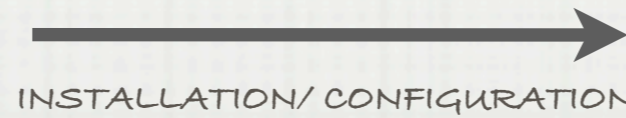


# MONITORING 2.0

ULRICH HABEL <[RHAEN@CPAN.ORG](mailto:RHAEN@CPAN.ORG)>

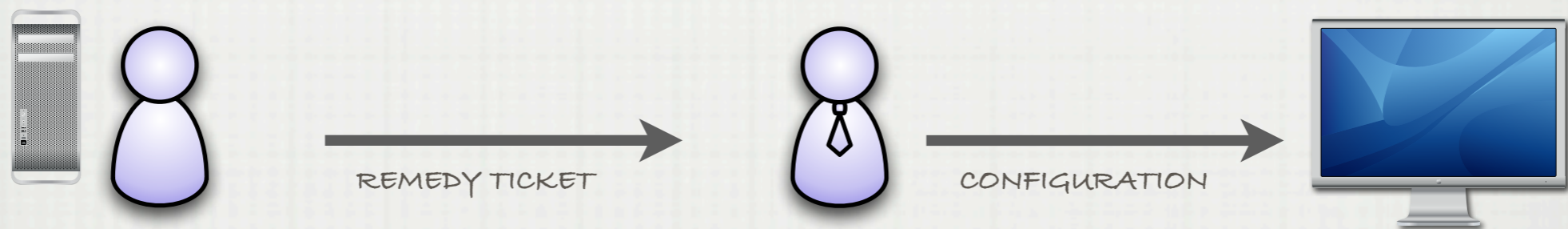
# ADMINISTRATION - THE OLD WAY

---



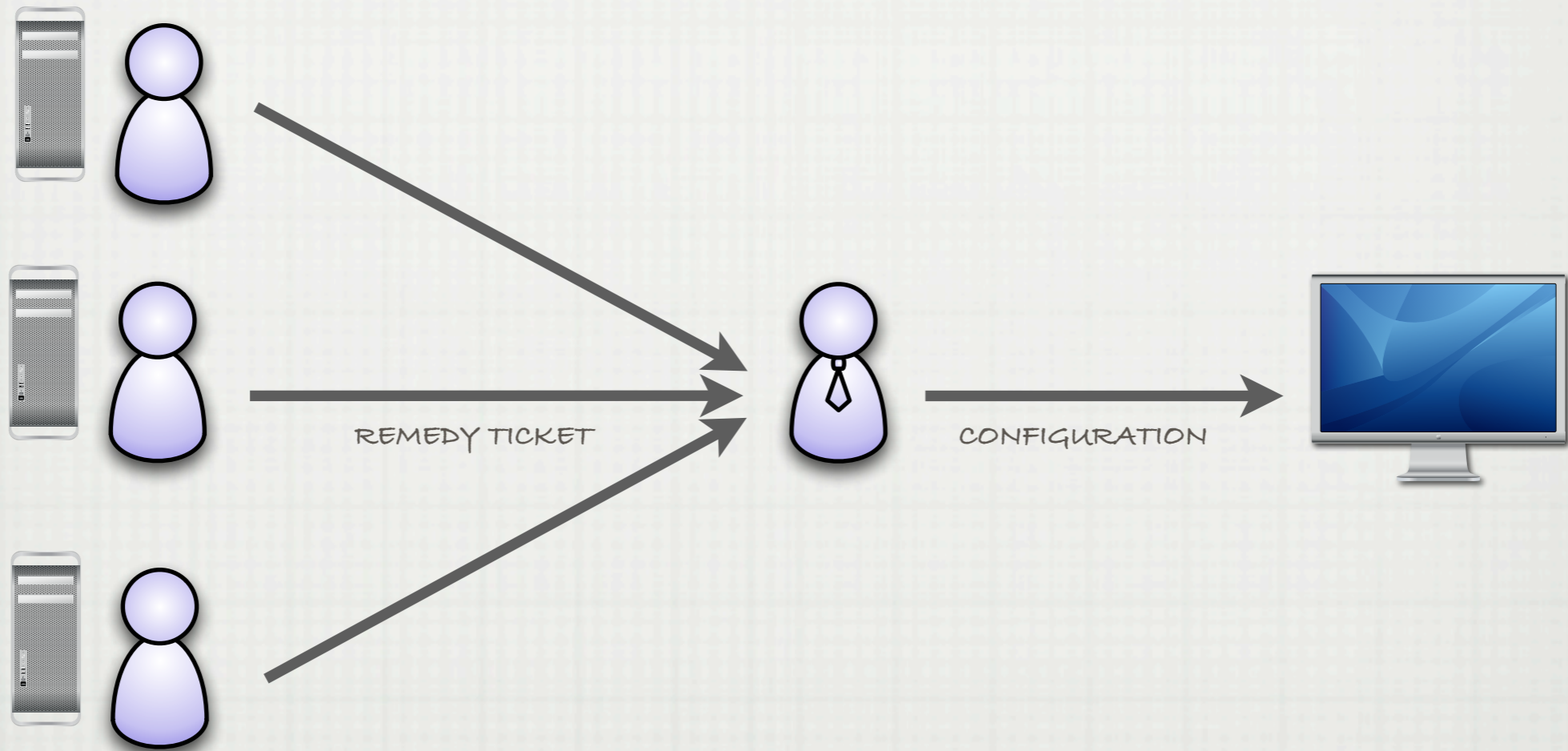
