

# JBoss Community



# Current & future developments in RHQ

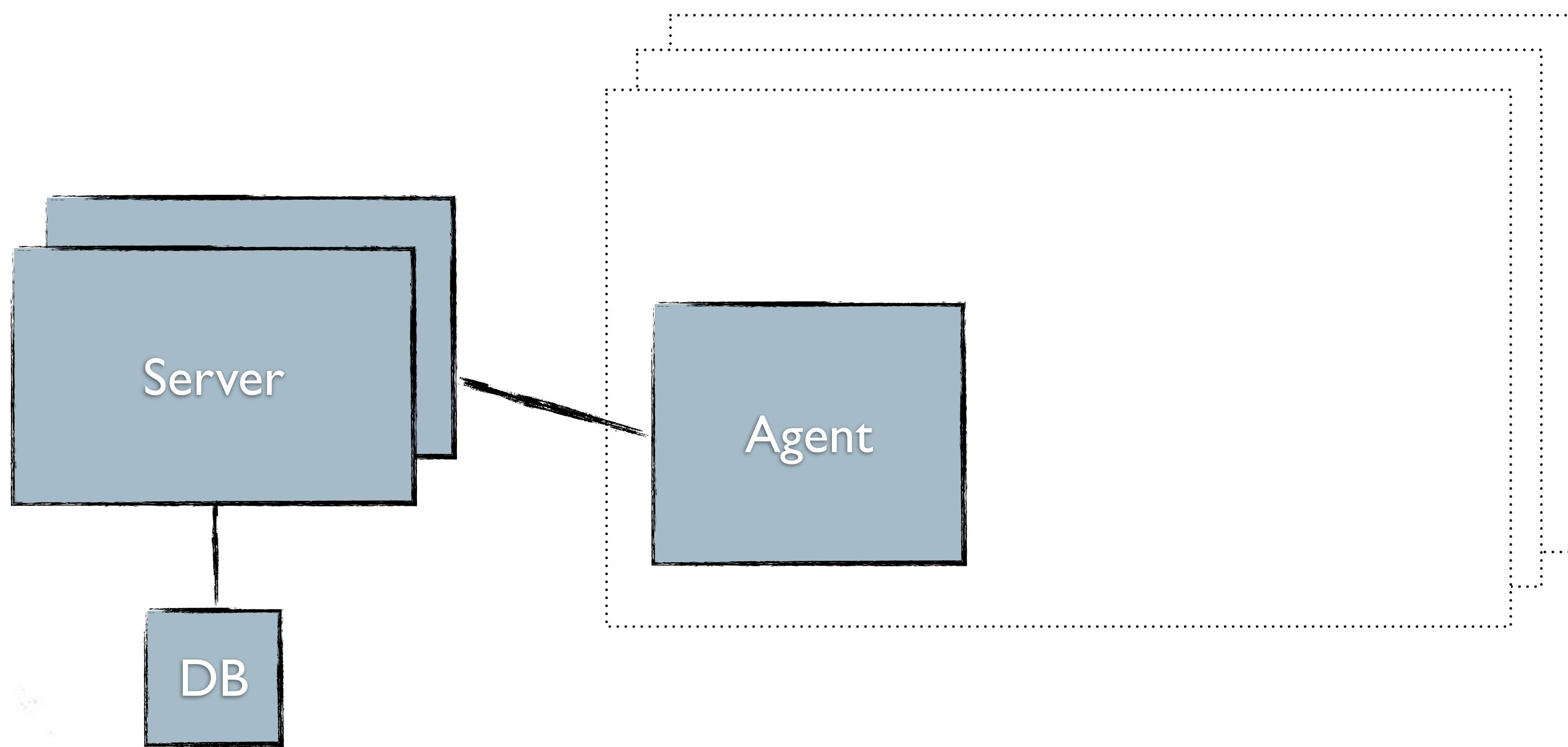
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[hwr@redhat.com](mailto:hwr@redhat.com)

@pilhuhn  
#rhq on Freenet

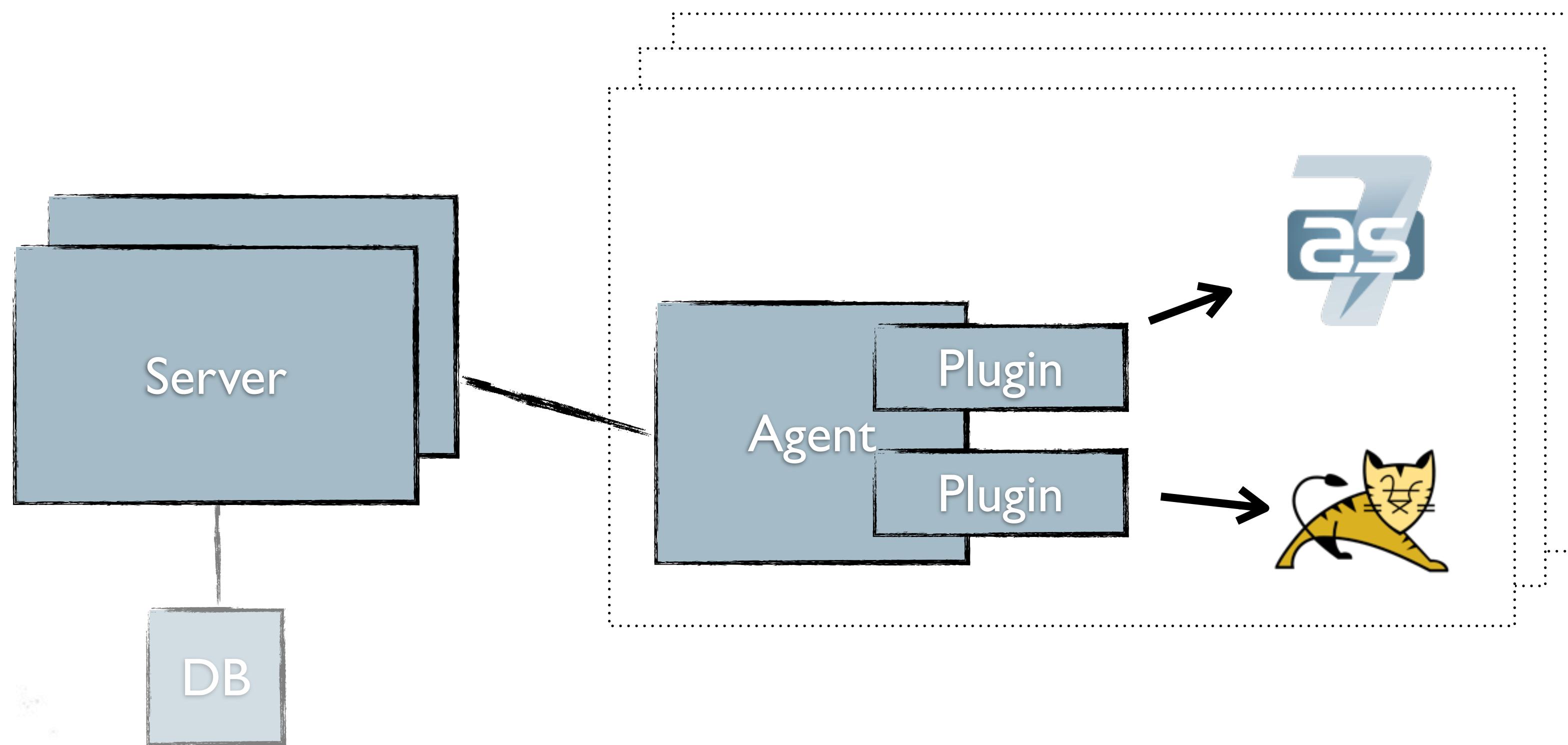
# Overview

- <http://jboss.org/rhq>
- Framework for
  - Monitoring, Alerting, Management of servers and applications
- Central Server(s)
- Agents on managed machines
- Plugins do the actual work

