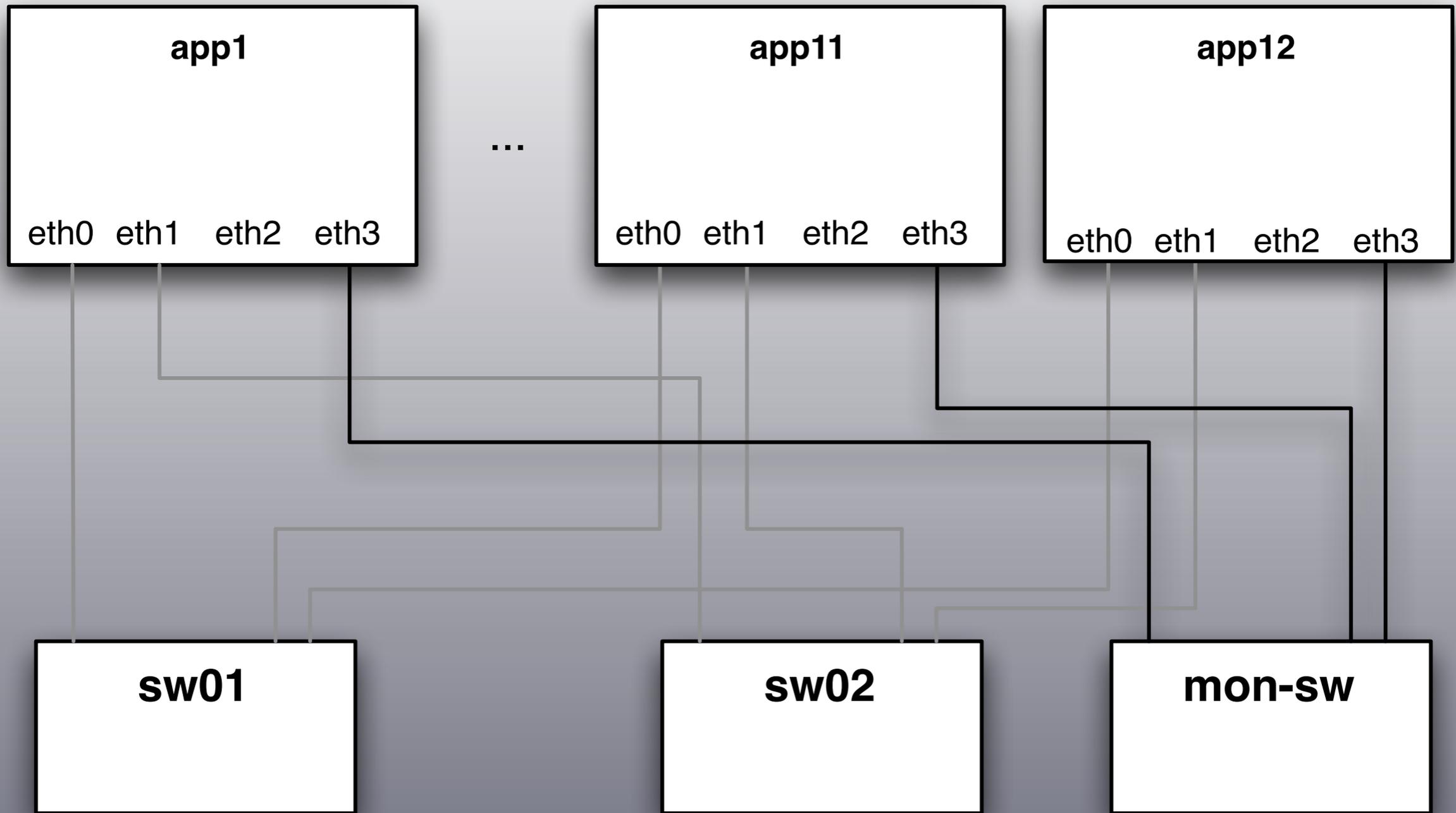
Filter: + Expression... Clear Apply

| No. | Time | Source | Destination | Protocol | Info |
|-----|----------|-------------------|---------------|----------|---|
| 1 | 0.000000 | Cisco-Li_06:2b:87 | Broadcast | ARP | Who has 192.168.1.1? Tell 192.168.1.2 |
| 2 | 3.318985 | 192.168.1.98 | 66.249.81.147 | HTTP | GET /safebrowsing/lookup?sourceid=firefox-antiphish&f |
| 3 | 3.319527 | 192.168.1.98 | 24.159.222.40 | DNS | Standard query A michaelnygard.dyndns.org |
| 4 | 3.359978 | 24.159.222.40 | 192.168.1.98 | DNS | Standard query response A 68.117.46.209 |
| 5 | 3.361154 | 192.168.1.98 | 68.117.46.209 | TCP | 56776 > 8818 [SYN] Seq=0 Len=0 MSS=1460 TSV=83308926 |
| 6 | 3.365093 | 68.117.46.209 | 192.168.1.98 | TCP | 8818 > 56776 [SYN, ACK] Seq=0 Ack=1 Win=5792 Len=0 MS |
| 7 | 3.365131 | 192.168.1.98 | 68.117.46.209 | TCP | 56776 > 8818 [ACK] Seq=1 Ack=1 Win=5840 Len=0 TSV=833 |
| 8 | 3.365475 | 192.168.1.98 | 68.117.46.209 | TCP | [TCP segment of a reassembled PDU] |
| 9 | 3.369218 | 68.117.46.209 | 192.168.1.98 | TCP | 8818 > 56776 [ACK] Seq=1 Ack=446 Win=6864 Len=0 TSV=2 |
| 10 | 3.372439 | 66.249.81.147 | 192.168.1.98 | TCP | http > 37023 [ACK] Seq=0 Ack=965 Win=7225 Len=0 |
| 11 | 3.376224 | 68.117.46.209 | 192.168.1.98 | TCP | [TCP segment of a reassembled PDU] |
| 12 | 3.376243 | 192.168.1.98 | 68.117.46.209 | TCP | 56776 > 8818 [ACK] Seq=446 Ack=1449 Win=8736 Len=0 TS |
| 13 | 3.376292 | 66.249.81.147 | 192.168.1.98 | TCP | [TCP Window Update] http > 37023 [ACK] Seq=0 Ack=965 |
| 14 | 3.377065 | 68.117.46.209 | 192.168.1.98 | TCP | [TCP segment of a reassembled PDU] |
| 15 | 3.377093 | 192.168.1.98 | 68.117.46.209 | TCP | 56776 > 8818 [ACK] Seq=446 Ack=2897 Win=11632 Len=0 T |
| 16 | 3.379142 | 68.117.46.209 | 192.168.1.98 | TCP | [TCP segment of a reassembled PDU] |
| 17 | 3.379169 | 192.168.1.98 | 68.117.46.209 | TCP | 56776 > 8818 [ACK] Seq=446 Ack=4345 Win=14528 Len=0 T |
| 18 | 3.379230 | 66.249.81.147 | 192.168.1.98 | HTTP | HTTP/1.1 200 OK |
| 19 | 3.379241 | 192.168.1.98 | 66.249.81.147 | TCP | 37023 > http [ACK] Seq=965 Ack=129 Win=8576 Len=0 |

▶ Frame 2 (1019 bytes on wire, 1019 bytes captured)
 ▶ Ethernet II, Src: Intel_ac:5a:fd (00:07:e9:ac:5a:fd), Dst: Cisco-Li_49:86:ea (00:0f:66:49:86:ea)
 ▶ Internet Protocol, Src: 192.168.1.98 (192.168.1.98), Dst: 66.249.81.147 (66.249.81.147)
 ▶ Transmission Control Protocol, Src Port: 37023 (37023), Dst Port: http (80), Seq: 0, Ack: 0, Len: 965
 ▶ Hypertext Transfer Protocol

```

0000  00 0f 66 49 86 ea 00 07 e9 ac 5a fd 08 00 45 00  ..fI.... ..Z...E.
0010  03 ed 8b 24 40 00 40 06 55 50 c0 a8 01 62 42 f9  ...$.@.@. UP...bB.
0020  51 93 90 9f 00 50 1c f5 0a 82 53 72 e2 47 50 18  Q....P.. ..Sr.GP.
0030  1d 50 2f a1 00 00 47 45 54 20 2f 73 61 66 65 62  .P/...GE T /safeb
0040  72 6f 77 73 69 6e 67 2f 6c 6f 6f 6b 75 70 3f 73  rowsing/ lookup?s
0050  6f 75 72 63 65 69 64 3d 66 69 72 65 66 6f 78 2d  ourceid= firefox-
0060  61 6e 74 69 70 68 69 73 68 26 66 65 61 74 75 72  antiphis h&featur
0070  65 73 3d 54 72 75 73 74 52 61 6e 6b 26 63 6c 69  es=Trust Rank&cli
0080  65 6e 74 3d 6e 61 76 63 6c 69 65 6e 74 2d 61 75  ent=navc lient-au
  
```



5 ADD WIDTH AS COLUMN

data TECHNOLGY INC.

FREE 500-1111

500 NUMBER

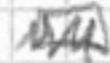
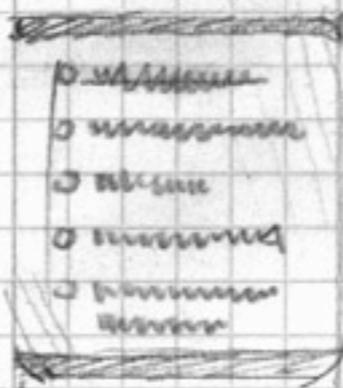
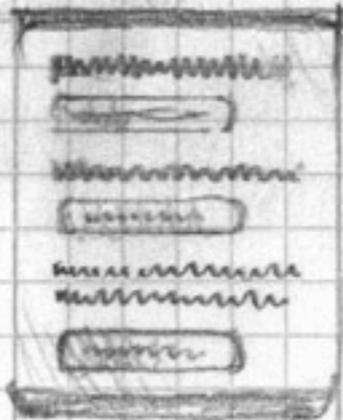
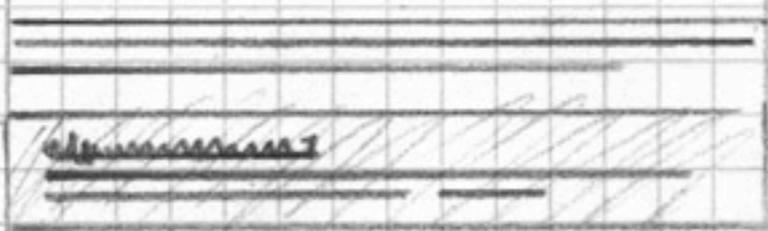
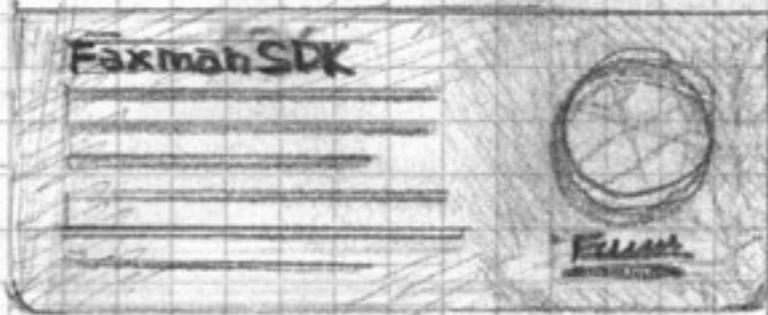
CHAT PAGE

INTRO BLOCK ON PRODUCT W/ HTML TYPE + LOGO GRAPHICS

INTRO TO BULLET ITEMS

BULLET FEATURES

CLOSING FOR CROSS-SELL OR FAX BOARDS?



