

JBoss Community



Current & future developments in RHQ

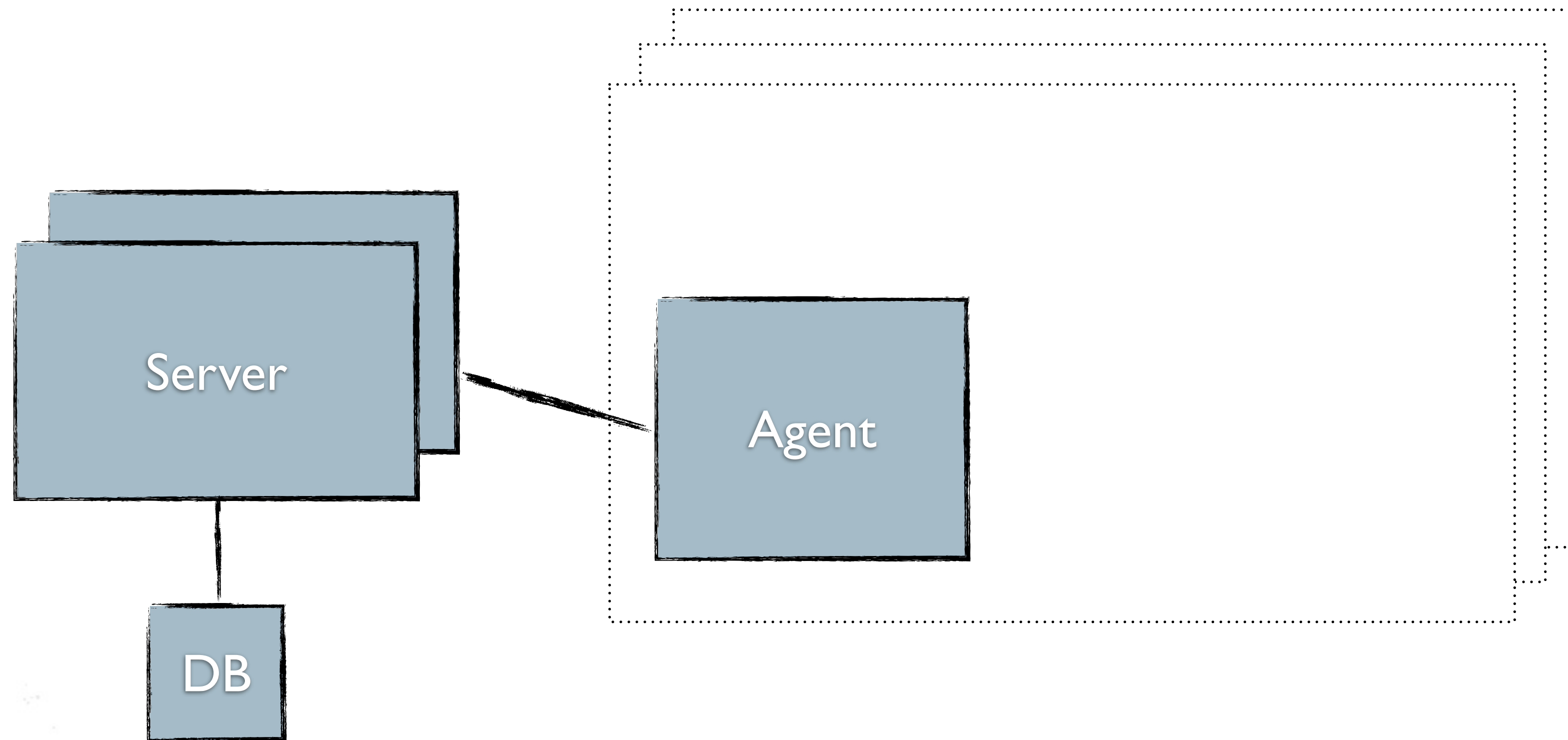
Heiko W. Rupp
<hwr@redhat.com>