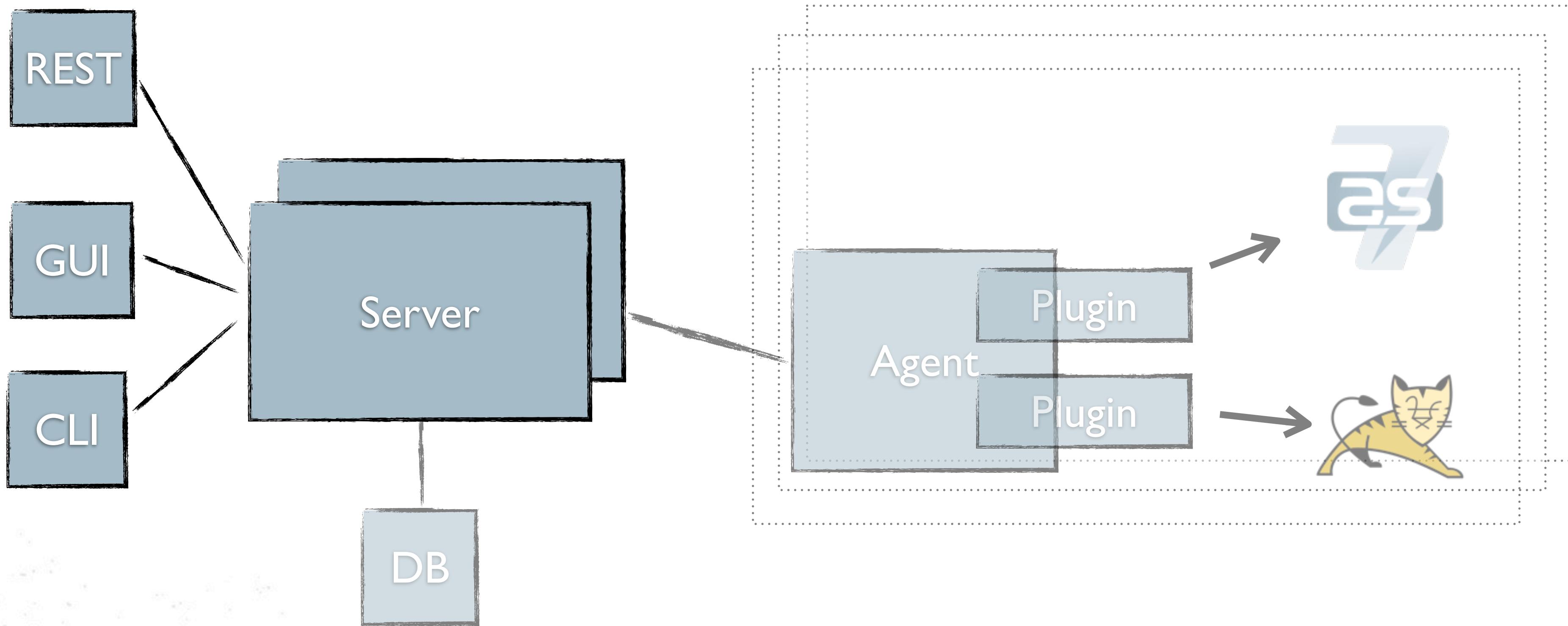
# Overview (2)



