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2012中国系统架构师大会

SYSTEM ARCHITECT CONFERENCE CHINA 2012

架构设计 · 自动化运维 · 云计算

运维变迁过程

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Weibo: @秋天的野菜

中小企业??



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IN DOLLAR TERMS,
 this means that if your site typically earns \$100,000 a day, this year
 you could lose **\$2.5 MILLION** in sales.



1995

Then: The average page size was a bit over **5Kb**, due to the fact that it contained just **2.3 objects** that means just 2.3 calls to whatever data center was serving the site.

(We estimate 10 times the size of 1 kb is the average for web pages at this time from the early 90s.)



2010

Now: The average page size is **400k** and contains about **75 objects** — everything from CSS to images to JavaScript. That means 75 server round trips are needed to pull all the page's resources to the user's browser. The optimal pages that maximize speed and accessibility.



2012

If we hit the current trend, by 2012 we can expect the average page to grow to **600k** and contain **83 objects**.

以日盈利 **10万美元** 的网站为例：

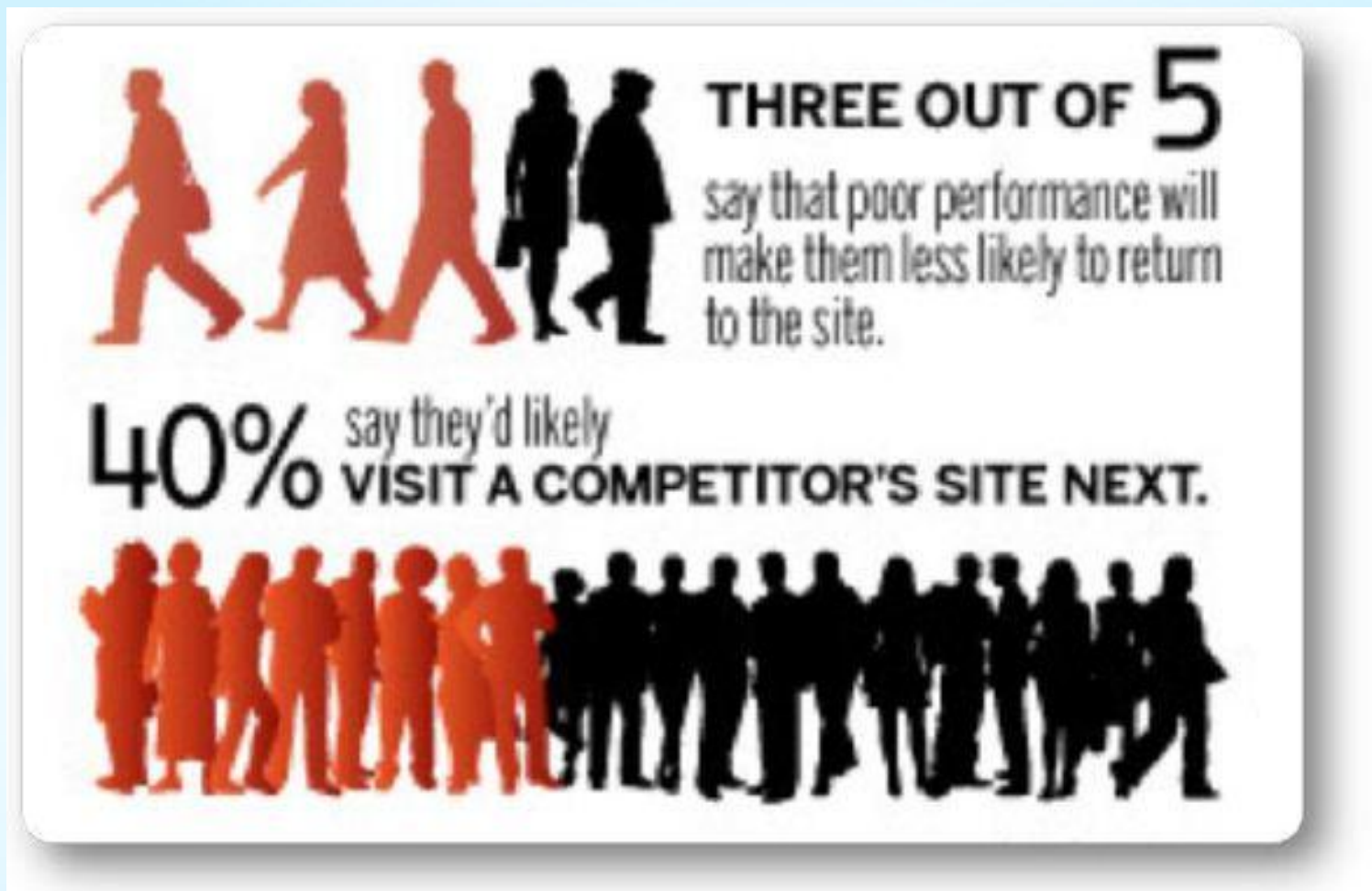
网站加载速度每慢1秒将：

降低 **7%** 的转化率

损失 **11%** 的PV

减少 **16%** 的生意机会

一年时间将减少 **250万 美元** 收益



因网站出现异常问题(性能) **60%** 的被访者表示不愿回到这个站点
而同时有 **40%** 的人将转向同类竞争对手站点

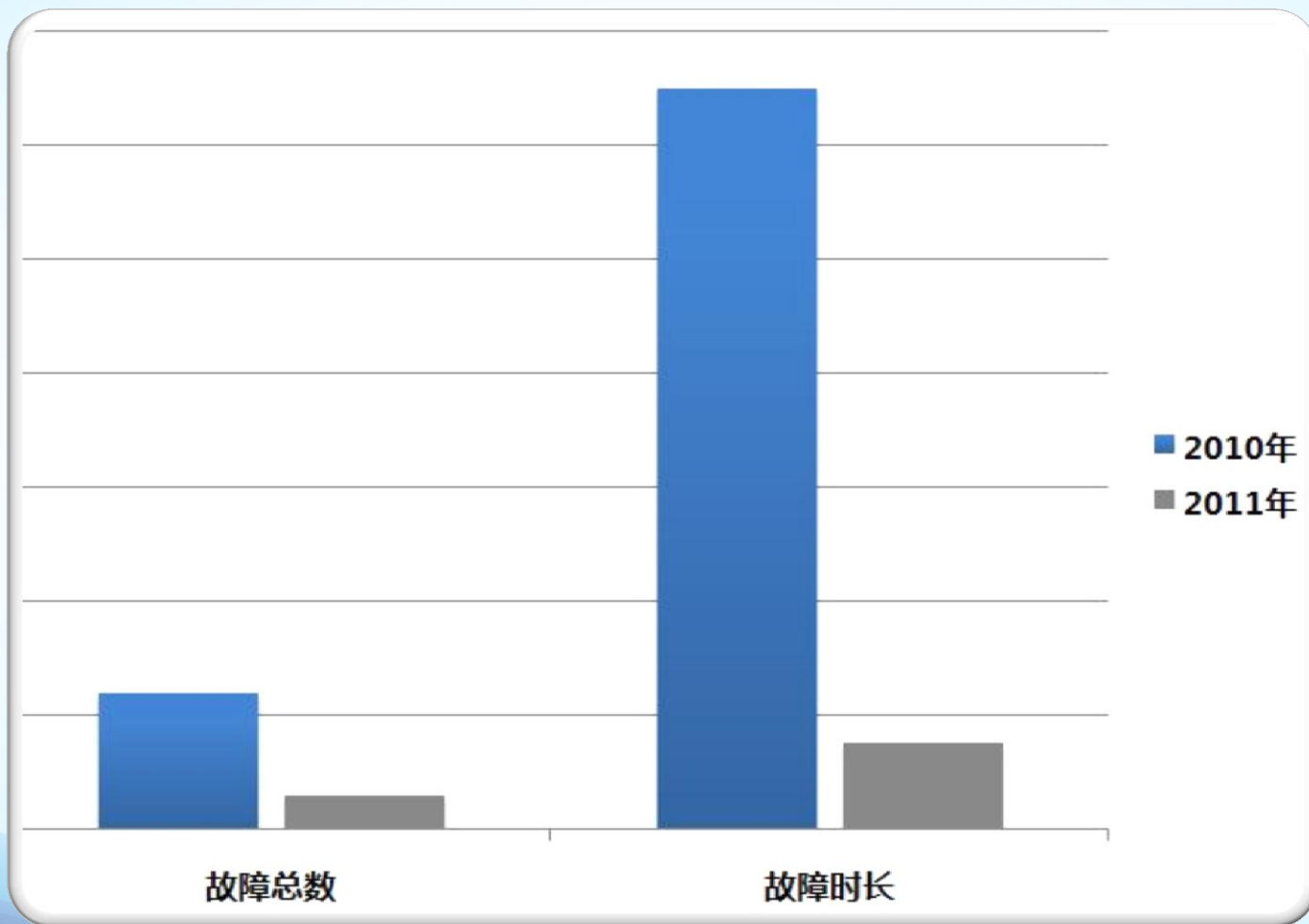
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稳定性



故障总数

故障时长

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How to do ?



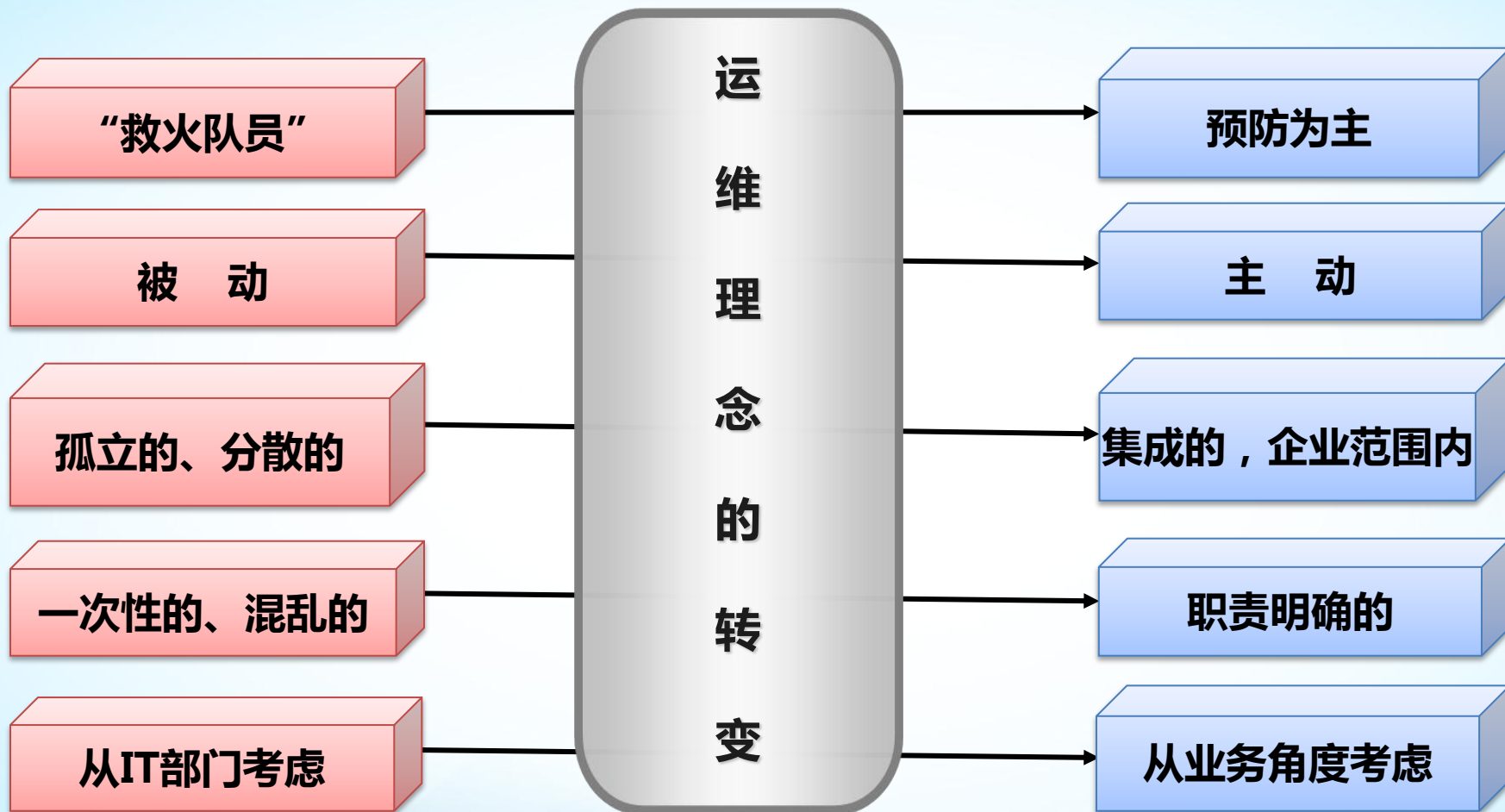
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理念