BUY MODULE - WHAT IS MOST EXPENSIVE IS @ THETA?

HELP + SUPPORT MODULE

LOGOS FOR APPROVAL - OR LOGOS OF COMPANIES WHO USE IT (CASE STUDIES)



Short Term R

Stop It.

Long Term R

**Seriously,
stop it.**

Lessons?

Lessons?

Shared understanding

Lessons?

Shared understanding

Concrete language

Lessons?

Shared understanding

Concrete language

Collaboration across boundaries

10 PIECES
20 PIECES

2 SAUCES
3 SAUCES

5 PIECES
10 PIECES

2 SAUCES
3 SAUCES



WE WILL GIVE 1 EXTRA IF YOU NEED MORE
ADDITIONAL SAUCES WILL BE .12 CENTS EACH

HOTCAKE SYRUP POLICY

1 SYRUP IS INCLUDED WITH 1 ORDER OF HOTCAKES WE
WILL GIVE 1 EXTRA SYRUP IF YOU NEED MORE
ADDITIONAL SYRUPS WILL BE .10 CENTS EACH

SALAD DRESSING POLICY

1 DRESSING PACKET IS INCLUDED PER SALAD
ADDITIONAL DRESSING PACKETS WILL BE .04 CENTS EACH

ADDITIONAL SAUCES

1 SAUCE WILL BE GIVEN ON REQUEST PER ORDER OF FRIES

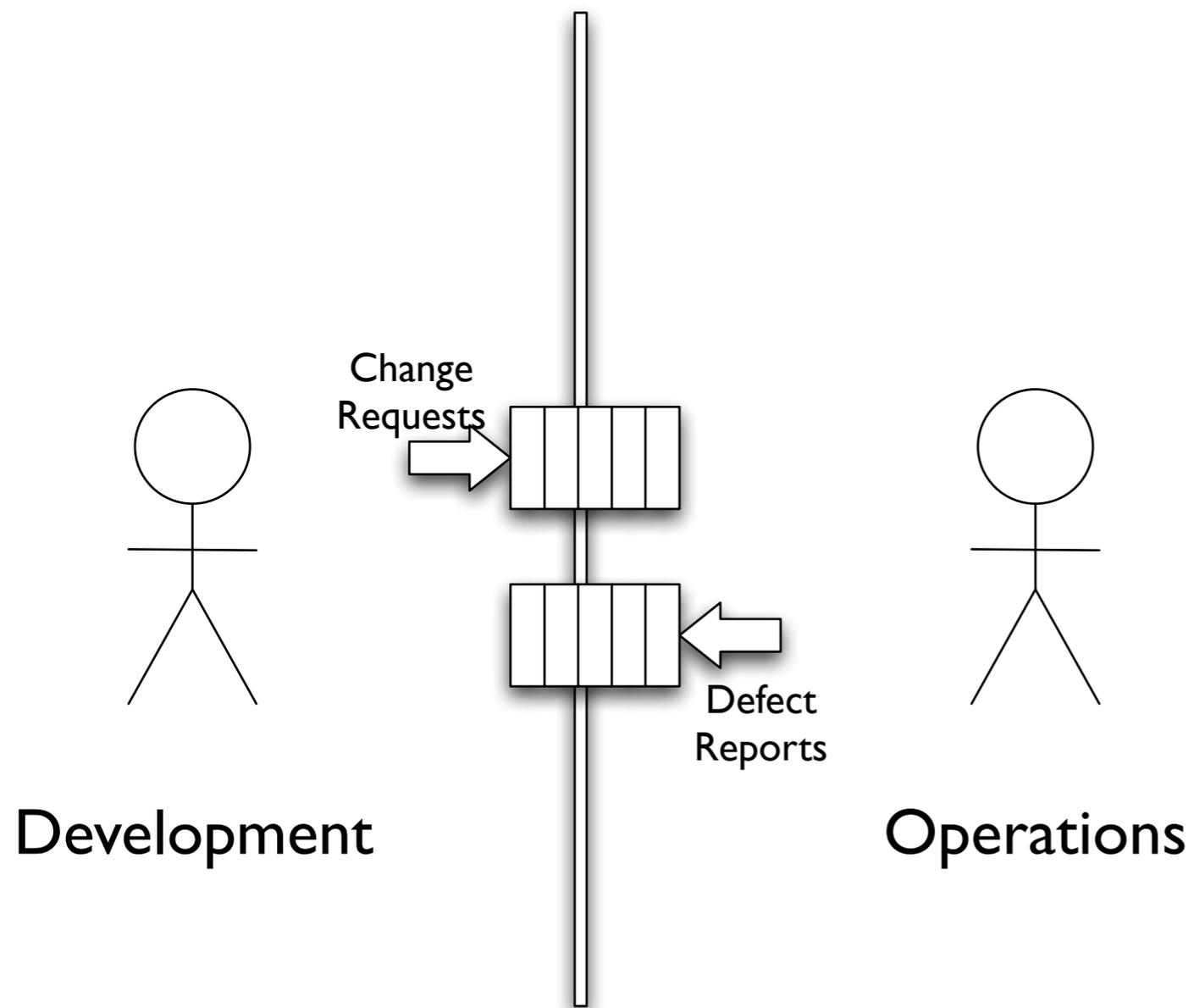
DUO TO RISING COSTS WE ARE HAVING TO IMPLEMENT THIS
NEW POLICY. WE THANK YOU FOR UNDERSTANDING.
ANY QUESTIONS PLEASE ASK

T. M. N. H. V. C. D.

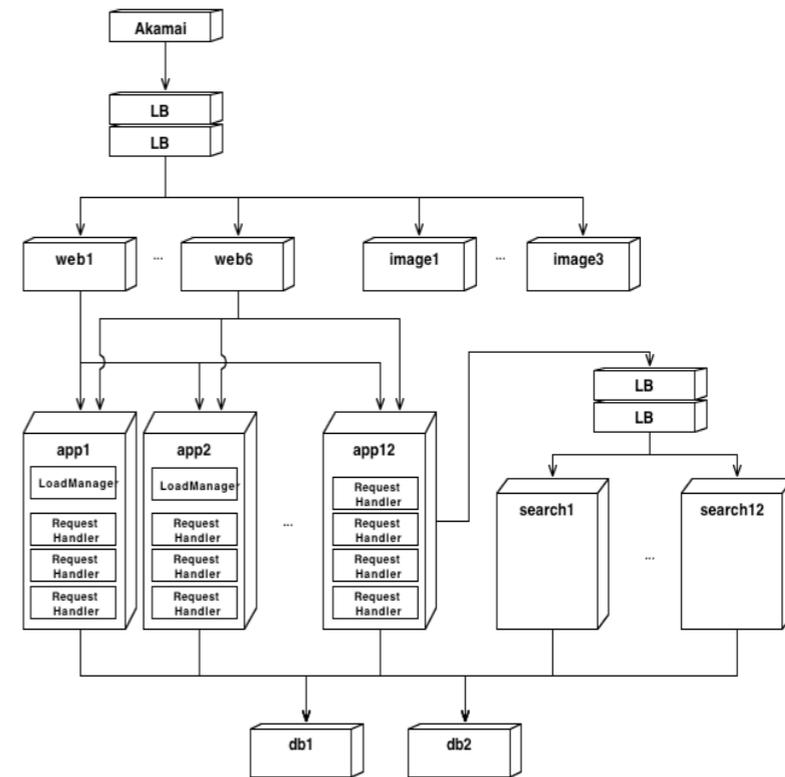
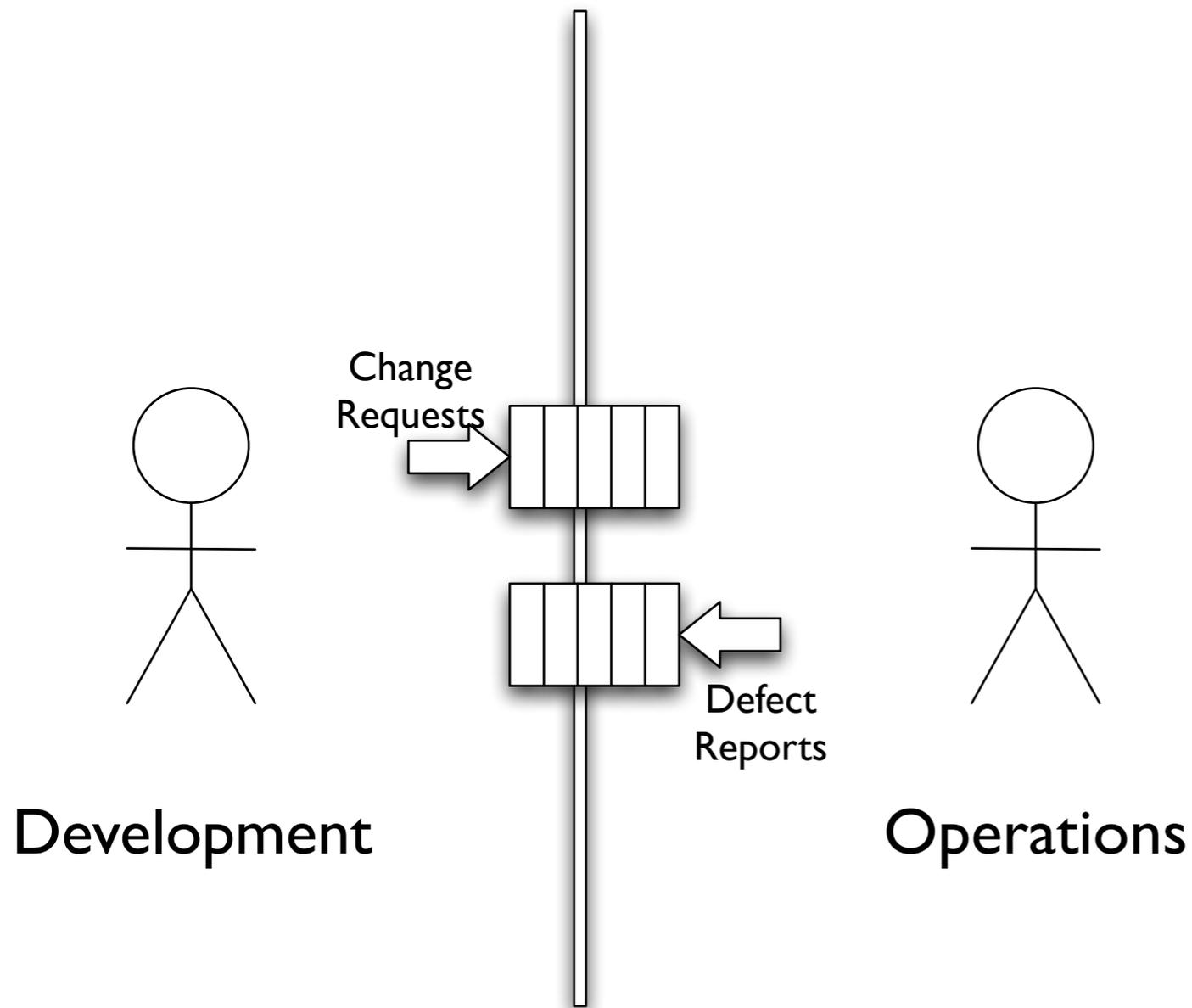
Organization Design