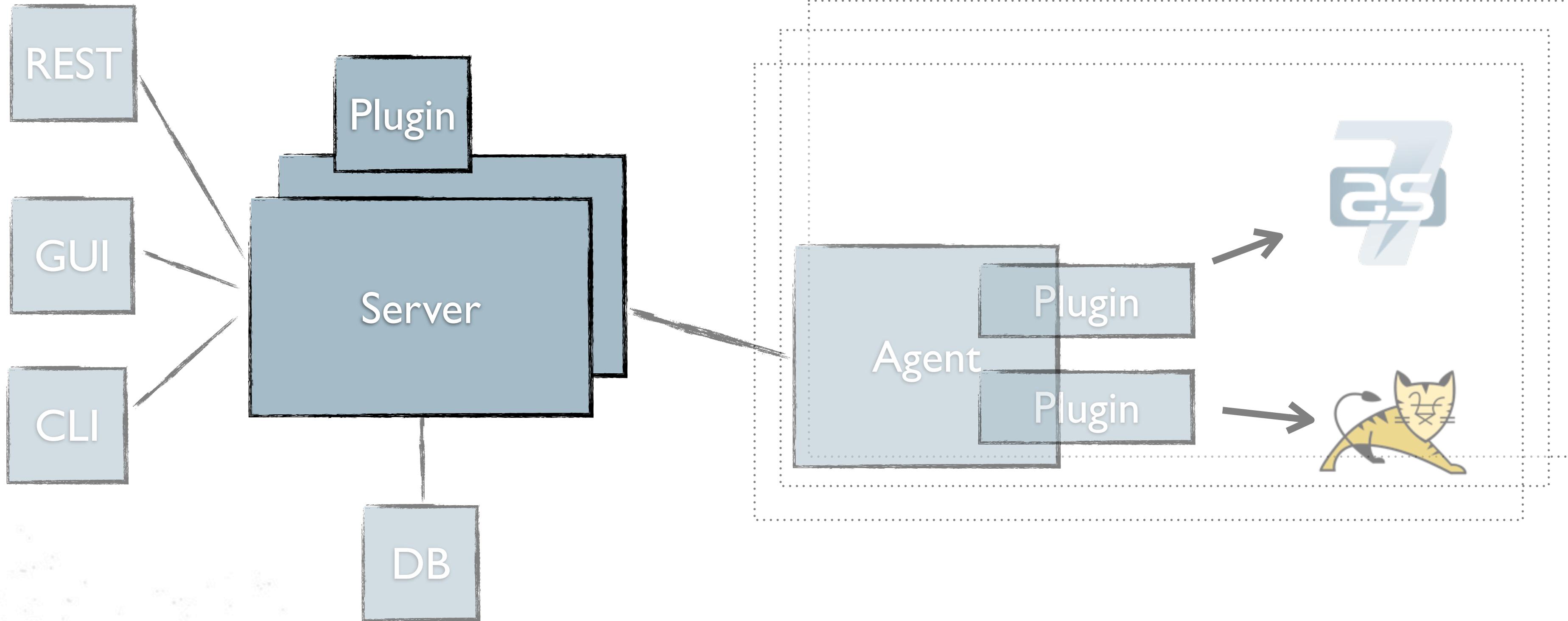
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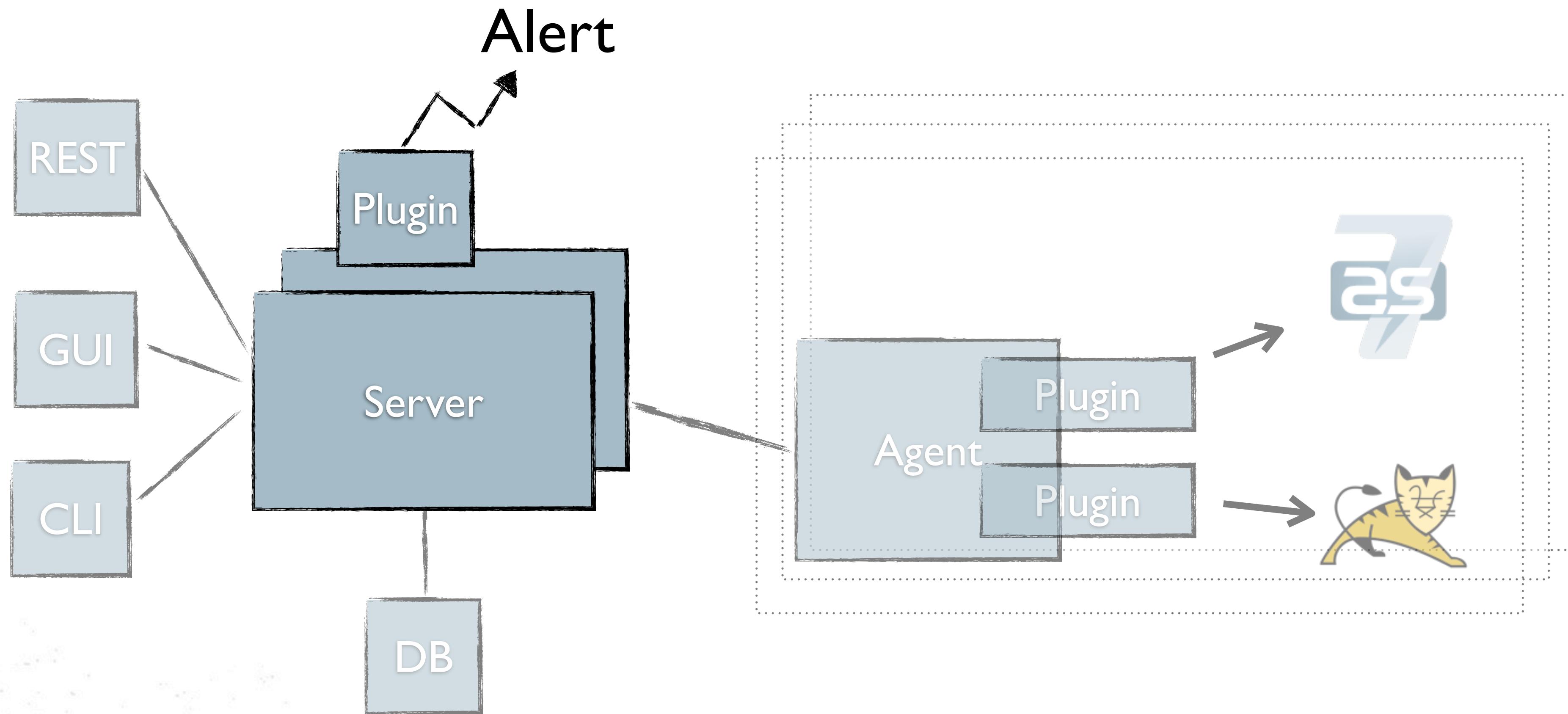
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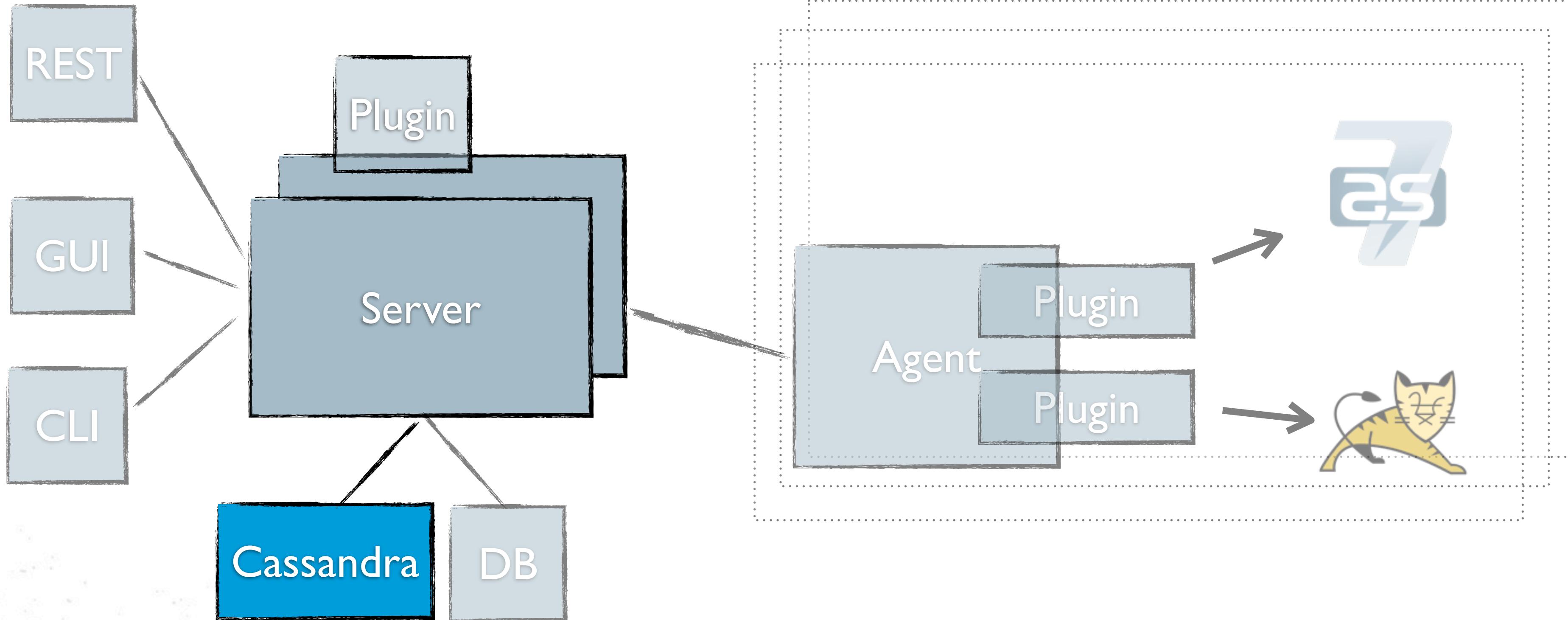
# Overview (2)



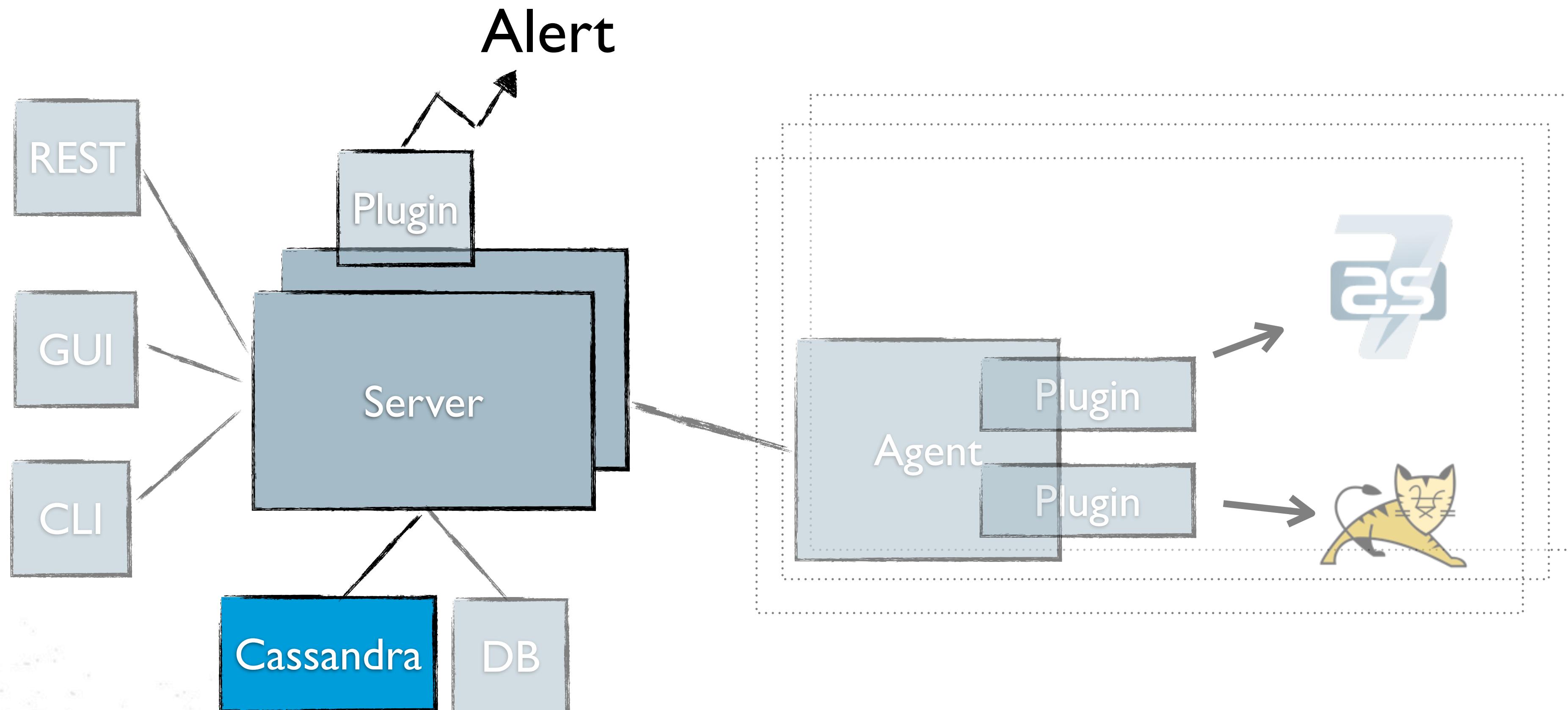
# Overview (2)



# Overview (2)



# Overview (2)



# Overview (3)

The screenshot shows the RHQ Resource Management interface. The top navigation bar includes links for Dashboard, Inventory (selected), Reports, Bundles, Administration, and Help. The user is logged in as rhqadmin.