@pilhuhn
#rhq on Freenet

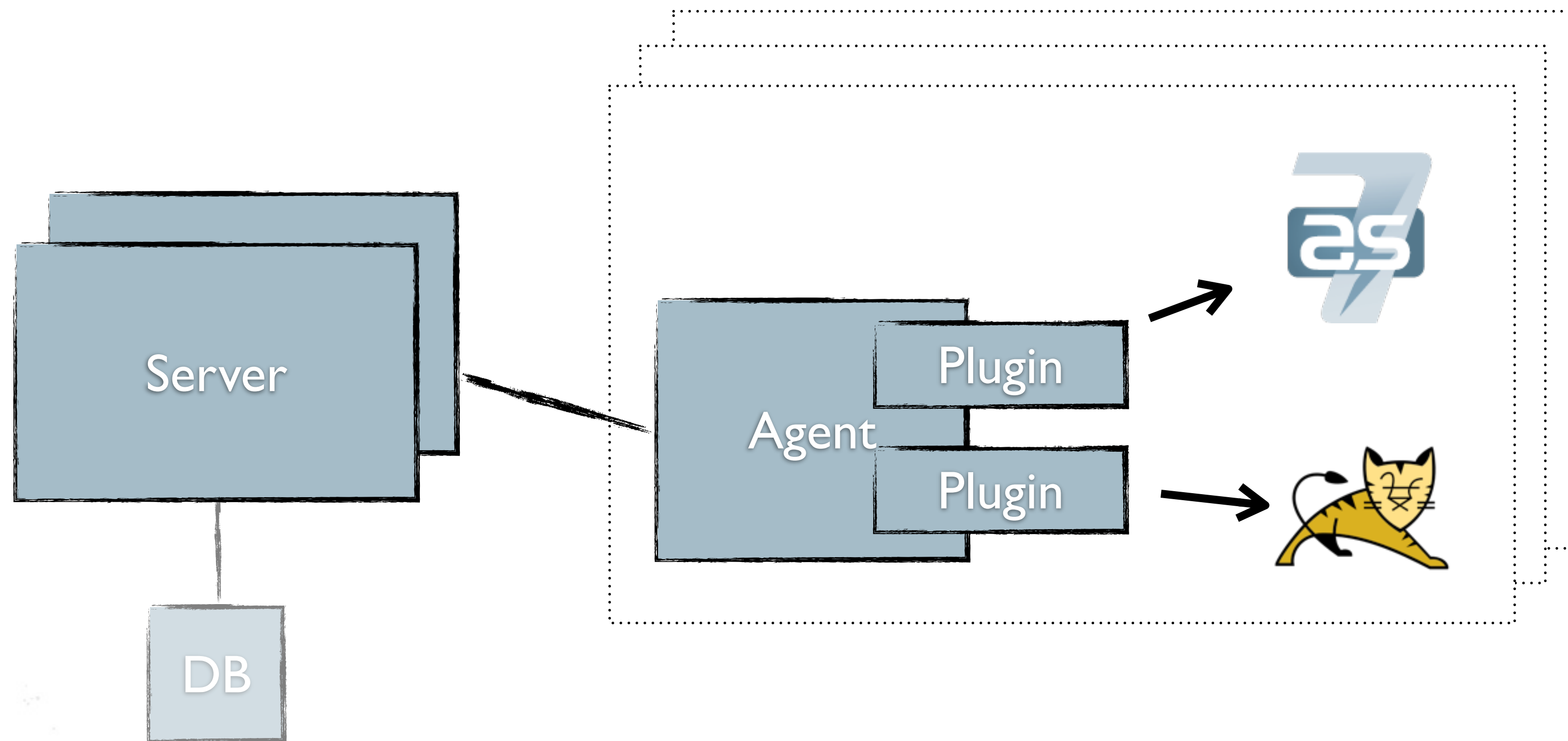
Overview

- <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