做事

网络链路

网络质量监控
(各地区)

IDC机房

机房内部(专线)
IDC机房之间

网络设备

网络设备监控
(交换机、负载均衡等)

服务器

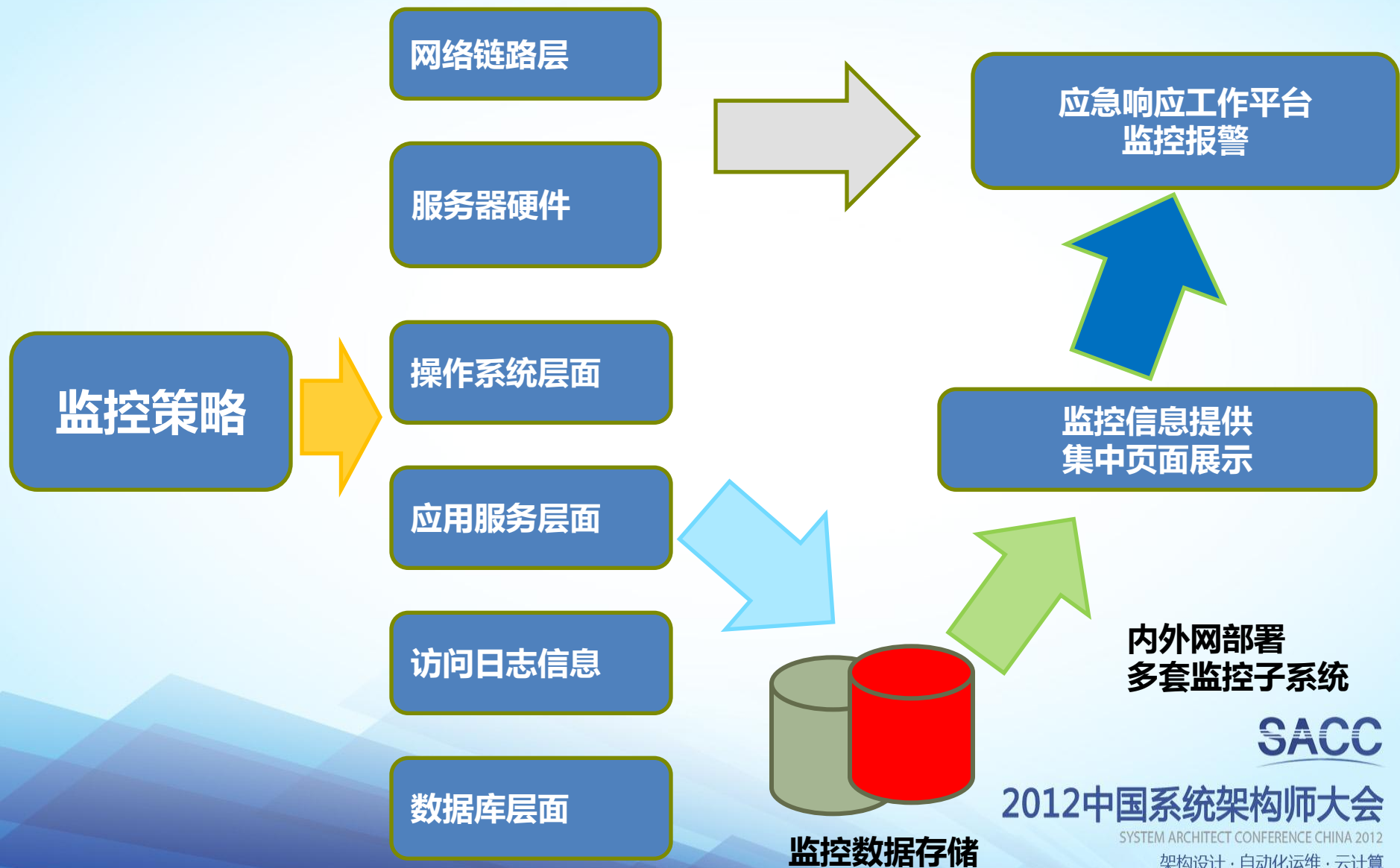
服务器健康检查
(硬件)