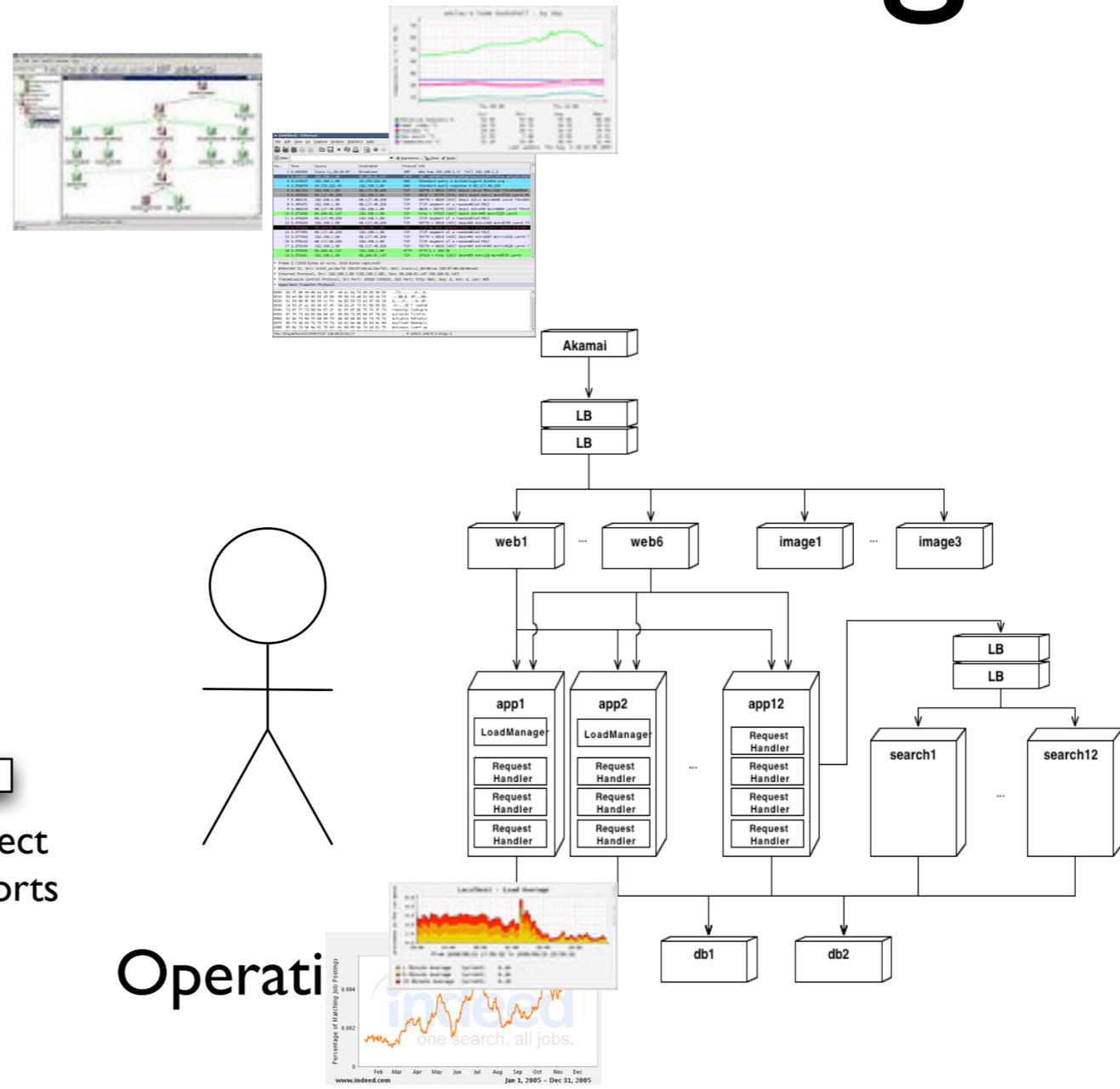
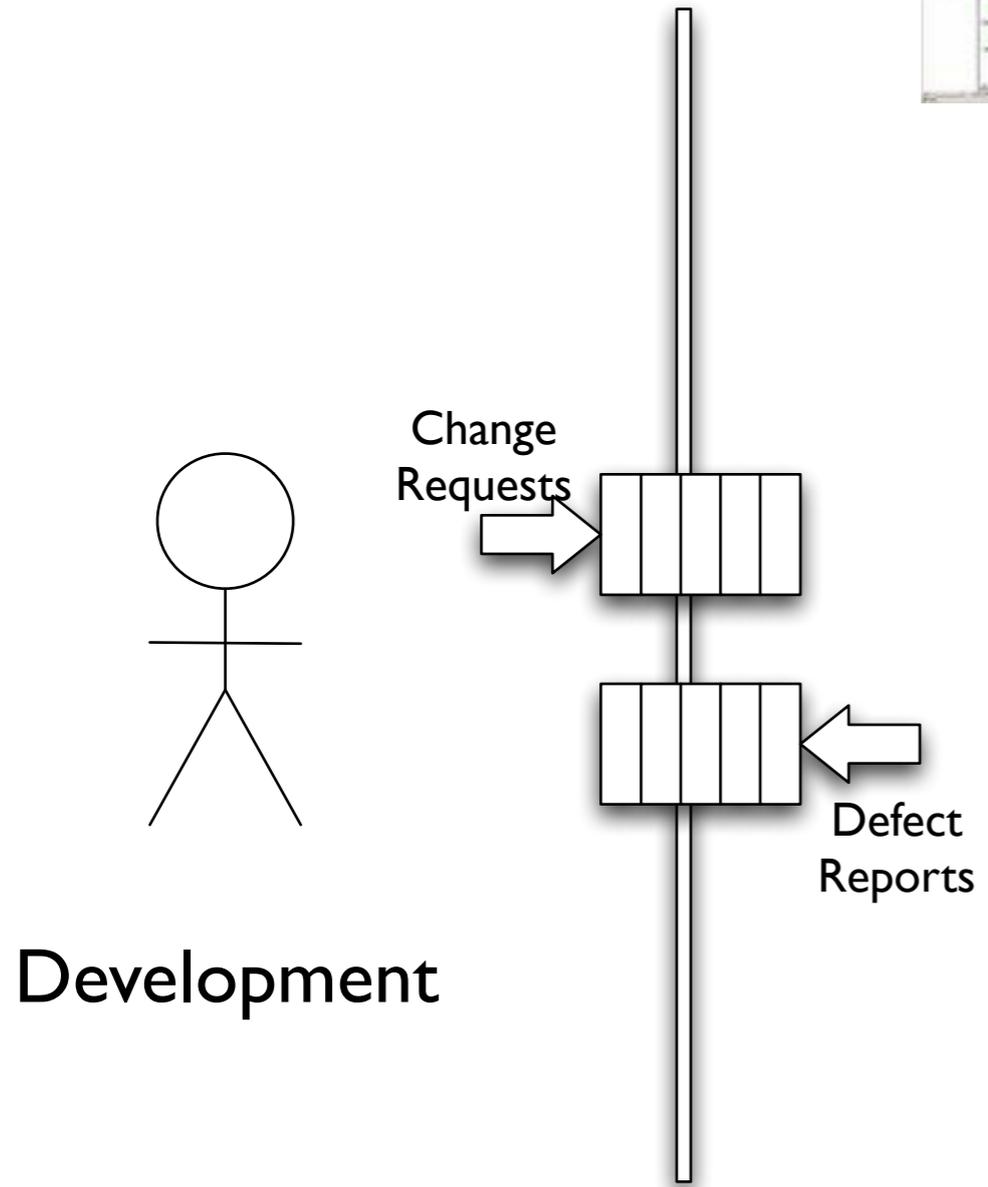
Organization Design