# ADMINISTRATION - BASIC

---



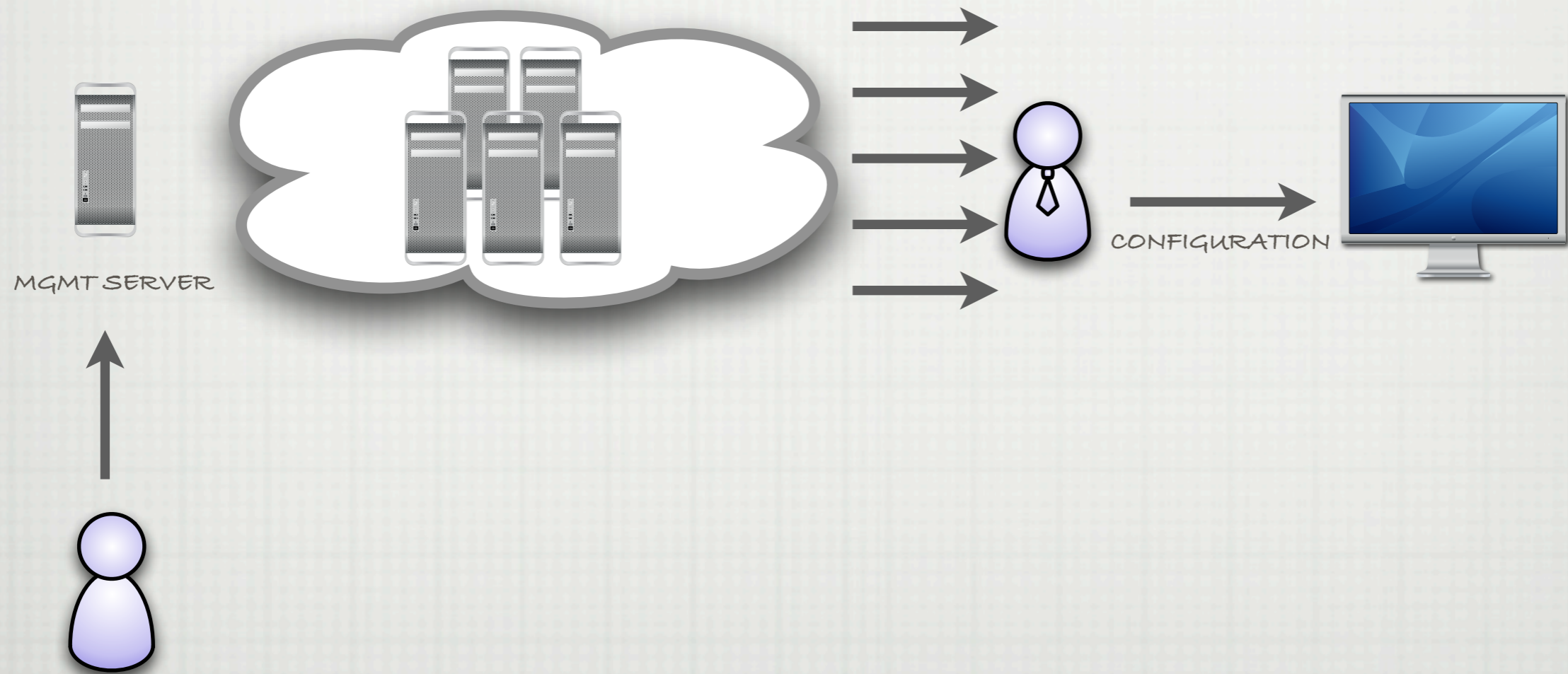
# ADMINISTRATION - ADVANCING

---



# ADMINISTRATION - CLOUD AGE

---



# STATISTICS/MONITORING REQUIREMENTS

COLLECT DATA

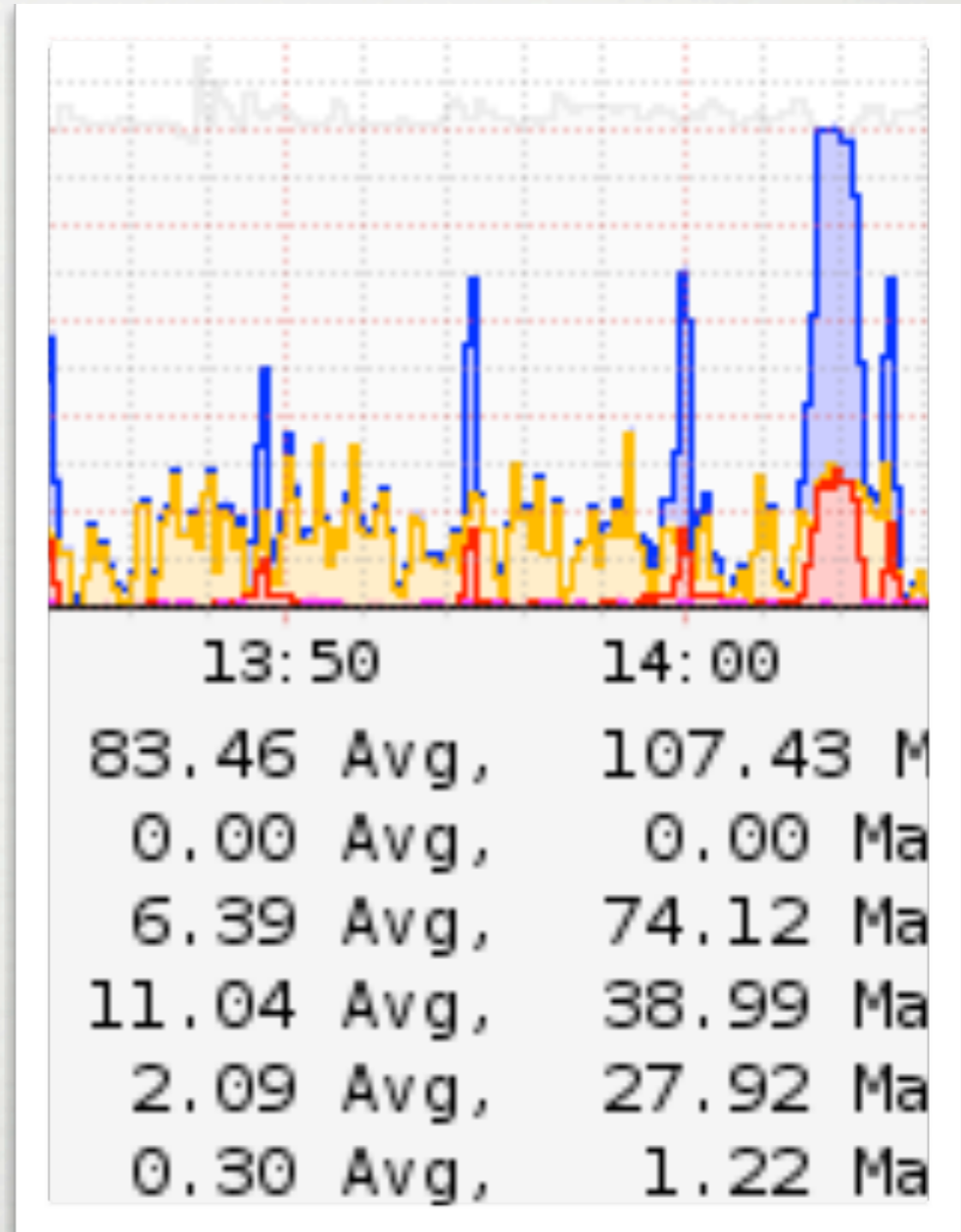
SERVER

OS

SERVICES

BASE LEVEL FOR  
MONITORING/  
ALERTING

ZERO-CONF



# MONITORING CHALLENGES

---

- DATA STORAGE (DATABASE/FS)
- LATENCY (LOCAL STORAGE/NETWORK)
- DURATION (TIME NEEDED FOR A SAMPLE)
- FREQUENCY (EVERY 30 S)
- CROSS PLATFORM ((X86\_|WIN){32,64})