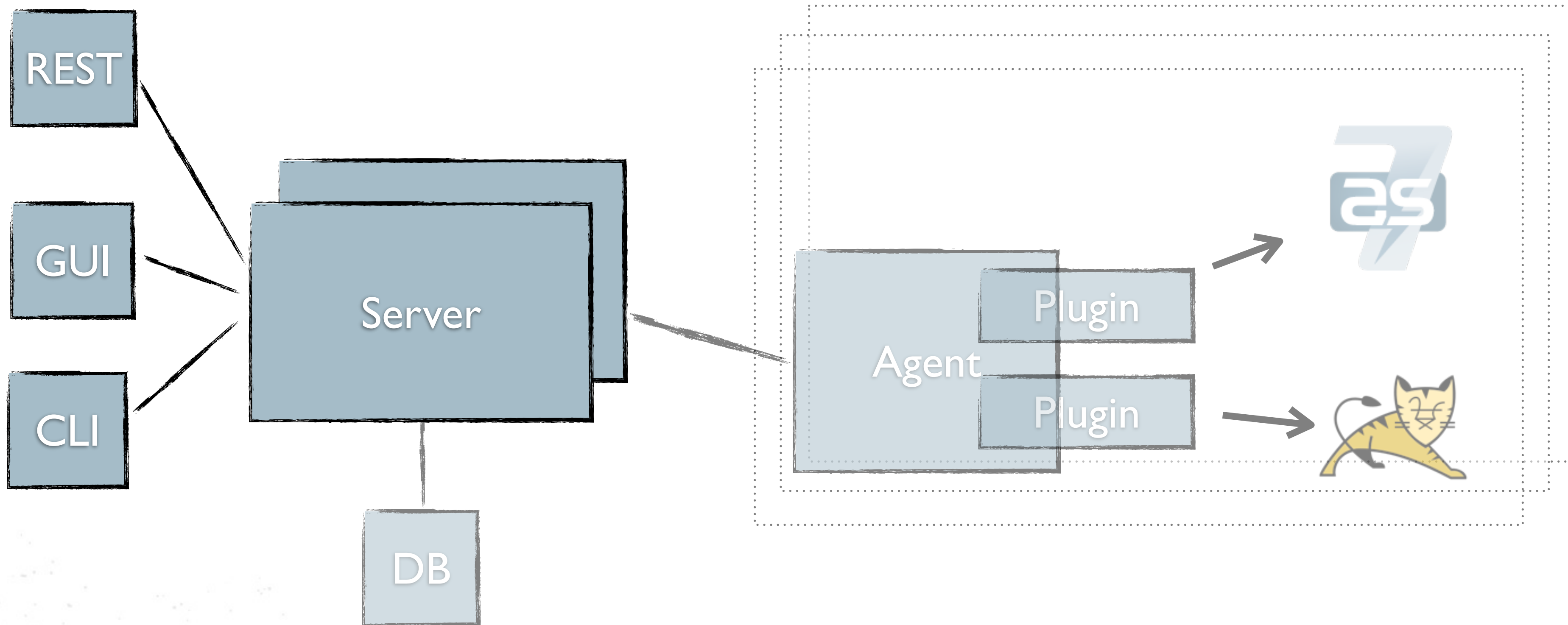
Overview (2)



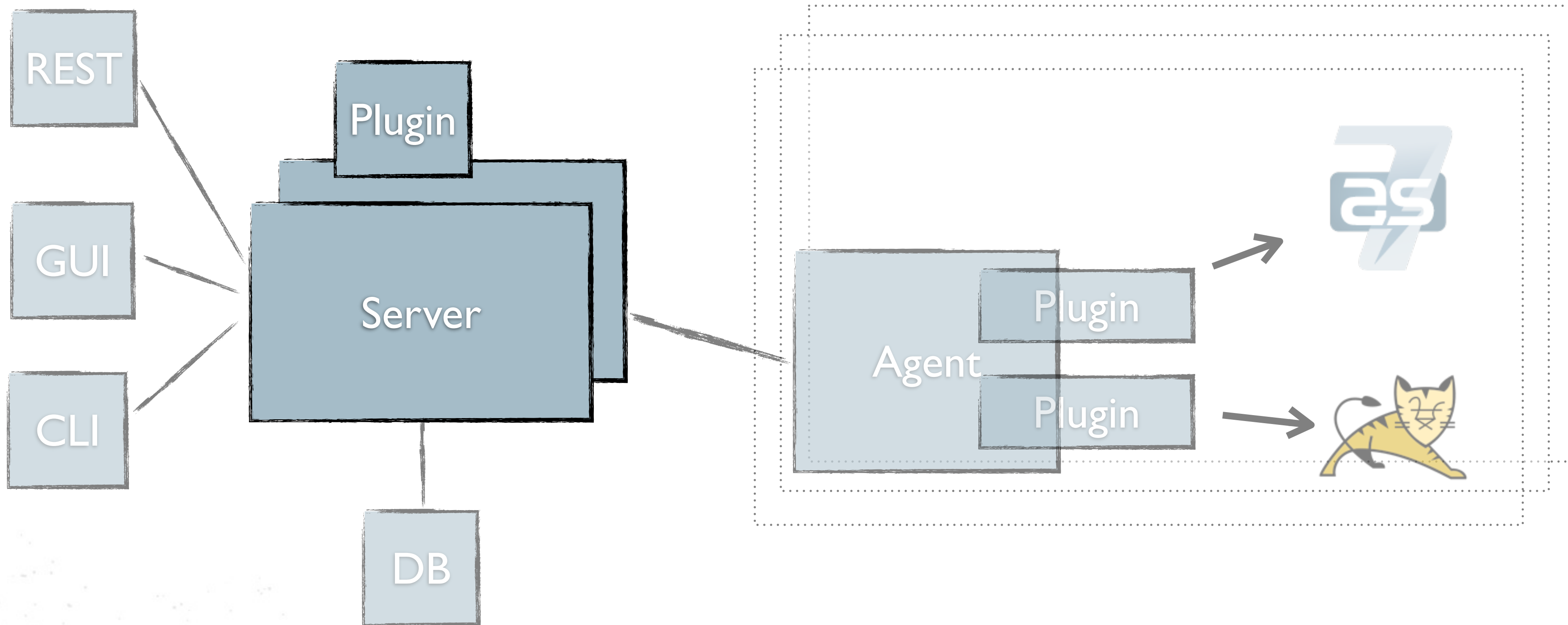
Overview (2)