Organization Design



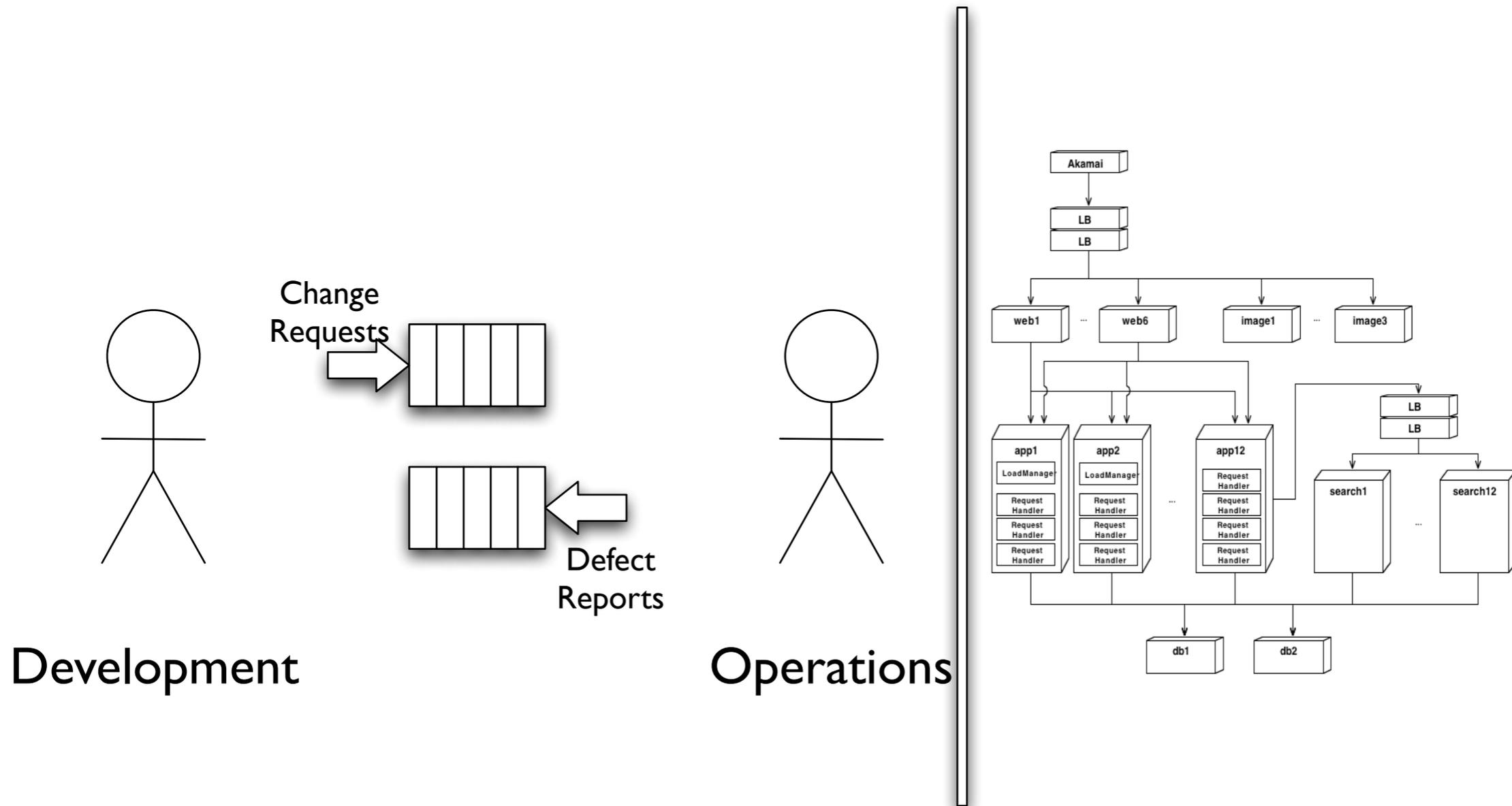
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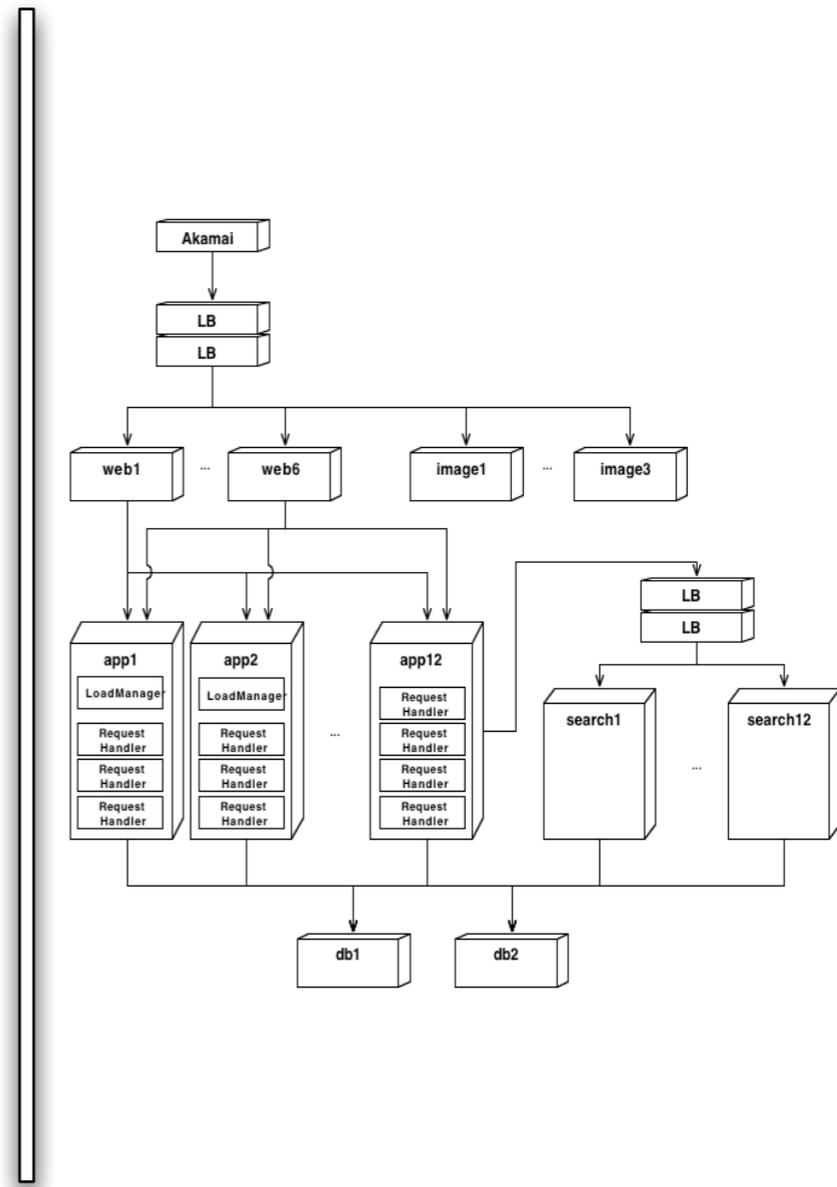
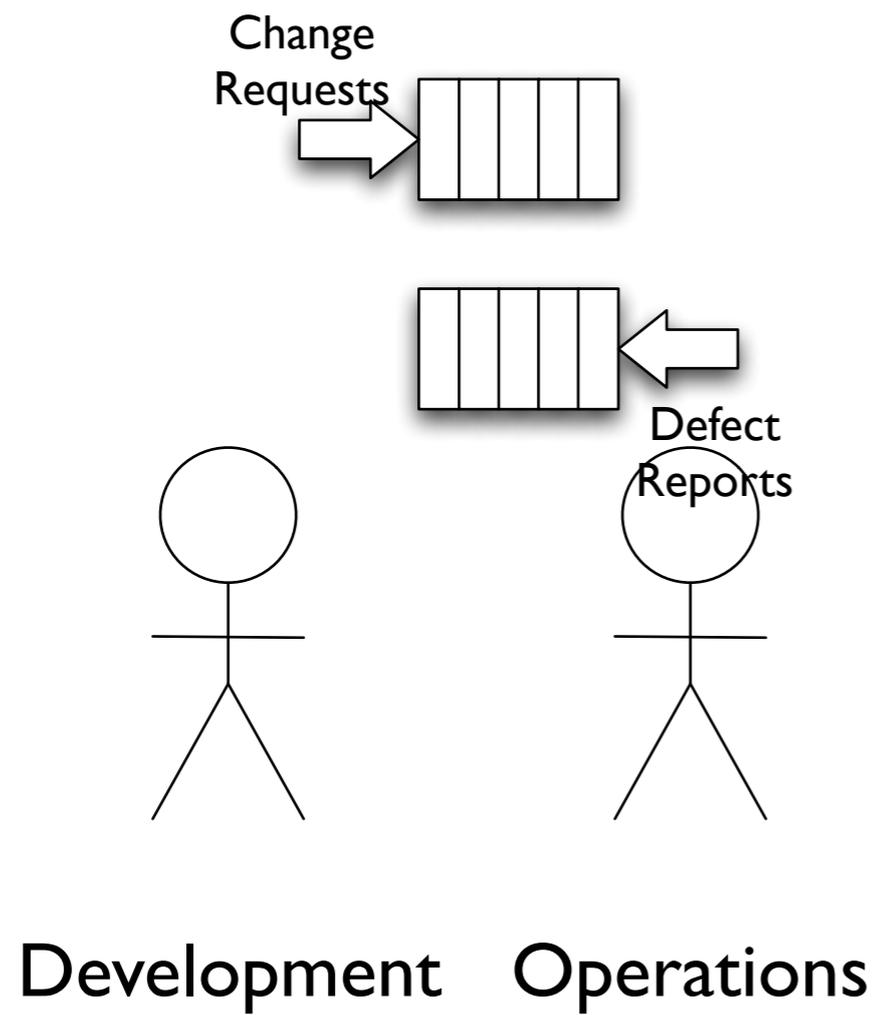
| Critical Business Processes Dashboard | | | |
|---|-----------|------------------|----|
| Critical Business Process | Status | Avail. MTD (SLA) | Av |
| *Undefined - This is for priority 1 or 2 issues not mapped to a CBP. | Available | 100.00 % | |
| CBP01 - (PR01) - Synthetic Transaction - Prod - Browse Category Pages | Available | 100.00 % | |
| CBP02 - (PR01) - Synthetic Transaction - Prod - Browse - Home Page | Available | 100.00 % | |
| CBP03 - (PR01) - Synthetic Transaction - Prod - Gift Card Lookup | Available | 100.00 % | |
| CBP04 - (PR01) - Synthetic Transaction - Prod - Gift Card Purchase | Available | 100.00 % | |
| CBP05 - (PR01) - Synthetic Transaction - Prod - Search | Available | 100.00 % | |
| CBP06 - (PR01) - Synthetic Transaction - Prod - ExpressLane Login&Out | Available | 100.00 % | |
| CBP07 - (PR01) - Synthetic Transaction - Prod - weboms.bestbuy.com | Available | 100.00 % | |

More ...