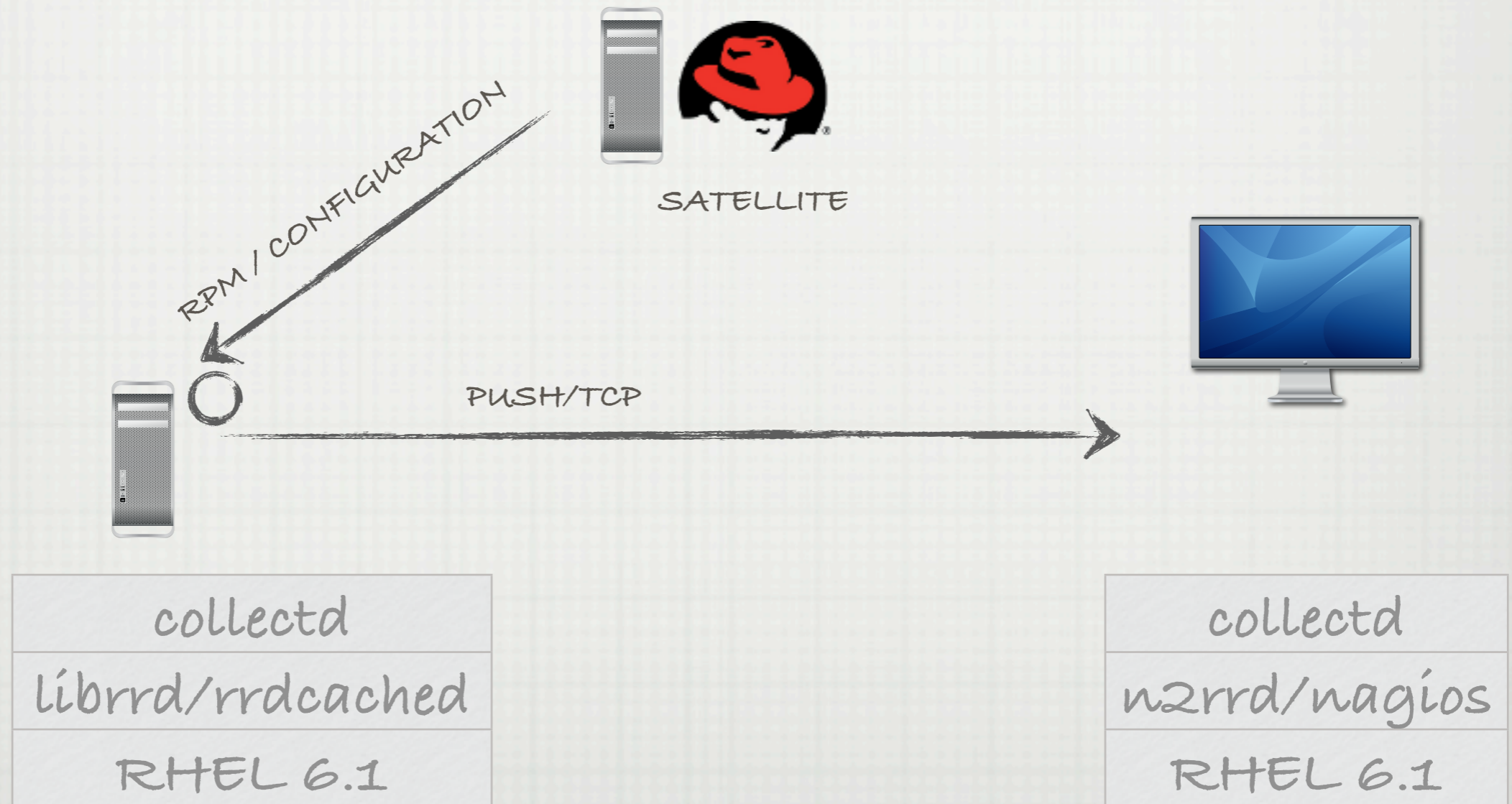
# TOOLS FOR MONITORING

---

- collectd (<http://www.collectd.org>)
- rrdtool (<http://oss.oetiker.ch/rrdtool/>)
- n2rrd (<http://n2rrd-wiki.diglinks.com/>)
- Nagios (<http://www.nagios.org/>)