The left sidebar displays a tree view of resources under the node 'snert'. The tree includes categories like CPU, File Systems, JBossAS Servers, and JBossAS7 Standalone Servers, with further sub-categories such as deployment-scanner, Deployments, infinispan, logging, naming, NetworkInterfaces, security, SocketBindingGroupStandalone, threads, web, Network Adapters, pattern, and RHQ Agent.

The main content area is titled 'snert MAC OS X' and contains several tabs: Summary (selected), Inventory, Alerts, Monitoring, Events, Operations, and Drift. The 'Summary' tab is active, showing the 'Activity' and 'Timeline' sections. The 'Resource: Measurements' panel lists various system metrics:

| Measurement     | Value    |
|-----------------|----------|
| Free Memory     | 421.47MB |
| Free Swap Space | 104.47MB |
| System Load     | 4.61%    |
| Used Memory     | 7.55GB   |
| Used Swap Space | 23.53MB  |
| User Load       | 9.08%    |

The 'Resource: Alerts' panel shows a table with columns: Creation Time, Name, Condition Text, Priority, and Status. It displays the message: "No results found using specified criteria." with 0 matching rows.

The 'Resource: Operations' panel shows a table with columns: Date Submitted, Operation, Requestor, and Status. It lists four entries:

| Date Submitted           | Operation            | Requestor | Status |
|--------------------------|----------------------|-----------|--------|
| Jan 30, 2012 12:17:51 PM | Manual Autodiscovery | 1admin    |        |
| Jan 26, 2012 11:52:38 AM | Manual Autodiscovery | rhqadmin  |        |
| Jan 24, 2012 4:25:12 PM  | Manual Autodiscovery | rhqadmin  |        |
| Jan 11, 2012 11:46:28 AM | Manual Autodiscovery | rhqadmin  |        |

At the bottom of the interface are buttons for Edit Mode and Reset.

# Overview (4)

- RHQ 4.8 - June 25th, 2013
  - 4.9 planned for around start of August
- JBoss Operations Network 3.1.2 - Dec 2012

# Recent developments

- Underlying EAP 6.1 (alpha 1)
- New charts based on D3.js
- REST-Api
- Cassandra Backend

# Demo

- <Demo>

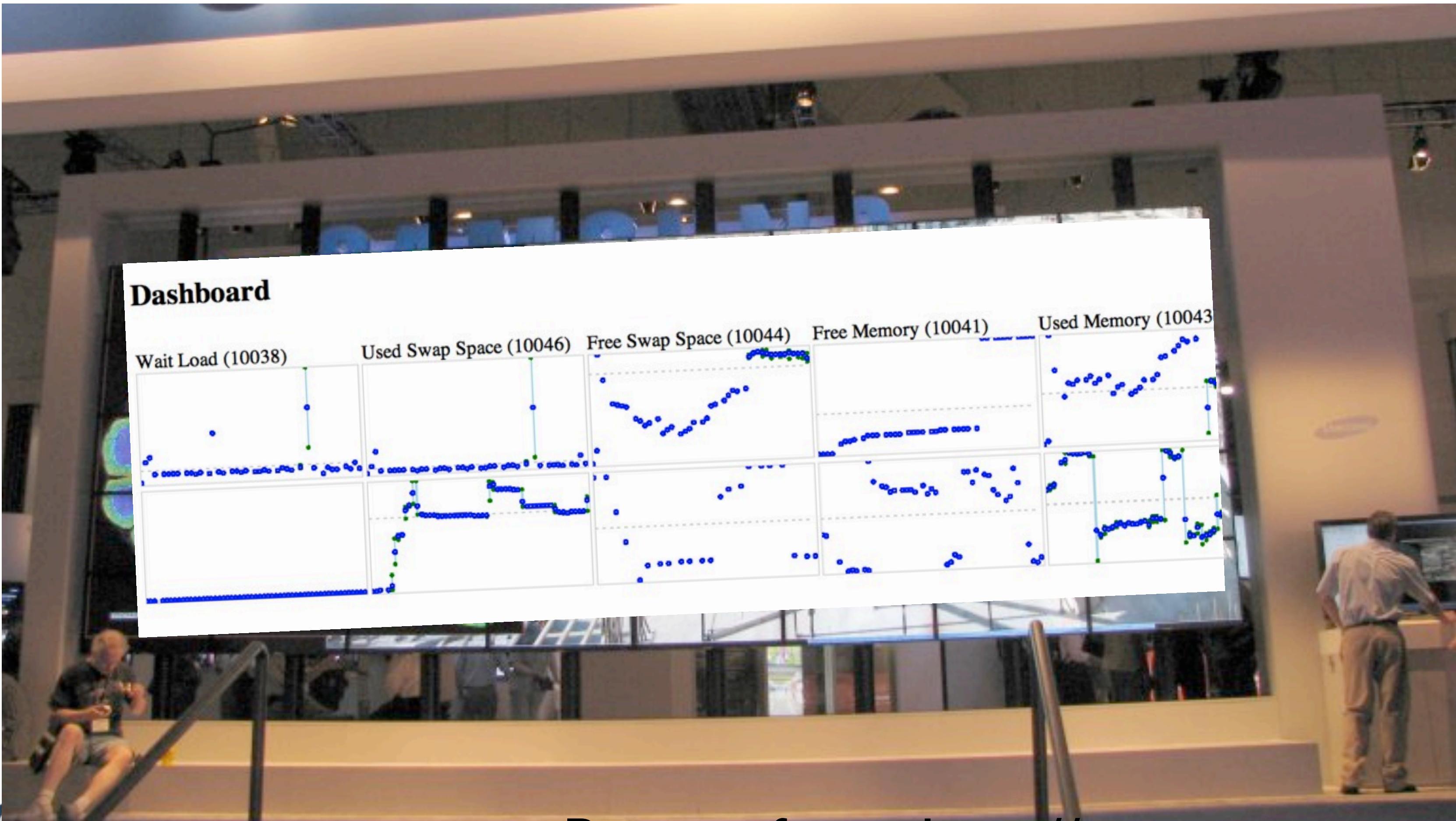
# RHQ and REST

- REST API since RHQ 4.2
  - Push and Pull
  - Retrieval of metrics
  - Push of metrics
- Allows for agent-less operation

# REST-API

- Nicht-Java-Clients
  - „Manage your enterprise with curl“
  - Shell / Perl / Ruby / Python / ...
- Graphing via JavaScript