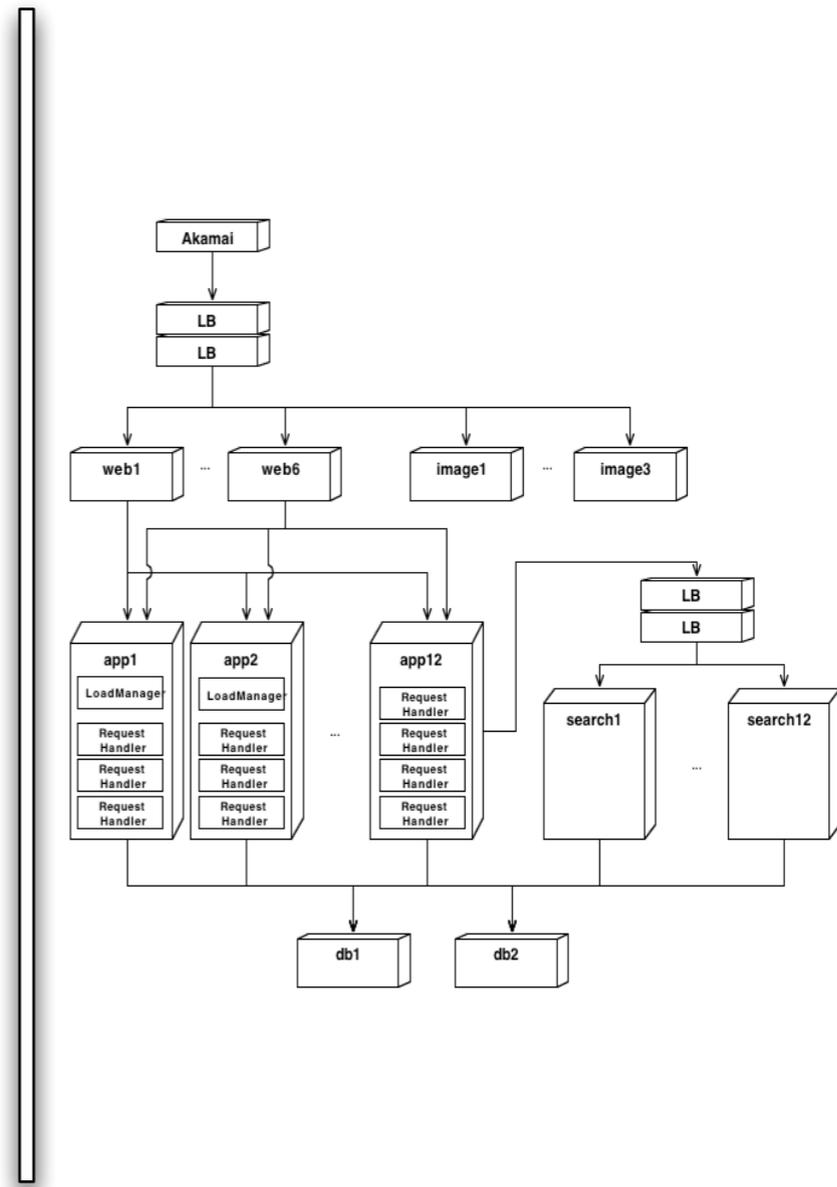
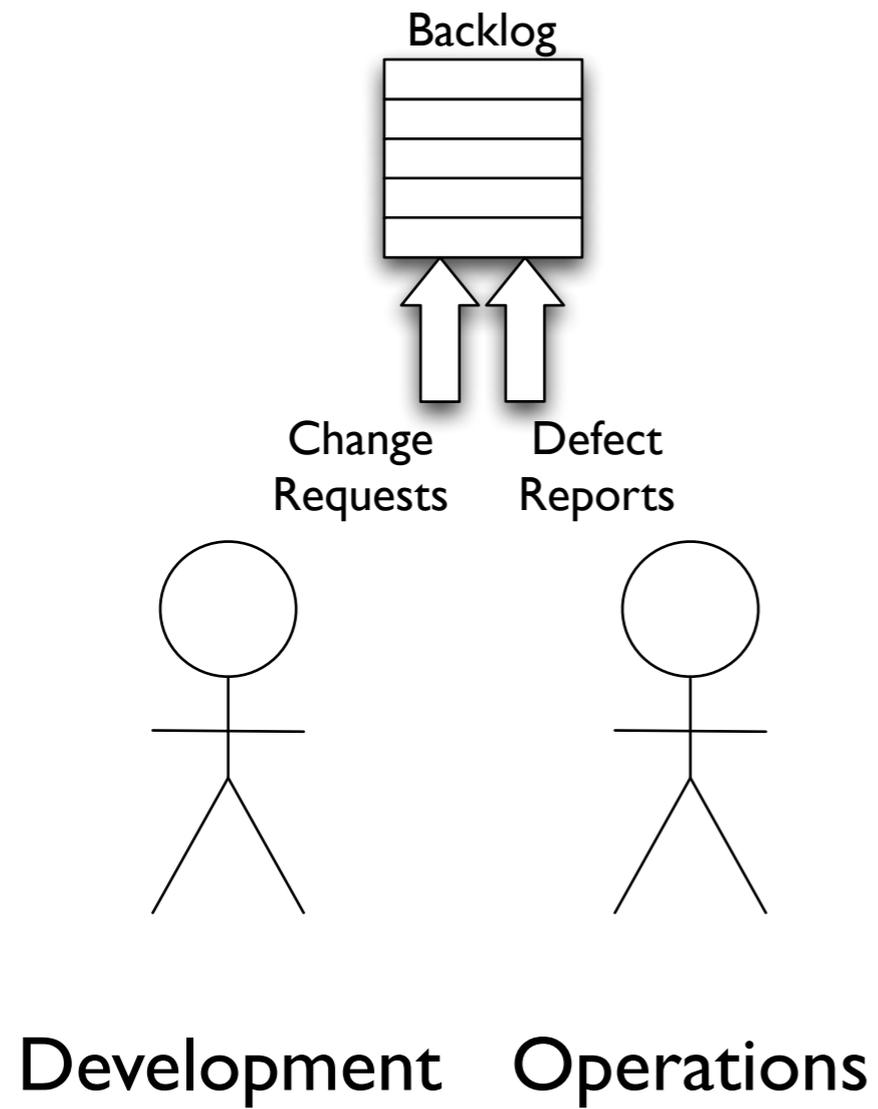
Organization Design



Organization Design



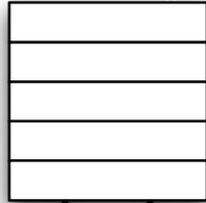
Organization Design



Organization Design

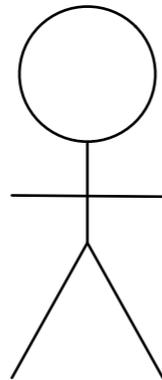
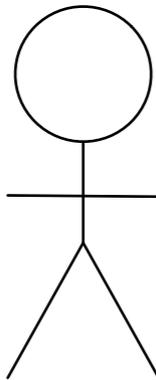
| Business Process | Status | Avail. MTD (SLA) | Av |
|---|-----------|------------------|----|
| efined - This is for priority 1 or 2 issues not mapped to a CBP. | Available | 100.00 % | Av |
| 1 - (PR01) - Synthetic Transaction - Prod - Browse Category Pages | Available | 100.00 % | Av |
| 2 - (PR01) - Synthetic Transaction - Prod - Browse - Home Page | Available | 100.00 % | Av |
| 3 - (PR01) - Synthetic Transaction - Prod - Gift Card Lookup | Available | 100.00 % | Av |
| 4 - (PR01) - Synthetic Transaction - Prod - Gift Card Purchase | Available | 100.00 % | Av |
| 5 - (PR01) - Synthetic Transaction - Prod - Search | Available | 100.00 % | Av |
| 6 - (PR01) - Synthetic Transaction - Prod - ExpressLane Login&Out | Available | 100.00 % | Av |
| 7 - (PR01) - Synthetic Transaction - Prod - weboms.bestbuy.com | Available | 100.00 % | Av |

Backlog



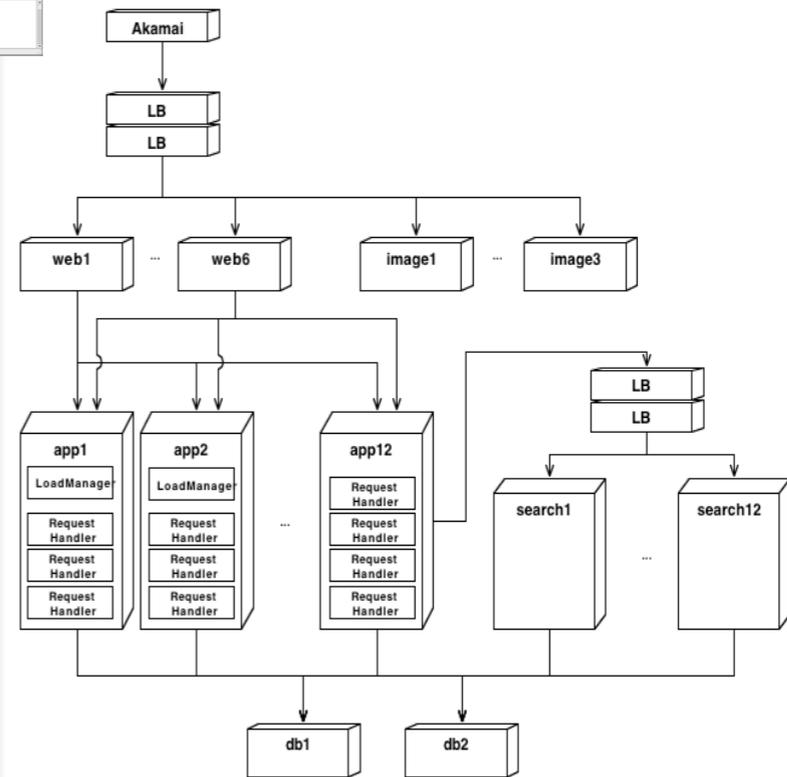
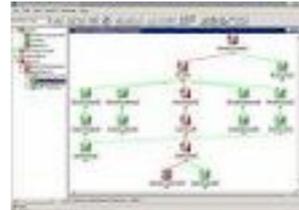
Change Requests

Defect Reports



Development

Operations



They Wouldn't Understand

They Wouldn't Understand



They Refuse To Understand



They Wouldn't Understand



They Wouldn't Understand

why the build broke.

They Wouldn't Understand

how to tune a
connection pool.

They Wouldn't Understand

that a good day is deleting
more code than I write.

They Wouldn't Understand
that high CPU utilization
doesn't always mean a
problem.

They Wouldn't Understand

we get those alerts all the
time.

They Wouldn't Understand

what load average *really*
means.