# FLEXIBLE MONITORING SOLUTION

---



# STATISTICS & DATA (COLLECTD)

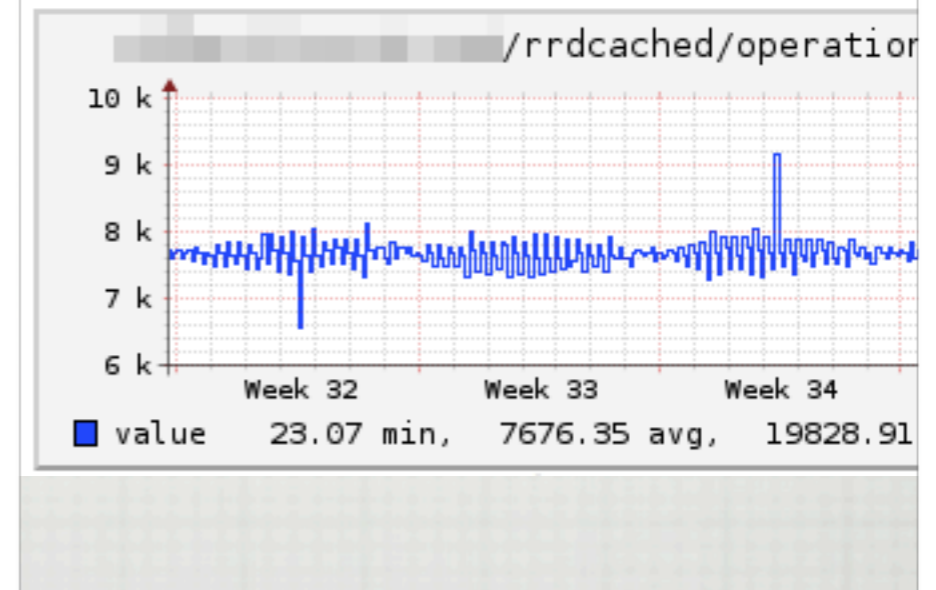
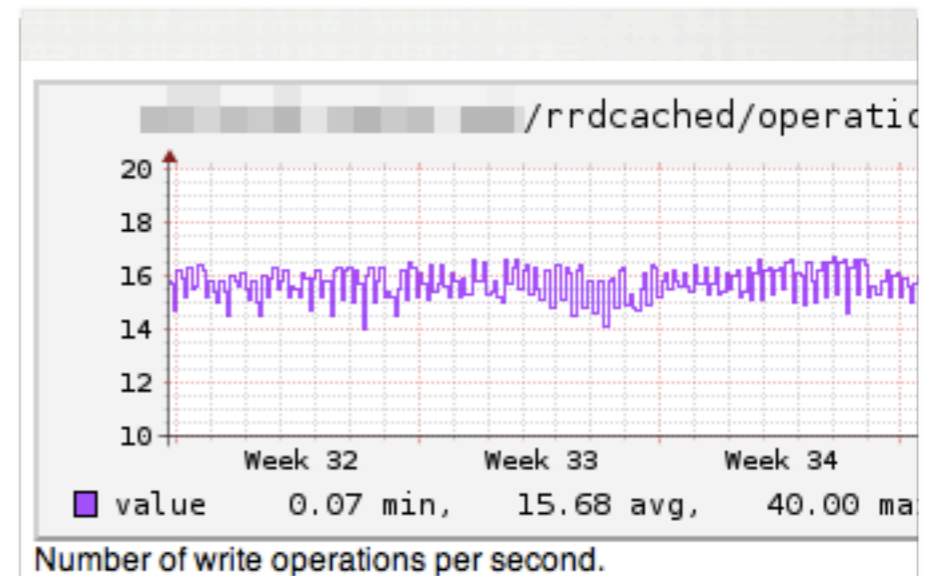
---

- LIGHTWEIGHT LOCAL UNIX DAEMON
- ANSI C WITH ISO99 EXTENSIONS