# REST-API -- Dashboard

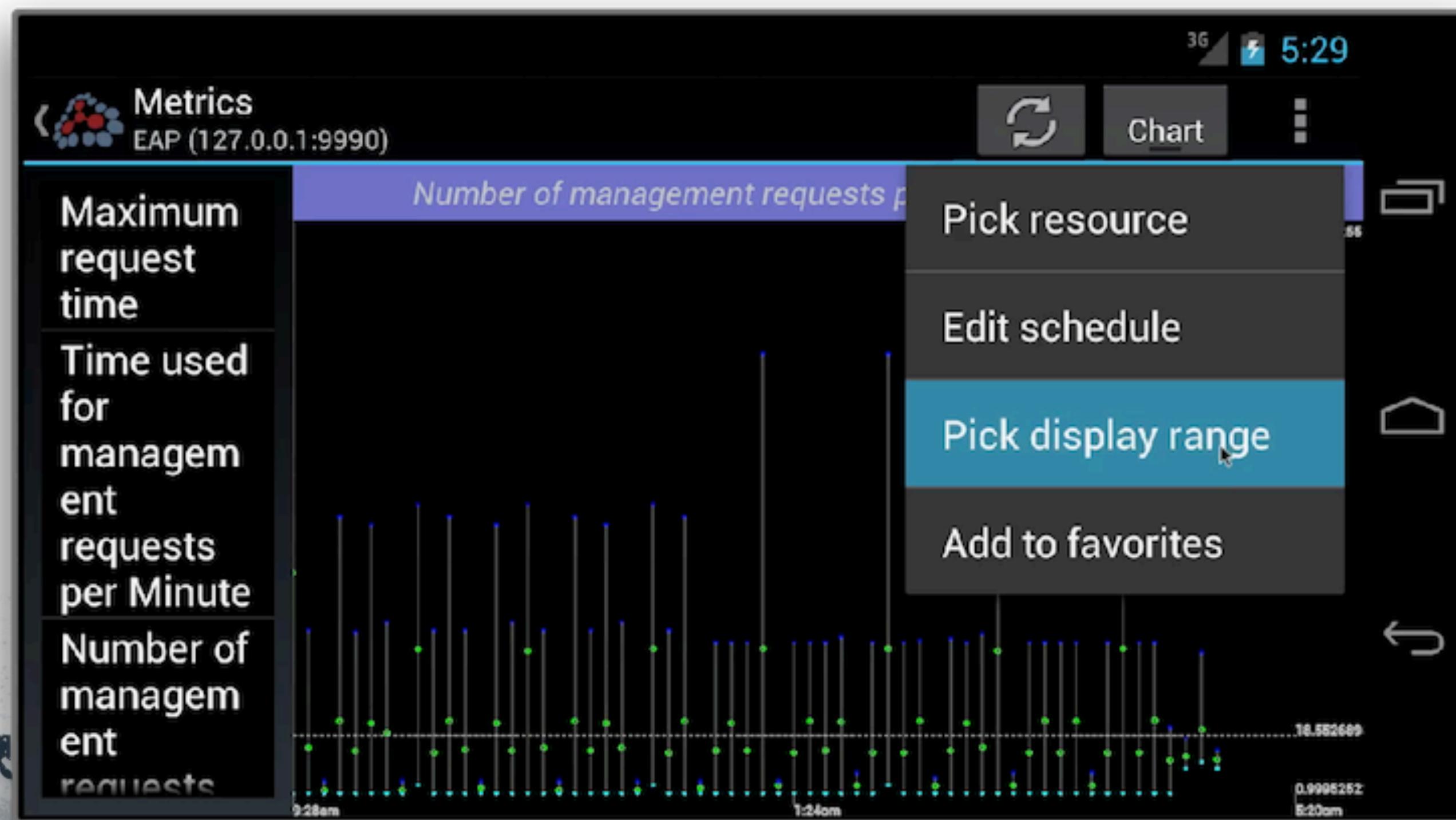


# REST-Api

- Mobile Clients
  - Android is „easy“
  - iPhone / iPad

# REST-API

- RHQPocket
  - <https://github.com/piluhn/RHQpocket>

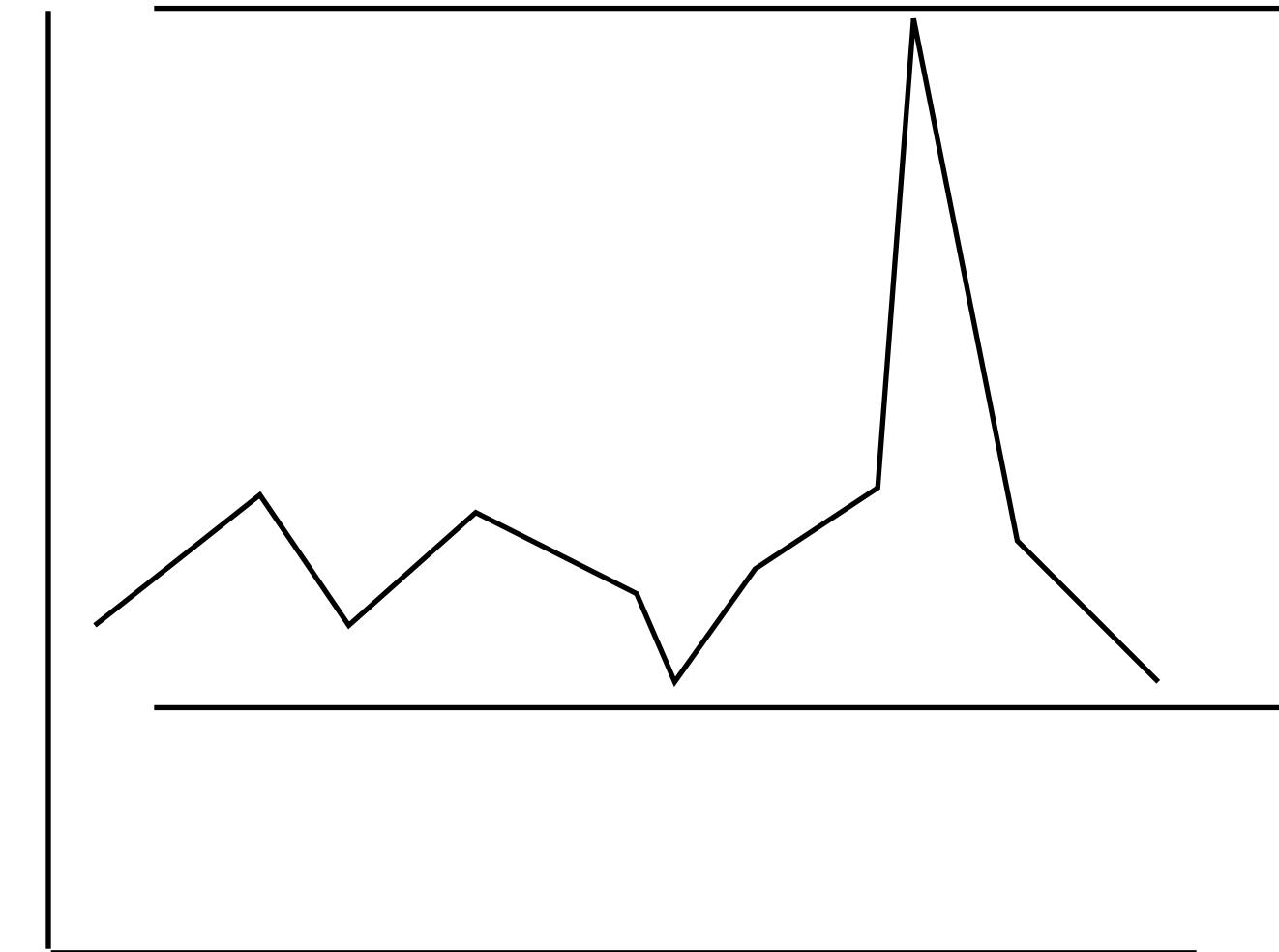
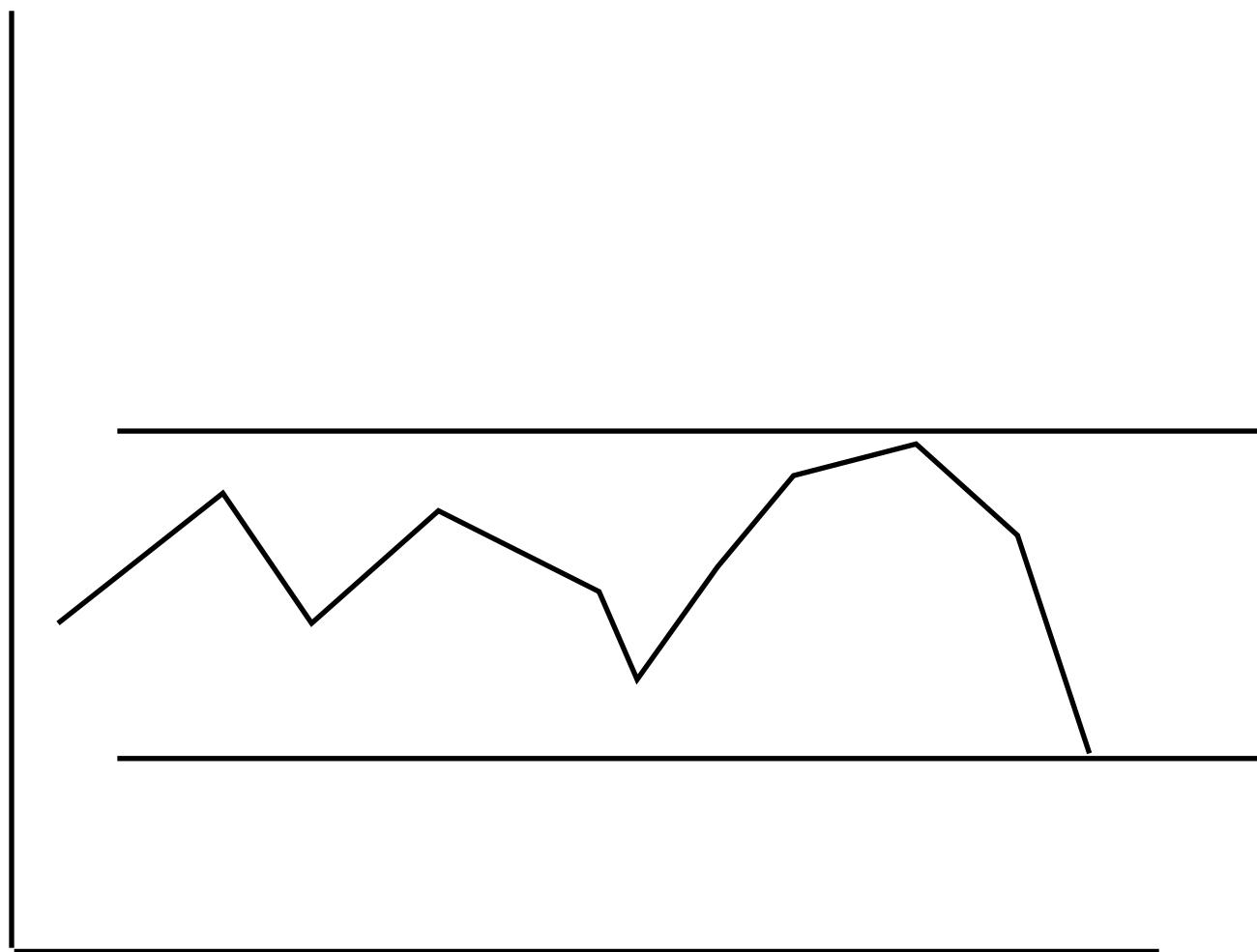