应用程序

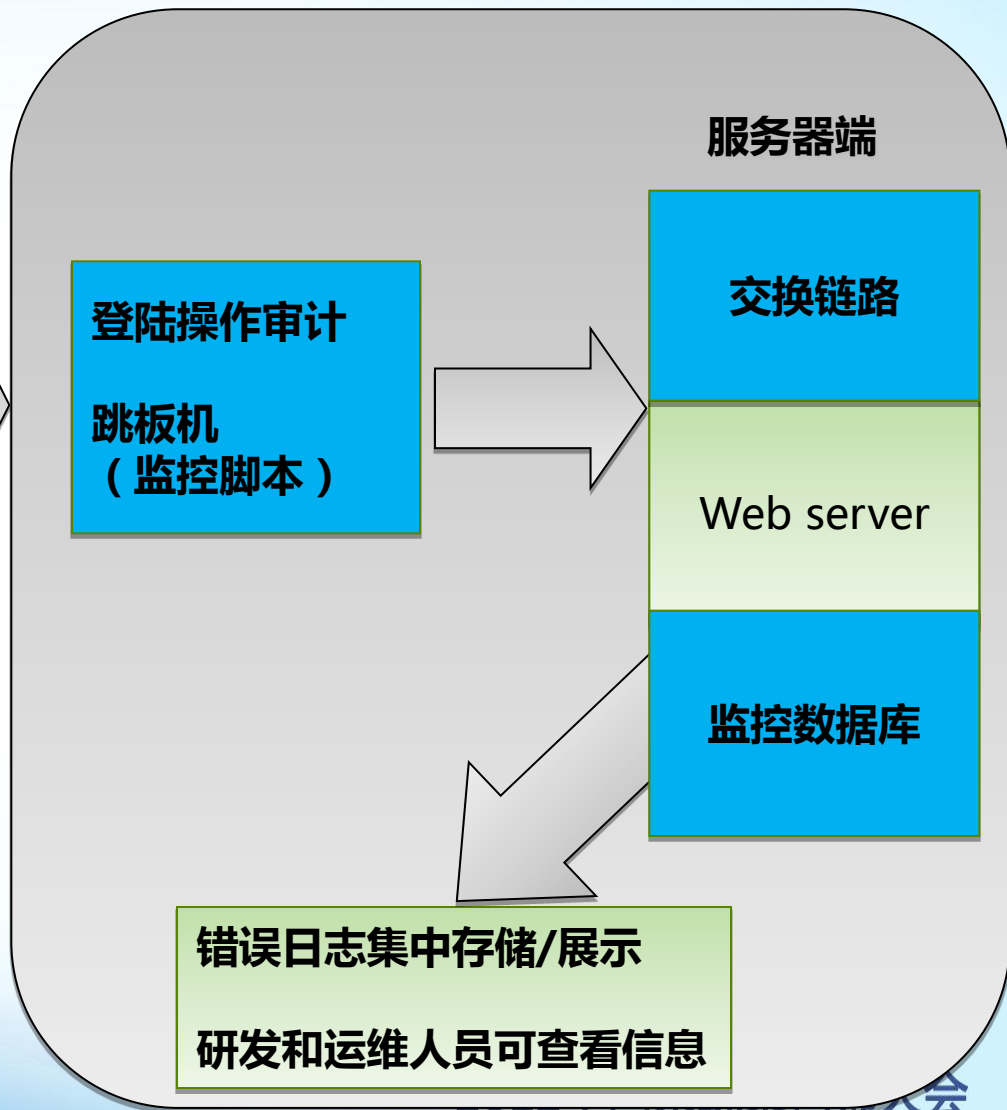
服务器程序监控
(App 4-7)