- AVAILABLE FOR WIN/UNIX
- PLUGIN ARCHITECTURE (92 PLUGINS READY)
- API FOR PERL/JAVA/...



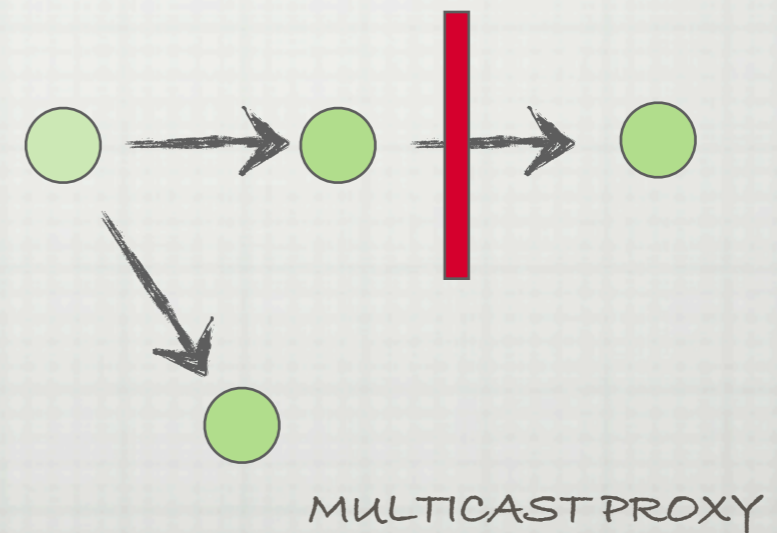
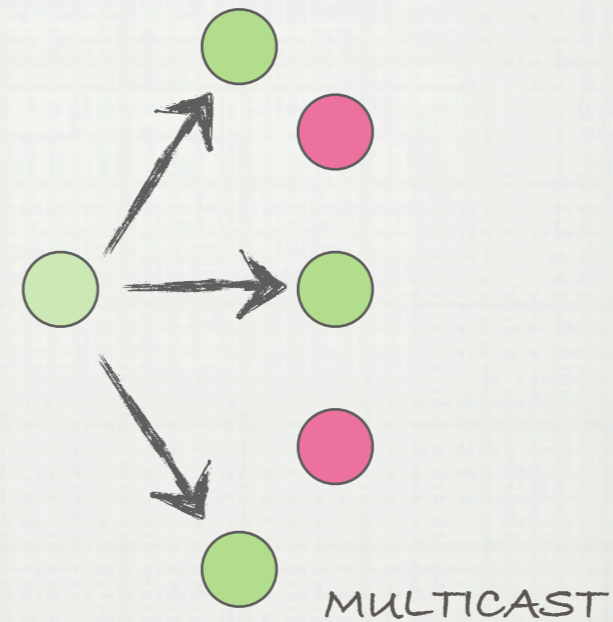
# LOCAL STORAGE (RRDCACHED)