JBoss Commu

RHQ

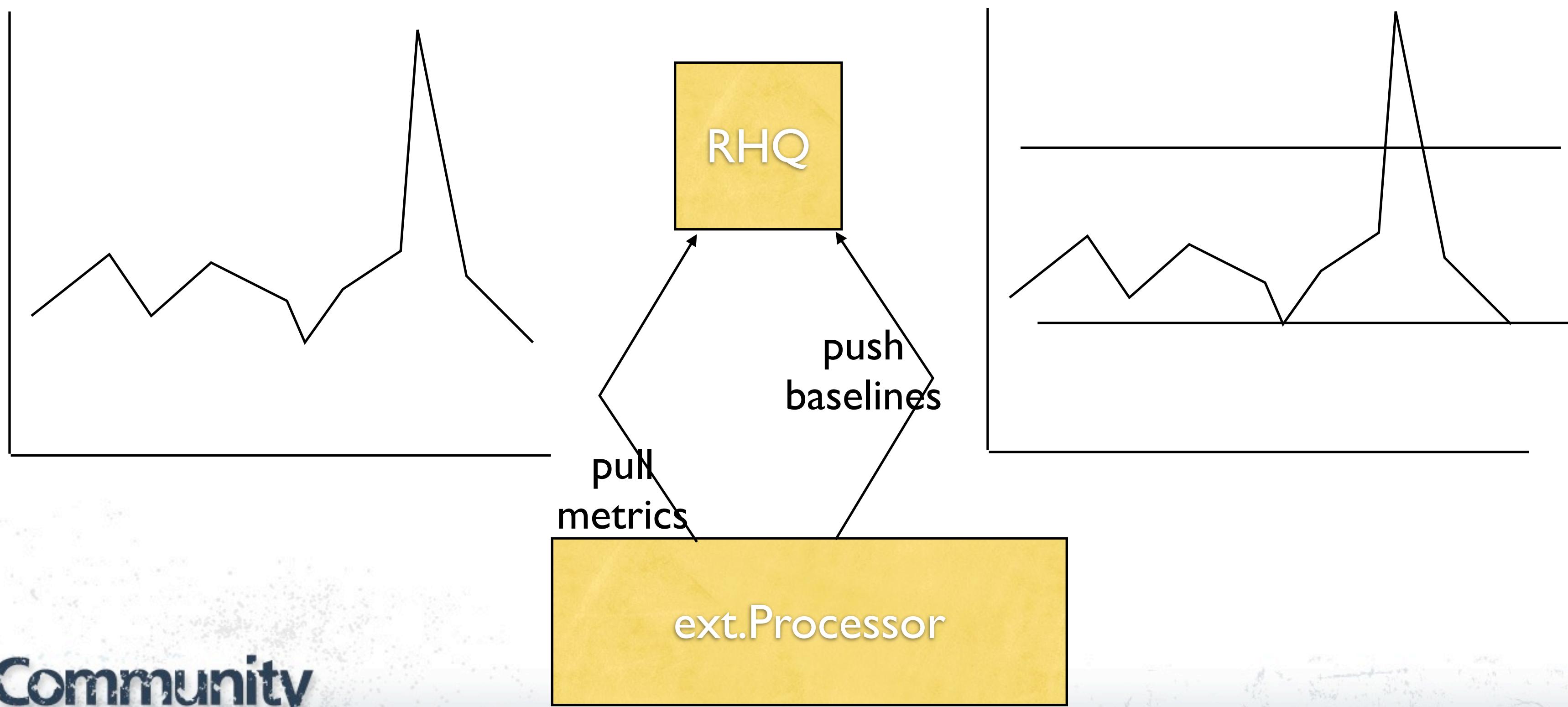
# REST-Api

- External Baselines (1)