后台数据
监控

做事

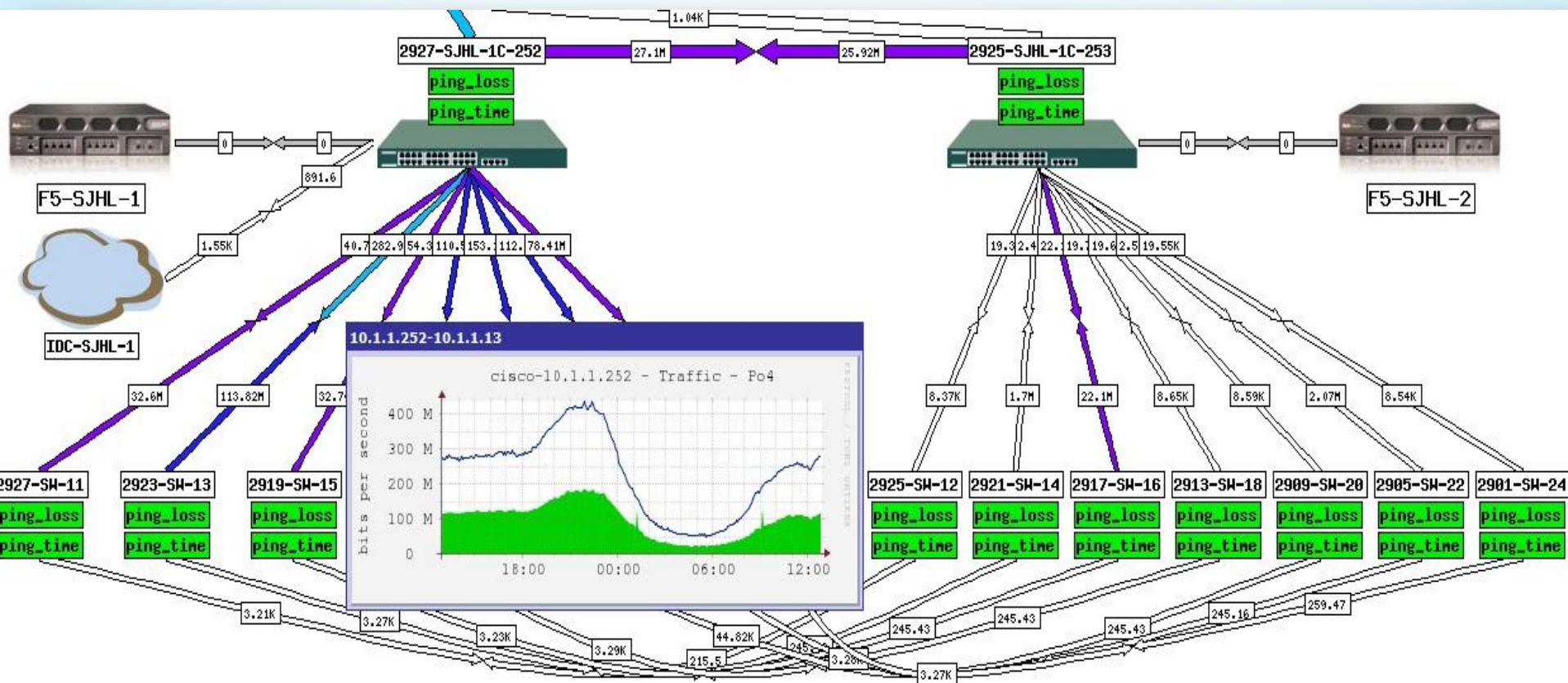


做事



急聘人才！

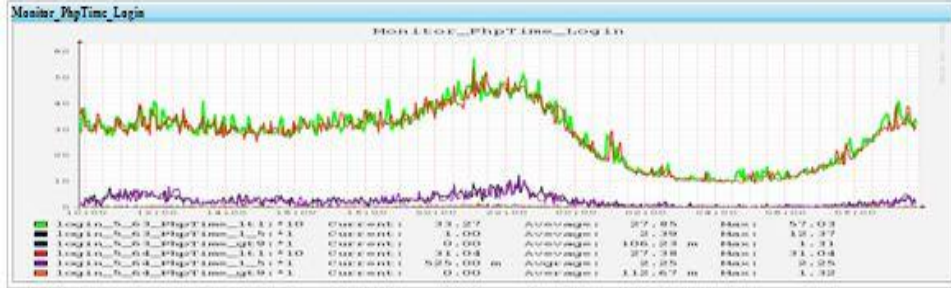
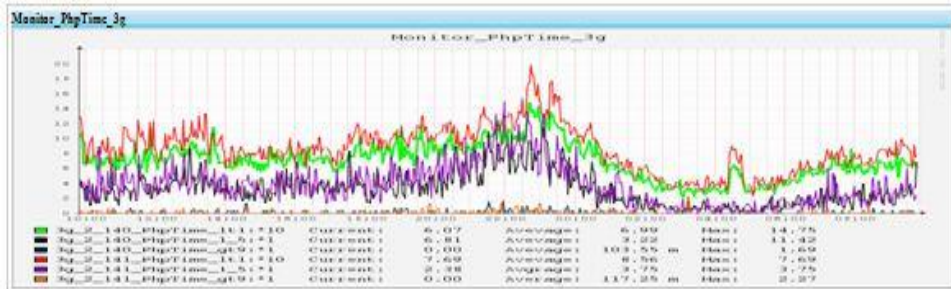
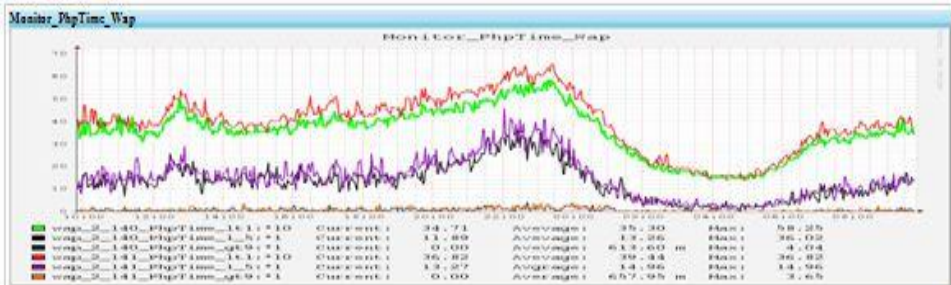
展示