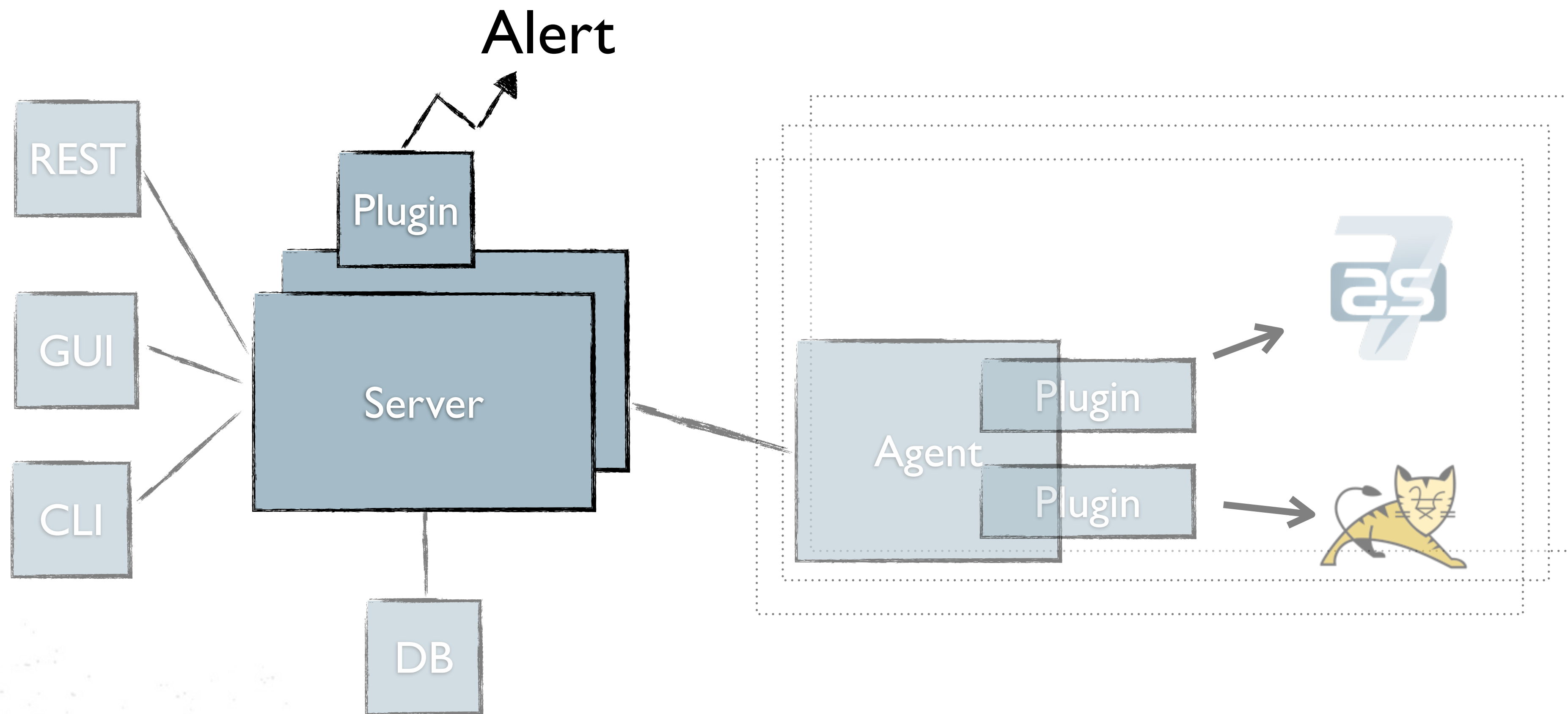
Overview (2)