- LOCAL DAEMON USING UNIX SOCKETS
- COLLECTD PLUGIN
- TIME/CHANGE BASED STORAGE OF DATA
- PART OF RRDTOOL
- NOT AVAILABLE IN RHEL 6.X SO FAR



# PUSH VIA TCP/IP IPv4/IPv6 (COLLECTD)

- PUSH VIA TCP/IP
- SINGLE PORT
- DATA SIGNED/  
ENCRYPTED
- UNICAST / MULTICAST  
(IP)
- PROXY PUSH POSSIBLE
- IT JUST WORKS



# SYSTEM GROUP BASED DEPLOYMENT

---



# BASE CONFIGURATION

---

## /etc/collectd.conf:

```
BaseDir      "/var/lib/collectd"  
PIDFile      "/var/run/collectd.pid"  
PluginDir    "/usr/lib64/collectd"  
TypesDB      "/usr/share/collectd/types.db"  
Interval     30  
ReadThreads  5
```

```
LoadPlugin syslog  
<Plugin syslog>  
    LogLevel info  
</Plugin>
```

```
<Plugin rrdtool>  
    DataDir "/var/lib/collectd/rrd"  
    CacheTimeout 120  
    CacheFlush 900  
</Plugin>
```

```
Include "/etc/collectd.d"
```

# ENVIRONMENT CONFIGURATION

---

`/etc/collectd.d/network.conf:`

```
LoadPlugin network
```

```
<Plugin network>
```

```
    <Server "10.65.33.12" "5509">
```

```
        SecurityLevel Encrypt
```

```
        Username "collectd"
```

```
        Password "vei5euPhadiw"
```

```
        Interface "eth0"
```

```
    </Server>
```

```
    TimeToLive 128
```

```
    MaxPacketSize 1024
```

```
    # proxy setup (client and server as above):
```

```
    # Forward true
```

```
    # statistics about the network plugin itself
```

```
    ReportStats false
```

```
</Plugin>
```

# SERVICE CONFIGURATION

---

/etc/collectd.d/service.conf:

```
# One per file - or grouped by function
```

```
LoadPlugin load
```

```
LoadPlugin mysql
```

```
<Plugin mysql>
```

```
  <Database "">
```

```
  User "monitor"
```

```
  Password "Aiz0veem8chi"
```

```
  MasterStats true
```

```
  </Database>
```

```
</Plugin>
```

```
LoadPlugin apache
```

```
<Plugin apache>
```

```
  <Instance "<%= fqdn %>">
```

```
    URL "http://localhost:<%= httpport %>/server-status?auto"
```