They Wouldn't Understand

**how to read a revenue
forecast**

**They Wouldn't Understand
the difference between
revenue and gross margin**

They Wouldn't Understand



False Accountability



Other Suspicious Characters

Other Suspicious Characters

“100% Pure Java”™ Developers

Other Suspicious Characters

“100% Pure Java”™ Developers

All-I-Need-Is-Unix Admins

Other Suspicious Characters

“100% Pure Java”™ Developers

All-I-Need-Is-Unix Admins

Function Point Project Managers

The Big Red Button



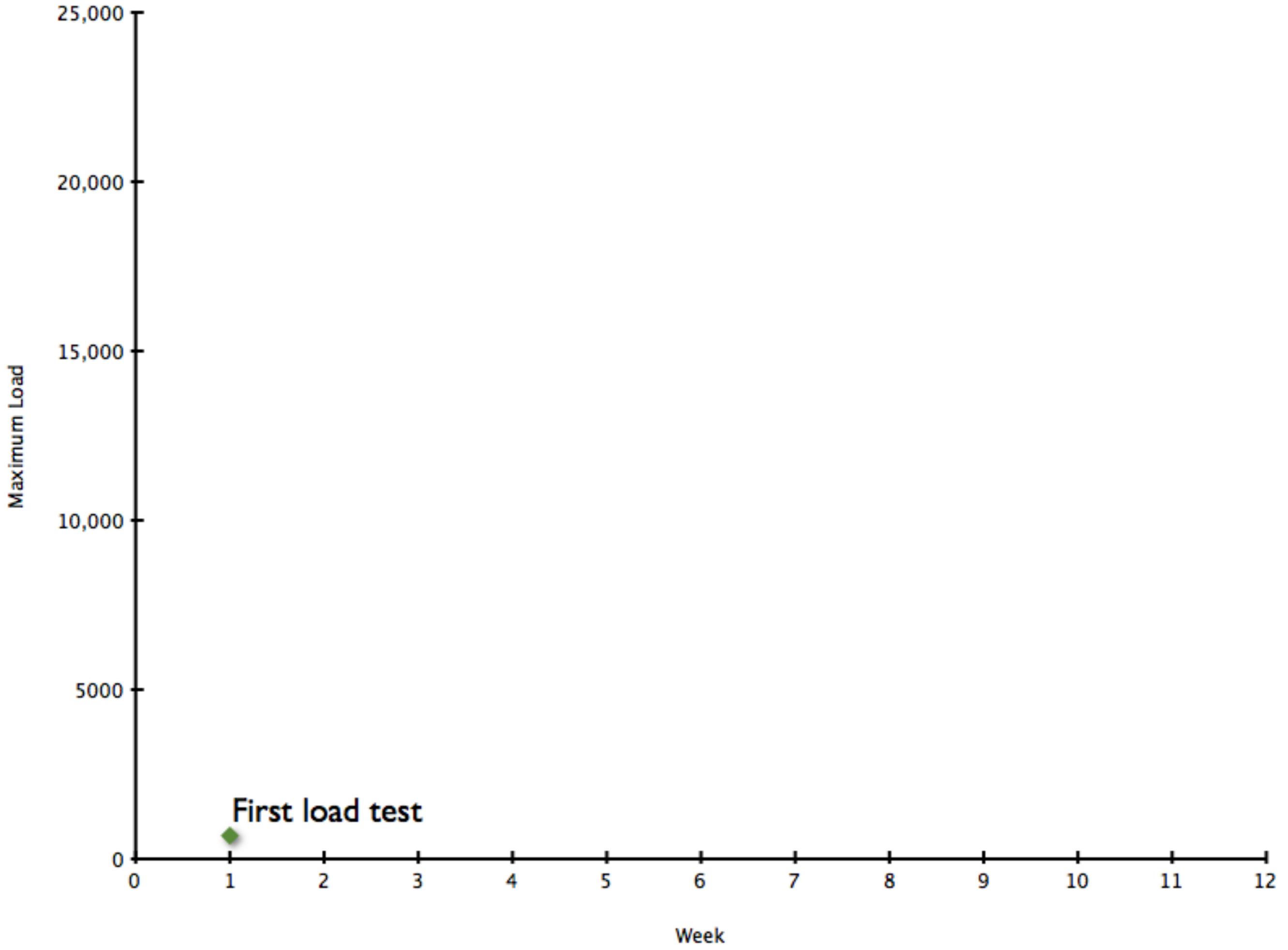


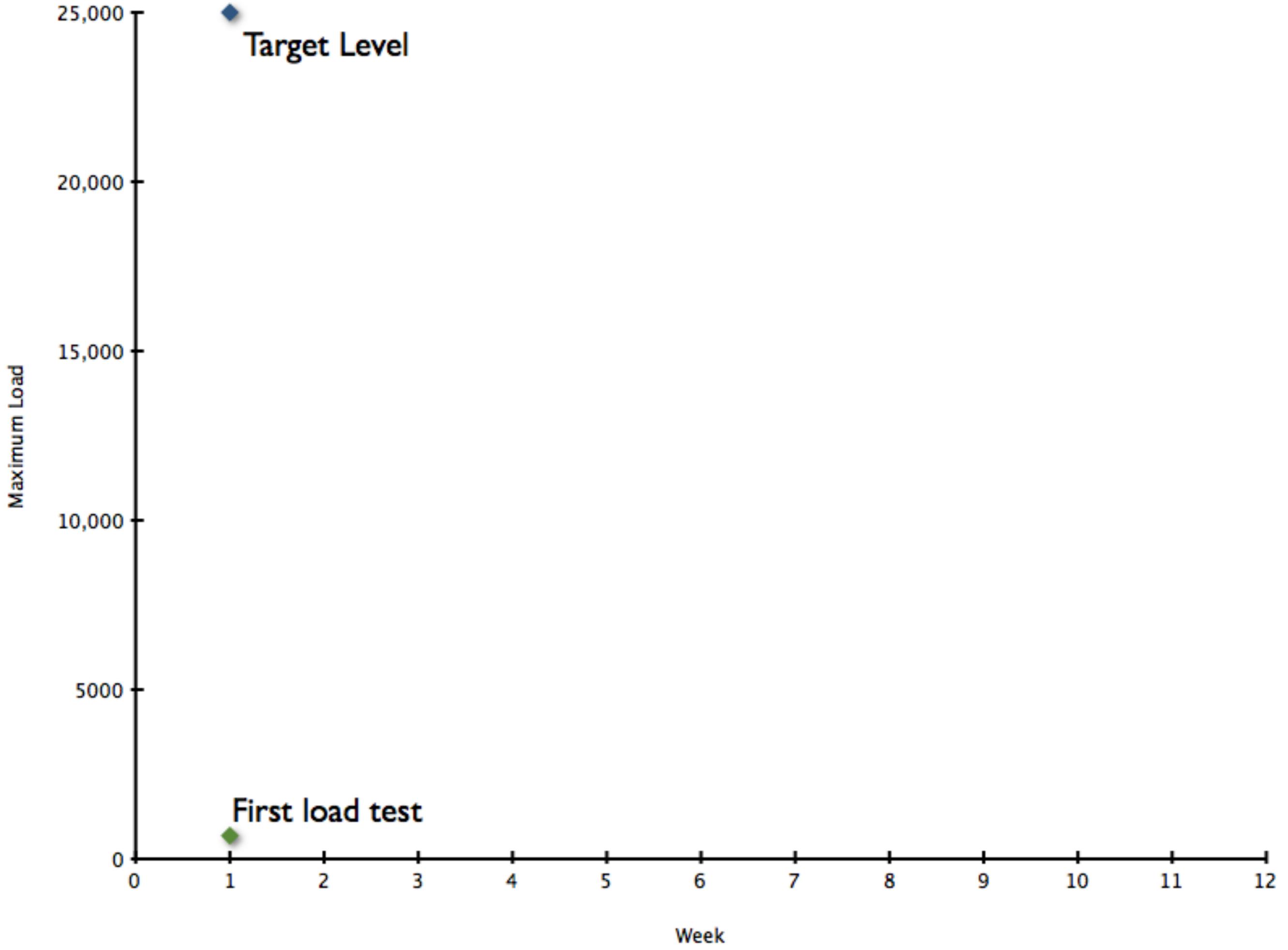
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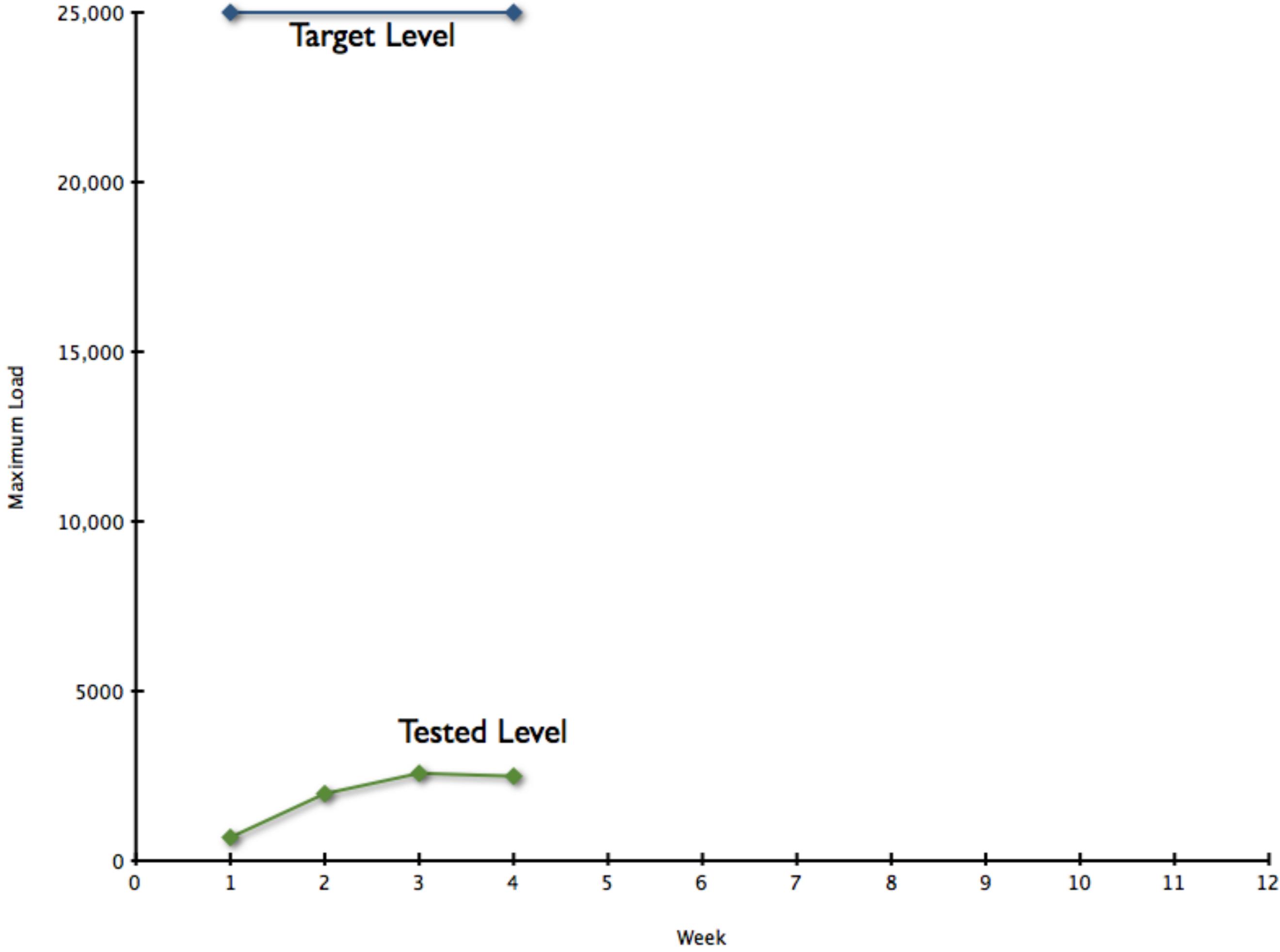