# REST-API

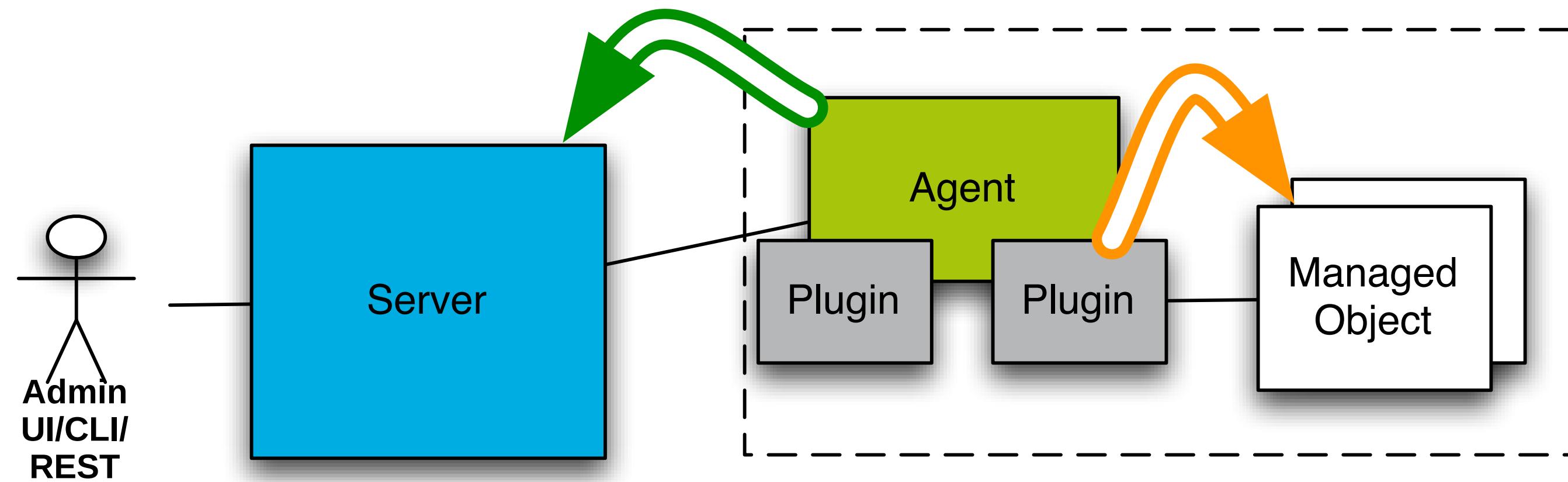
- External Baselines (2)



# REST-API: push

2) push

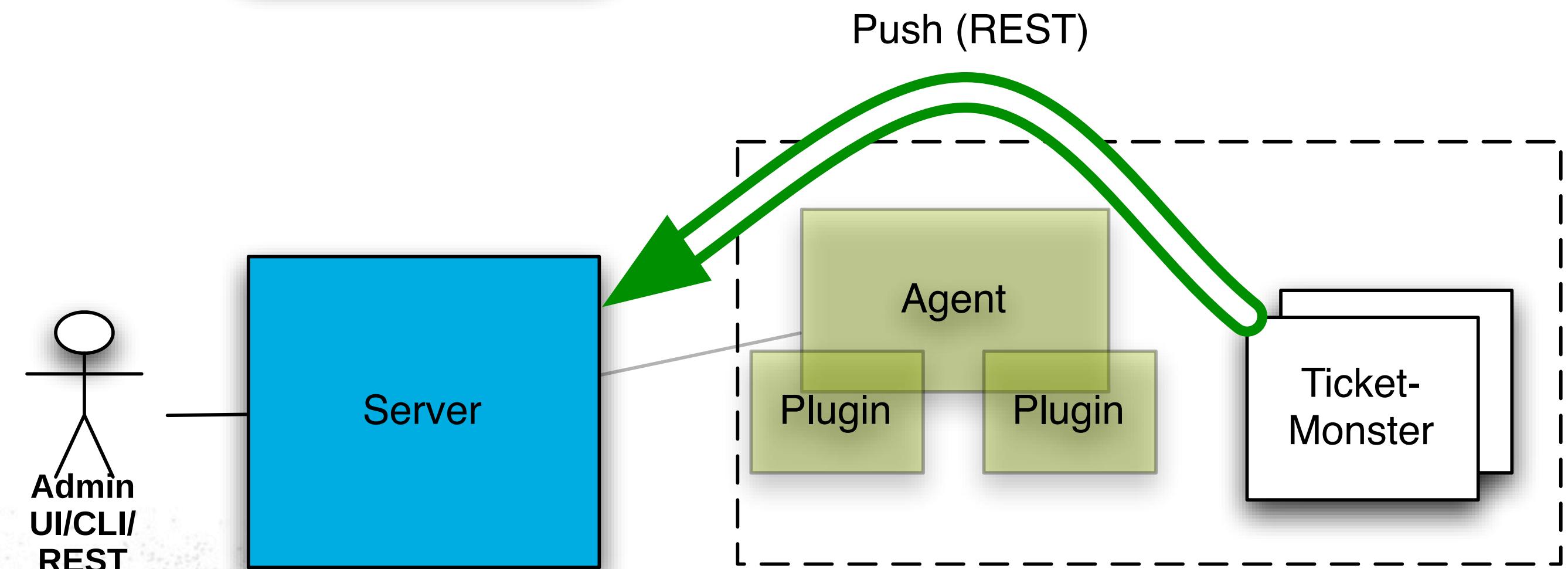
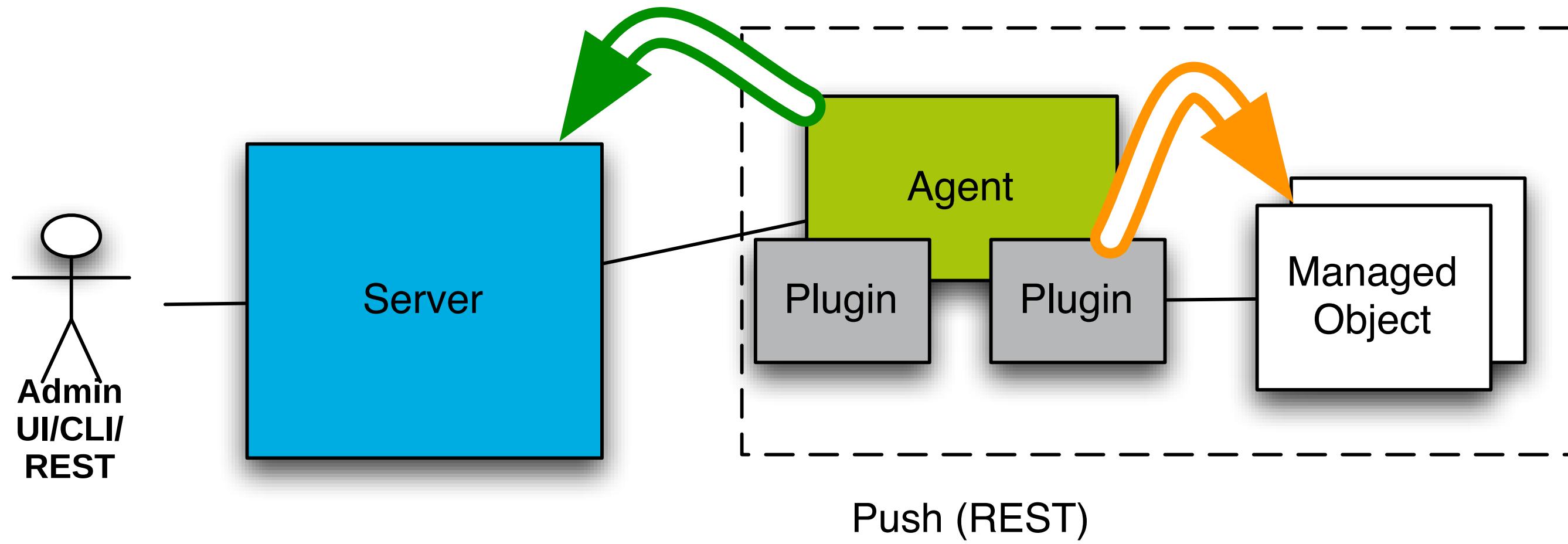
1) pull