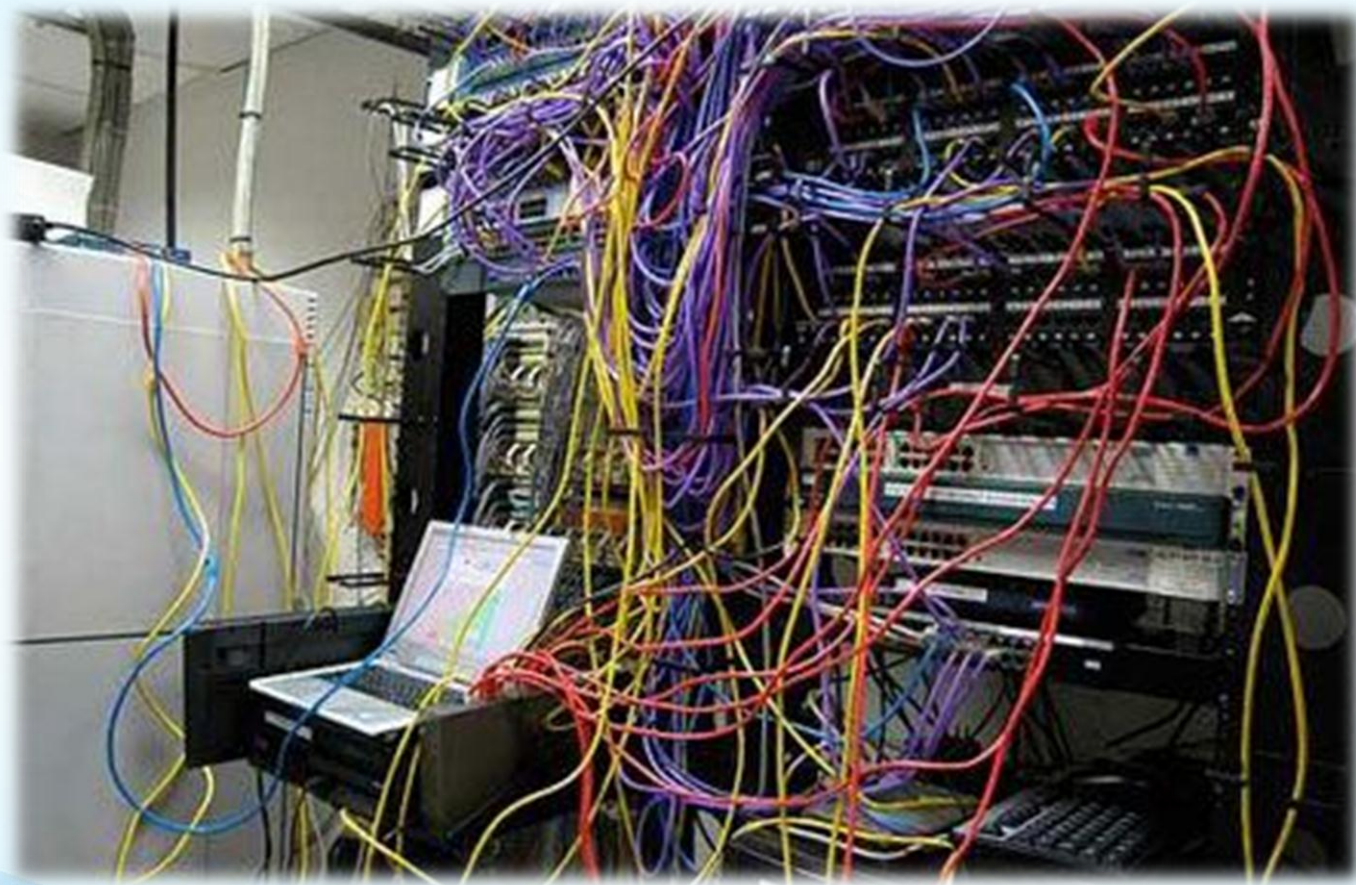
展示

Switch_ip:	Switch_port:	Time:	In_max:	Time:	Out_max:
1 [redacted] 23	po1_1 [redacted] 4	2012-02-02_22:01:00:	242	2012-02-02_22:04:00:	395
1 [redacted] 25	po2_1 [redacted] 4	2012-02-02_22:16:00:	527	2012-02-02_21:46:00:	89
1 [redacted] 24	po3_1 [redacted] 4	2012-02-02_21:57:00:	615	2012-02-02_22:02:00:	484
1 [redacted] 12	po4_1 [redacted] 4	2012-02-02_21:46:00:	205	2012-02-02_21:21:00:	206
1 [redacted] 22	po5_1 [redacted] 4	2012-02-02_21:31:00:	334	2012-02-02_21:37:00:	395
1 [redacted] 07	po6_1 [redacted] 4	2012-02-02_22:05:00:	281	2012-02-02_22:31:00:	149
1 [redacted] 11	po8_1 [redacted] 4	2012-02-02_21:07:00:	151	2012-02-02_21:27:00:	232
1 [redacted] 15	po9_1 [redacted] 4	2012-02-02_21:46:00:	203	2012-02-02_20:31:00:	25
1 [redacted] 17	po10_ [redacted] 0.4	2012-02-02_21:34:00:	728	2012-02-02_22:06:00:	467
1 [redacted] 18	po11_ [redacted] 0.4	2012-02-02_21:44:00:	329	2012-02-02_21:40:00:	206
1 [redacted] 13	po12_ [redacted] 0.4	2012-02-02_22:46:00:	161	2012-02-02_22:06:00:	166
1 [redacted] 19	po13_ [redacted] 0.4	2012-02-02_22:05:00:	168	2012-02-02_22:07:00:	203
1 [redacted] 20	po14_ [redacted] 0.4	2012-02-02_21:46:00:	503	2012-02-02_21:40:00:	602
1 [redacted] 21	po15_ [redacted] 0.4	2012-02-02_21:41:00:	135	2012-02-02_21:41:00:	352
1 [redacted] 14	po16_ [redacted] 0.4	2012-02-02_22:01:00:	163	2012-02-02_21:41:00:	347
1 [redacted] 253	po17_ [redacted] 0.4	2012-02-02_22:10:00:	1391	2012-02-02_21:34:00:	2447