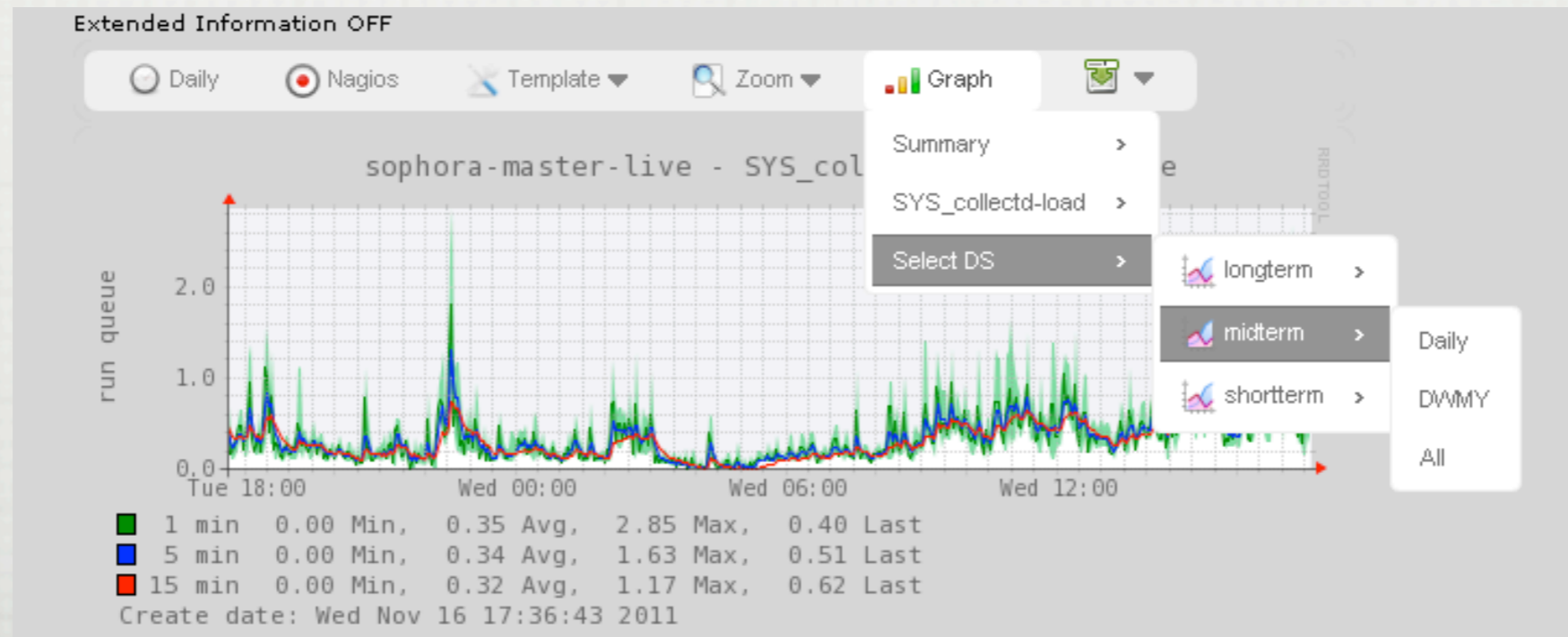
```
    Server "apache"
```

```
  </Instance>
```

```
</Plugin>
```

# RRD2GRAPH (PART OF N2RRD)

- ZERO CONFIGURATION ON COLLECTORS
- „AUTODISCOVERY“ OF SERVERS BASED ON DIRECTORY STRUCTURES
- OPENSOURCE - DIGLINKS



# NAGIOS INTEGRATION

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- ONE PLUGIN TO CHECK FOR COLLECTED VALUES  
(ONE PLUGIN TO RULE THEM ALL)
- EASY TO CONFIGURE FOR ADMINISTRATORS
- WORK IN PROGRESS (WE SHOULD DO SOMETHING...)



QUESTIONS?

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