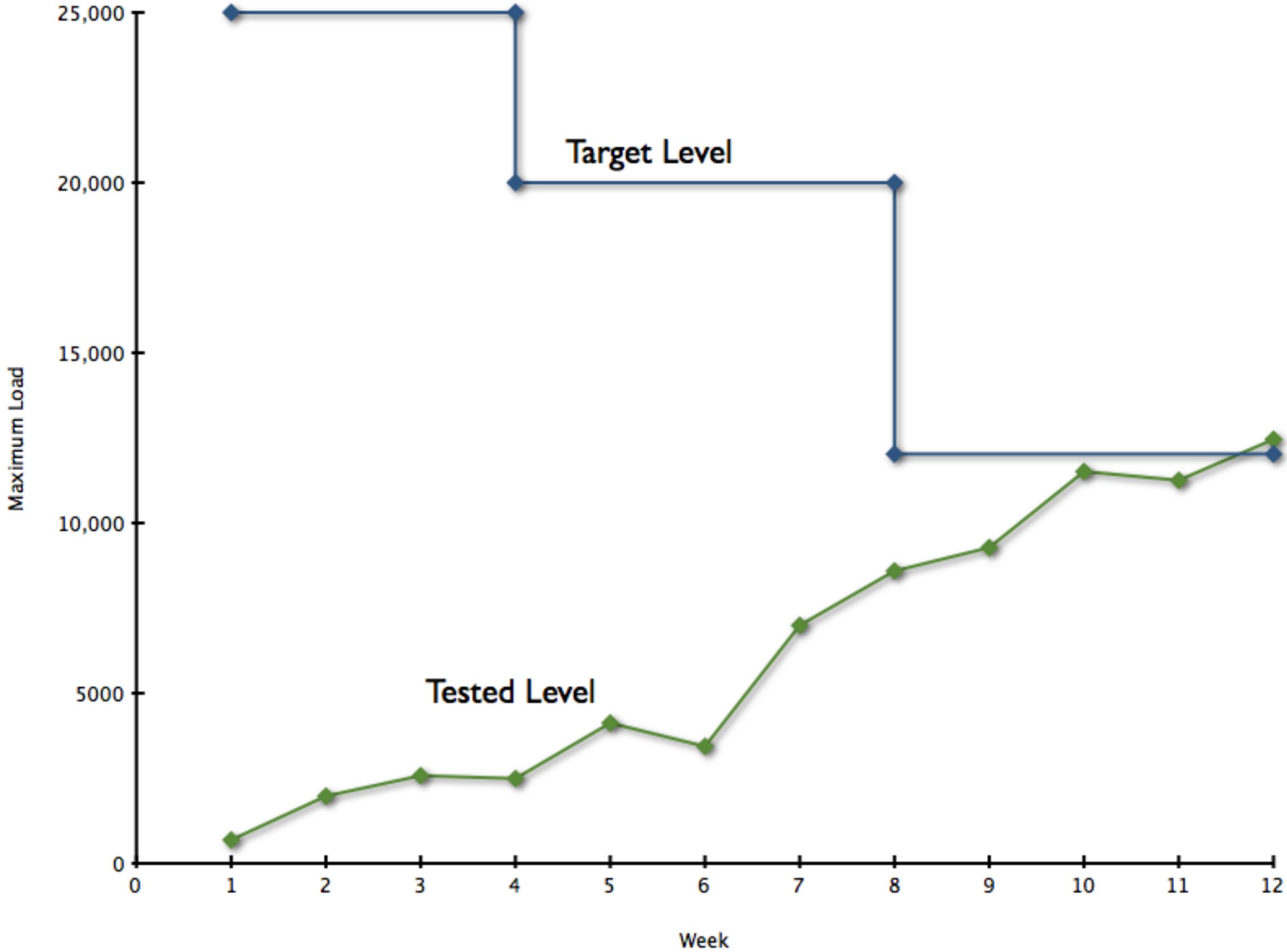


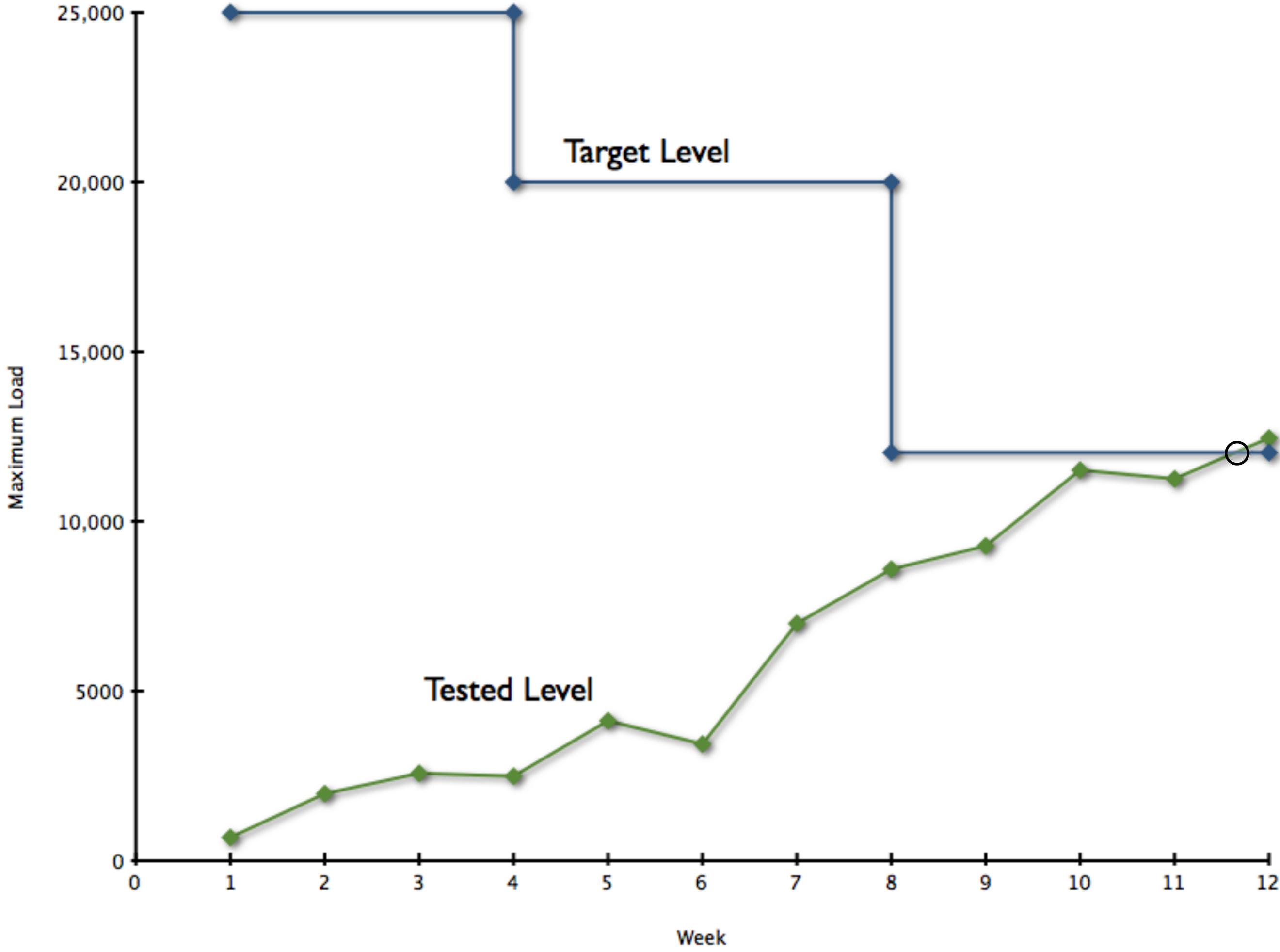
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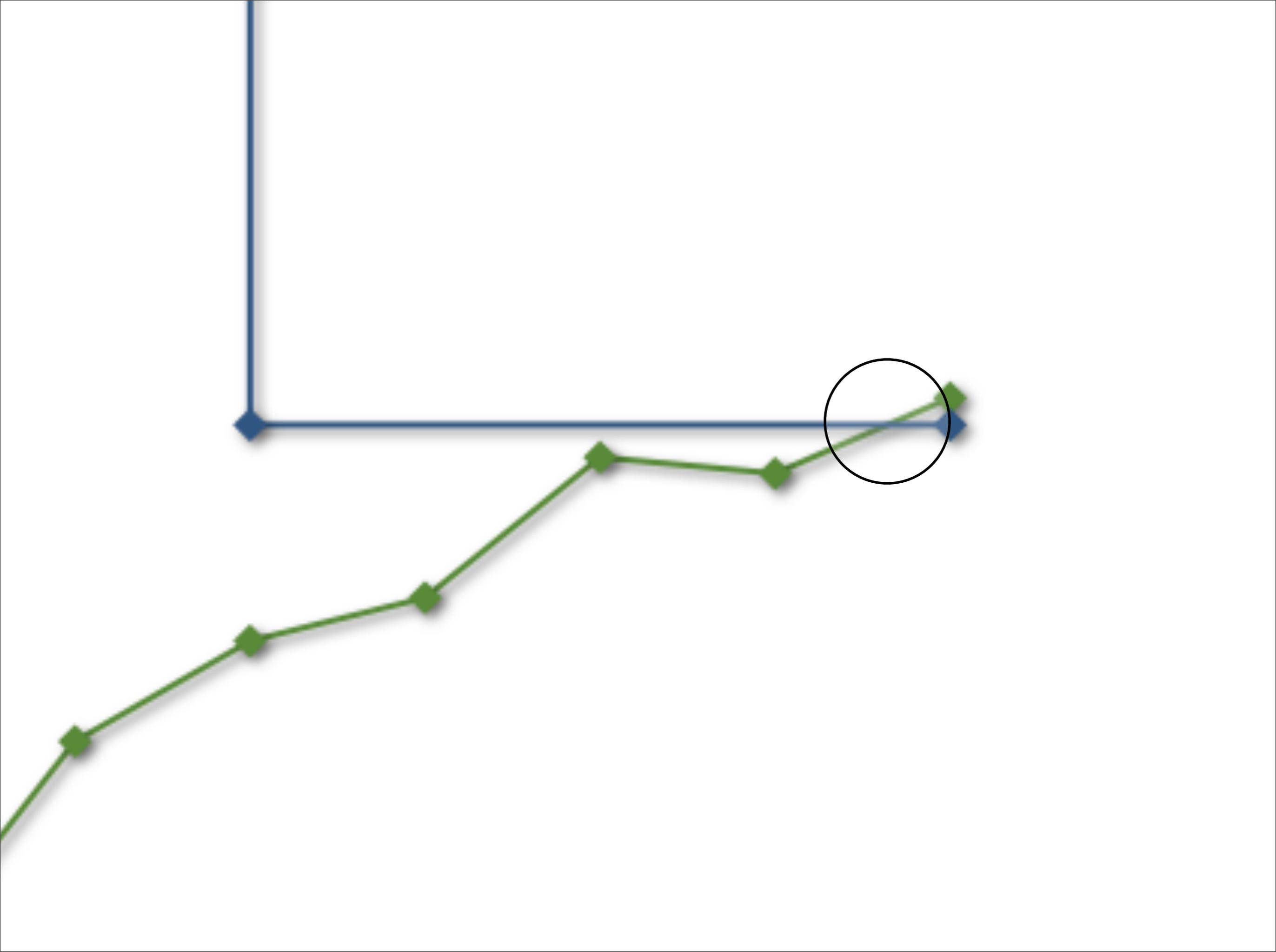