展示



改造



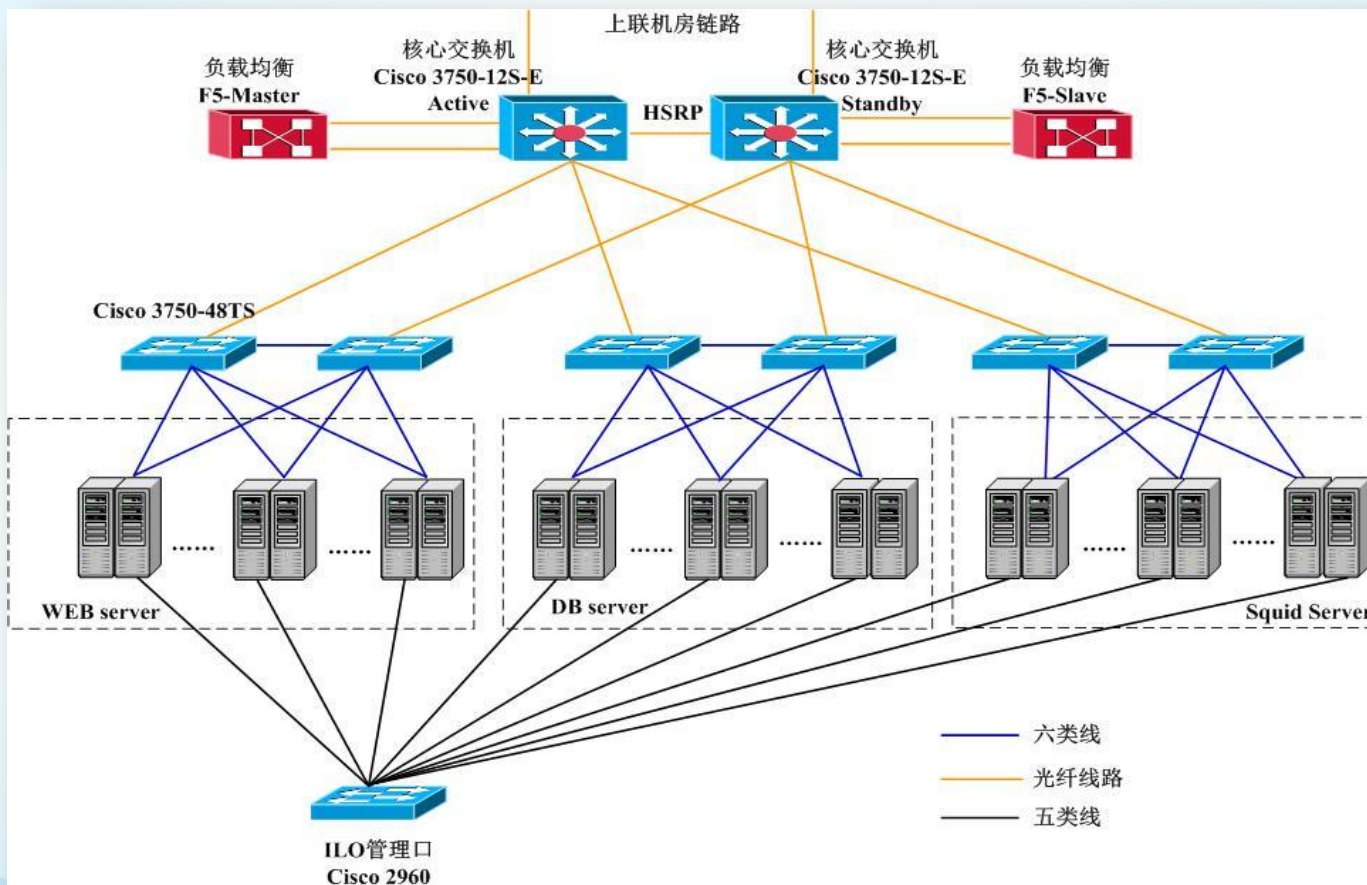
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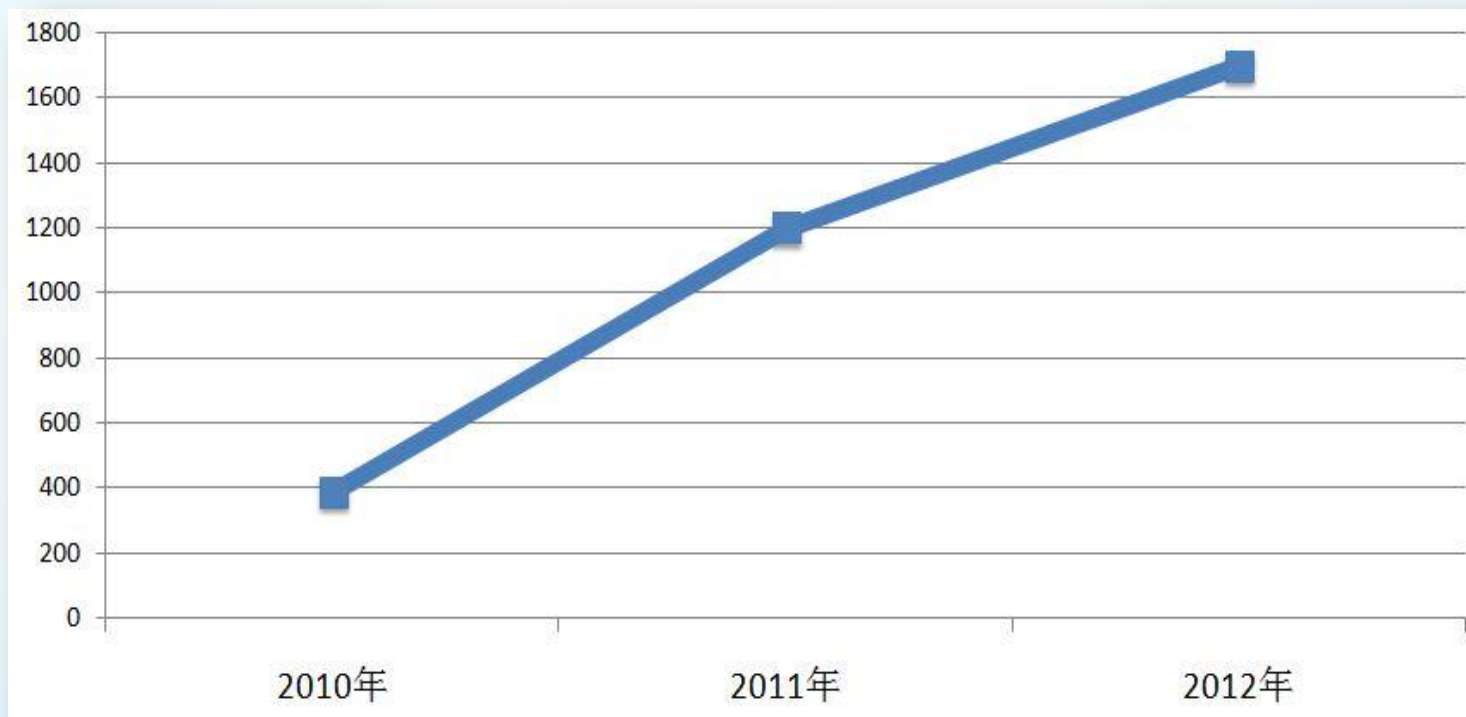
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改造