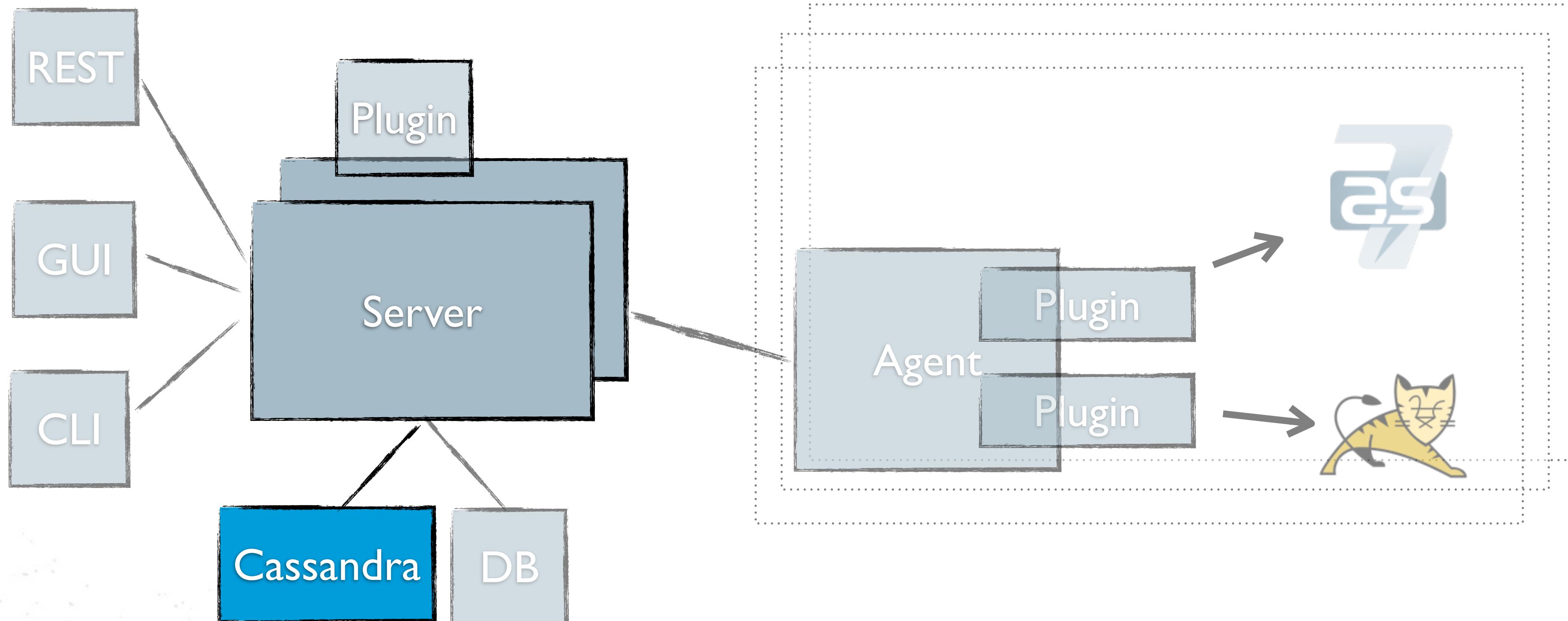
Overview (2)