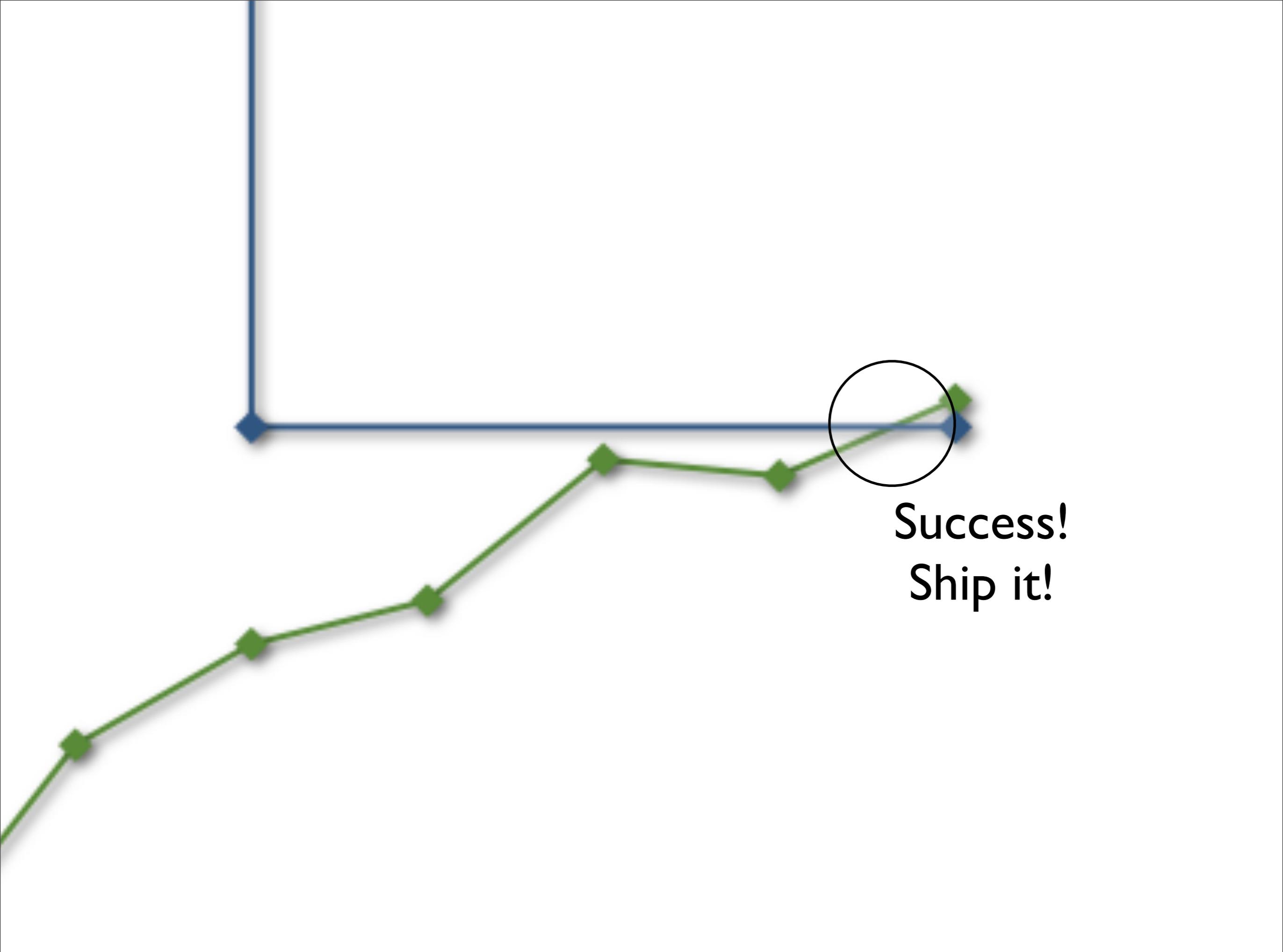












Success!
Ship it!



Wednesday, November 3, 2010









Wednesday, November 3, 2010



Wednesday, November 3, 2010



Wednesday, November 3, 2010



Wednesday, November 3, 2010



Perimeter



Perimeter Defences





Mean



Mean Time



Mean Time Between

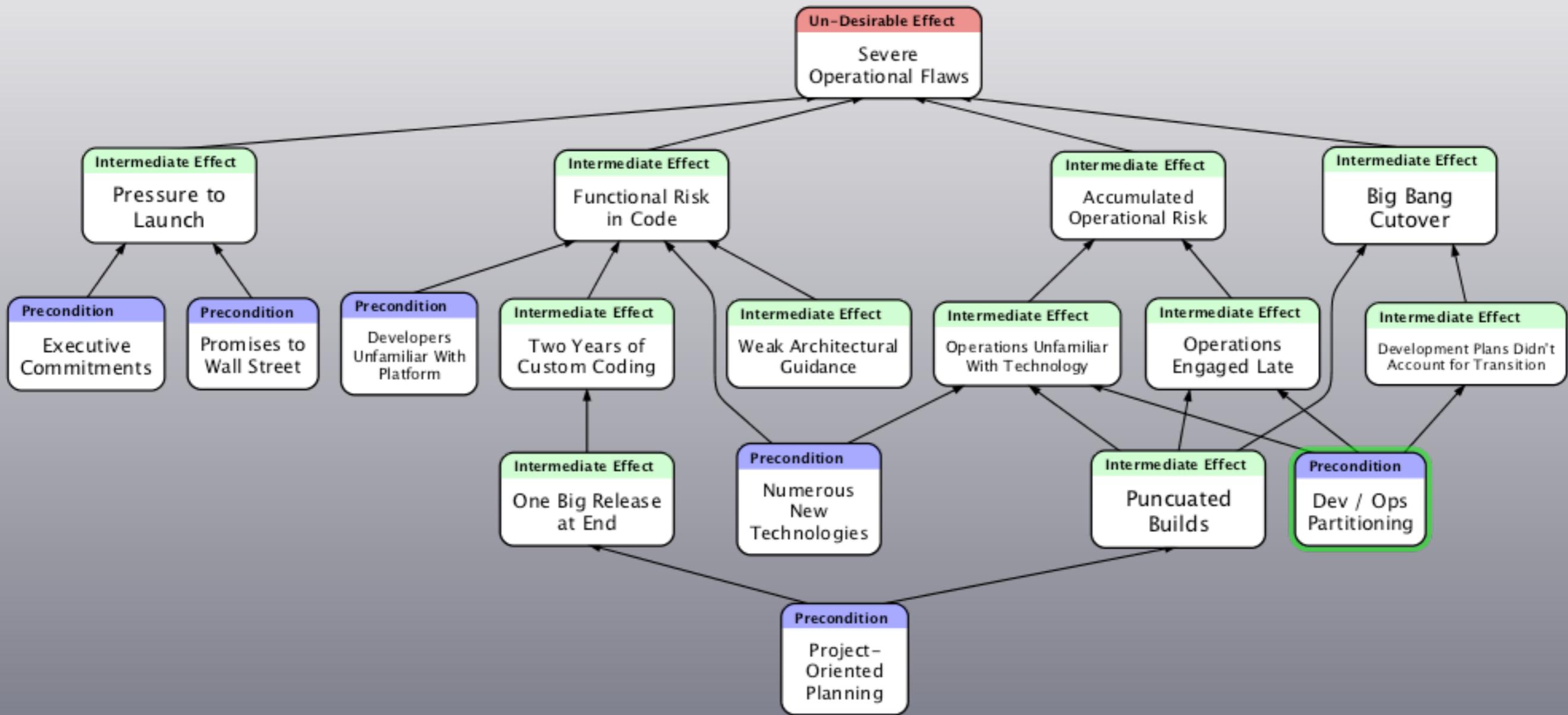


Mean Time Between Horrrifying



Mean Time Between Horrrifying Discoveries





What Went Right?

What Went Right?

Dev & Ops collaboration

What Went Right?

Dev & Ops collaboration

Shared views and information

What Went Right?

Dev & Ops collaboration

Shared views and information

Speed of change

What Went Right?

Dev & Ops collaboration

Shared views and information

Speed of change

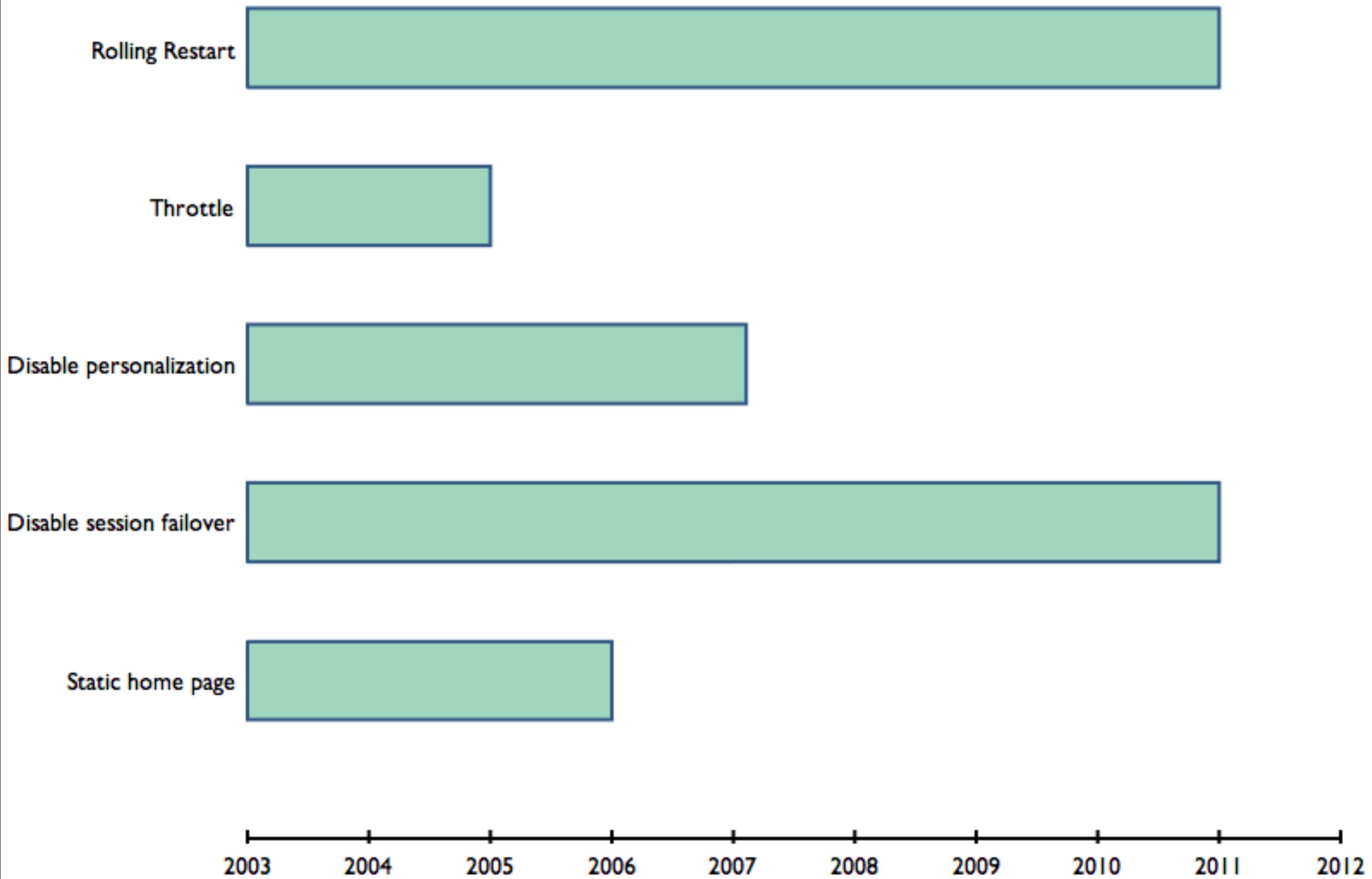
Heroic efforts both challenged and elevated



Wednesday, November 3, 2010

Schrödinger's Manager







Seeds Sown In Trauma Bear Twisted Fruit













Wednesday, November 3, 2010

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@mtnygard