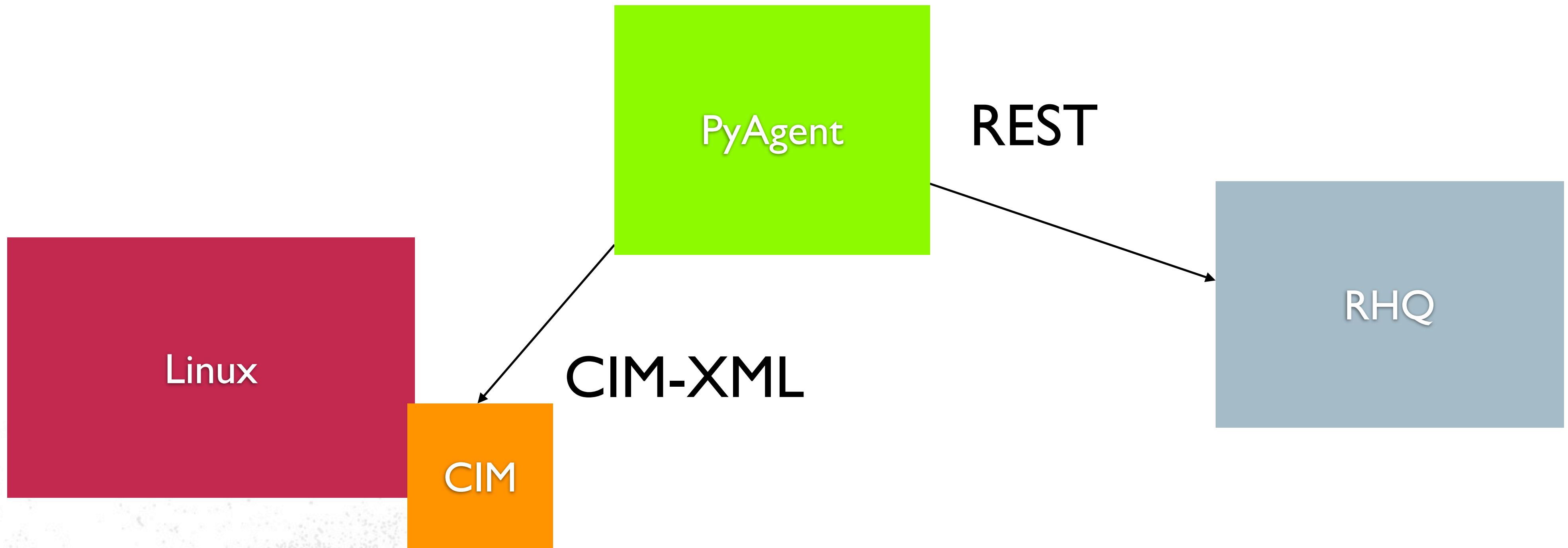
# REST-API: push

2) push

1) pull



# REST-Api



# Future: Wintermute<sup>1</sup>

- Aka Alerts 2.0
- Current situation:
  - No way to correlate data of different input sources:
    - "Alert me at night only when 2 of 3 servers of the cluster are down"
    - "Alert me if (many incoming http connections) && (few database connection)"
    - "Alert me if (load balancer down) or (one server has high load)"

# Future: Wintermute (2)

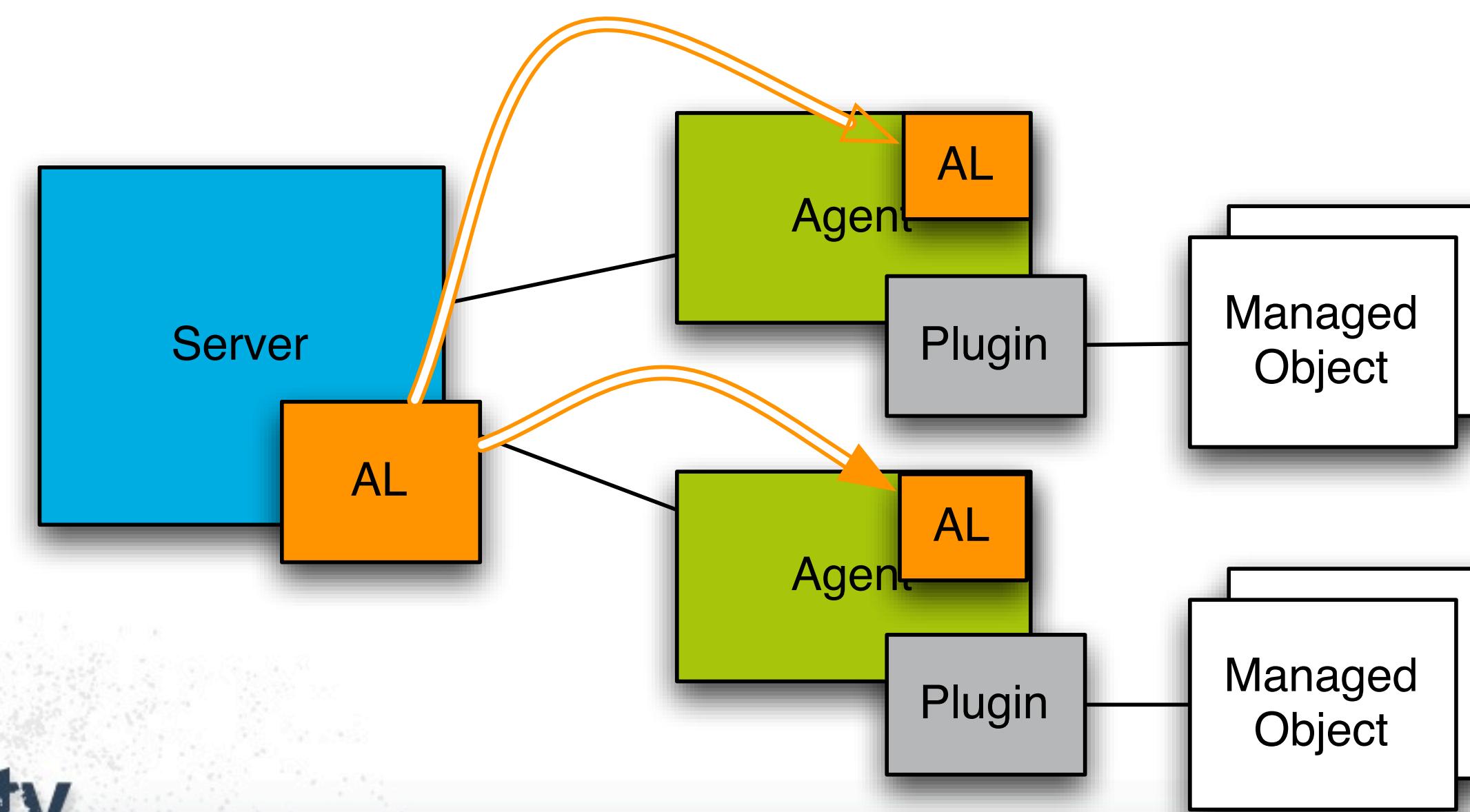
- Currently we don't have:
  - Notion of maintenance windows
  - Notion of "disabled by Admin"
  - A way of escalating of alerts
  - A way of conditional activation of alert senders
  - Comparison of two metrics
  - Comparison of different resources
  - A time factor in alert definition
  - Selection like 1 out of 3

# Future: Wintermute (3)

- Mostly an idea for now
- Proposal
  - Rules Engine („Drools“)
  - Complex Event Processing („CEP“)
- DSL for AlertDefinitions
- UI Builder for DSL

# Future: Wintermute (4)

- „Microcode download“ into the agent
  - Agent runs partial rule base
  - Only forward if „relevant“
  - Only forward n-th metric



# Future: Misc

- SLA support
  - Recording of service levels
  - Reports of achievements
- Multi-tenancy
  - Can (partially) be done via groups/roles today

# Future: I18N of plugins

- GWT UI is translatable
  - German, Portuguese, Chinese, Japanese
- Plugins still all English
  - Messages show in English in e.g. Chinese UI
- Proposal at <http://www.rhq-project.org/x/koAo>
  - Work in agent and server
  - Translation of individual plugins

# Future: UI enhancements

- Parts of the UI still in Struts / JSF
  - re-write in GWT
- Further improvements for charts
- „UI Plugins“

# Future: move to GitHub

- Sourcecode currently at [git.fedorahosted.org](http://git.fedorahosted.org)
- Planned to move to GitHub in 1st half of 2012

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# You can make an impact!

- Translations
- Plugins writing
- Examples
- Bug reports
- Cool new ideas
- Use cases
- ...

# Further reading

- RHQ
  - <http://jboss.org/rhq>
  - Twitter: @rhq\_project
  - GitHub: github.com/rhq-project/
  - Irc: irc://irc.freenode.net/#rhq
- Myself
  - <http://piluhn.blogspot.com/>
  - Twitter: @piluhn

# Thank you!

Question?