设备有点多



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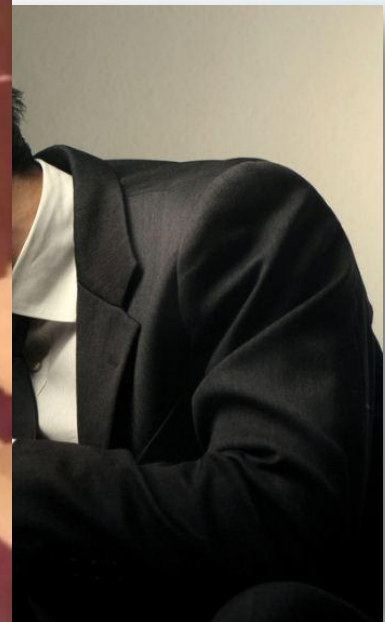
苦B的运维



重复



戒化



自动化运维-Ks.....



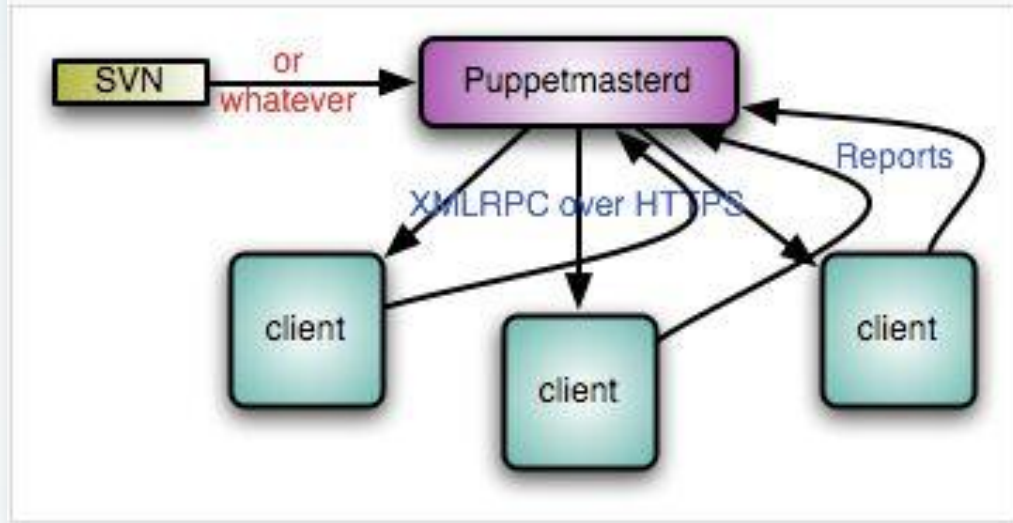
KickStart



自动化部署-.....

C/s构架

下图为puppet的架构图



70%精力用于运维、30%用于创新，转变为以30%的精力用于运维、70%用于创新。

节省了人力成本、IT运营成本、降低人机交互差错率，**不限形式，重在效率！**

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运维管理-登录方式



审计文件系统（开源）



基于文件系统监测的 IT 安全产品（对比状态标识）

```
root@nagios:/var/lib/tripwire/report
Feb 29 11:42:30 nagios tripwire:
Feb 29 11:42:30 nagios tripwire: Modified:
Feb 29 11:42:30 nagios tripwire: "/etc/group-"
Feb 29 11:42:30 nagios tripwire: -----
Feb 29 11:42:30 nagios tripwire: Rule Name: Critical configuration files (/etc/p
passwd)
Feb 29 11:42:30 nagios tripwire: Severity Level: 100
Feb 29 11:42:30 nagios tripwire: -----
Feb 29 11:42:30 nagios tripwire:
Feb 29 11:42:30 nagios tripwire: Modified:
Feb 29 11:42:30 nagios tripwire: "/etc/passwd"
Feb 29 11:42:30 nagios tripwire: =====
Feb 29 11:42:30 nagios tripwire: Error Report:
Feb 29 11:42:30 nagios tripwire: =====
Feb 29 11:42:30 nagios tripwire:
```

安全监控-外部扫描



IBM AppScan

能扫描和检测所有常见的 Web 应用安全漏洞，
例如 SQL 注入（SQL-injection）、
跨站点脚本攻击（cross-site scripting）、
缓冲区溢出（buffer overflow）

Keep Walking



网络设备管理流程



思 考

技术运营

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谢 谢

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