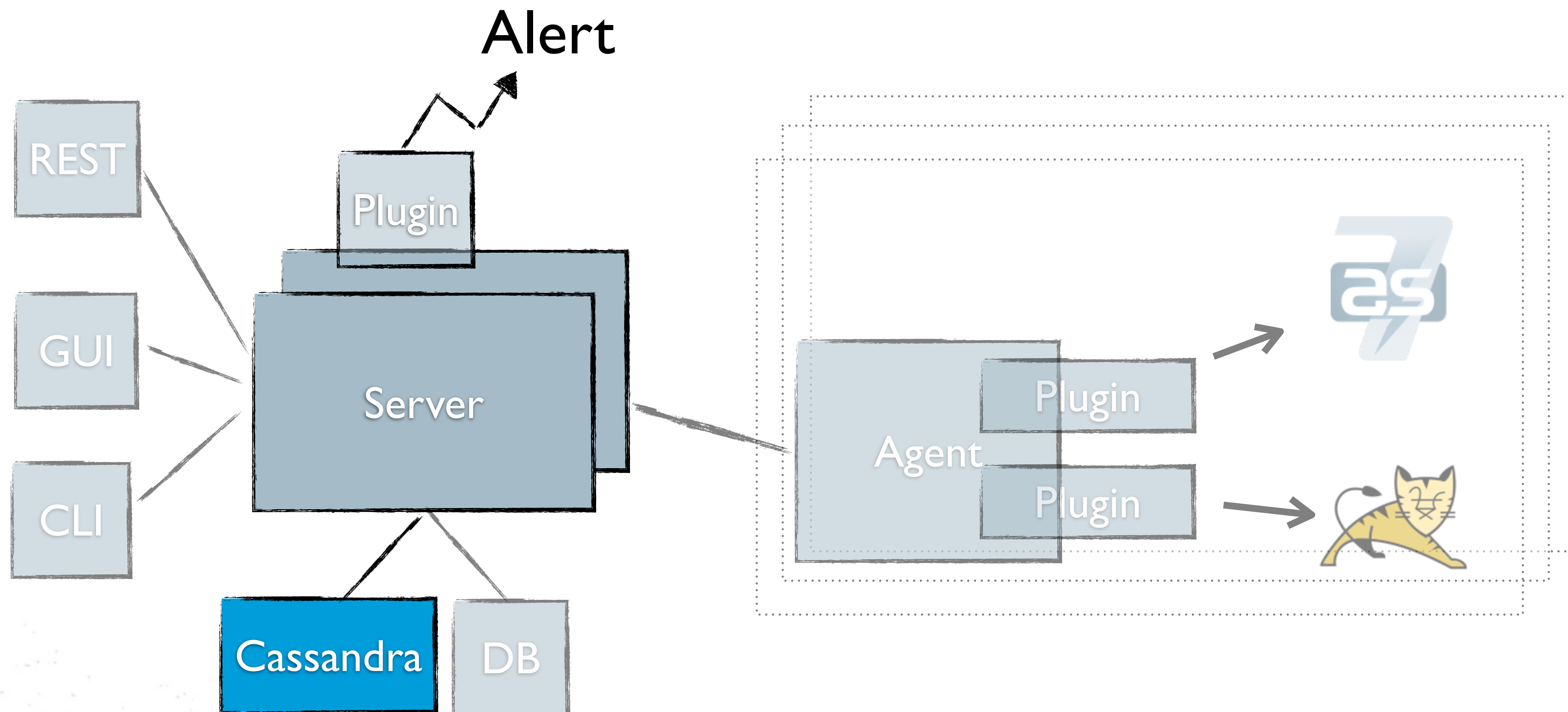
Overview (2)



Overview (2)



Overview (2)



Overview (3)

The screenshot shows the RHQ (Red Hat Quarkus) web interface. The browser address bar displays `http://localhost:7080/coregui/#Resource/10001`. The top navigation bar includes links for Dashboard, Inventory, Reports, Bundles, Administration, and Help. The user is logged in as `rhqadmin`. The left sidebar shows a tree view of resources, with `snert` selected under `JBossAS7 Standalone Servers`. The main content area displays the `snert` resource details for a `Mac OS X` system. The `Summary` tab is active, showing various metrics: Free Memory (421.47MB), Free Swap Space (104.47MB), System Load (4.61%), Used Memory (7.55GB), Used Swap Space (23.53MB), and User Load (9.08%). Below the metrics, there are sections for `Resource: Bundle Deployments` and `Resource: Event Counts`, both showing no results. On the right, the `Resource: Alerts` section shows no results, and the `Resource: Operations` section displays a list of operations performed on the resource.

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

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>

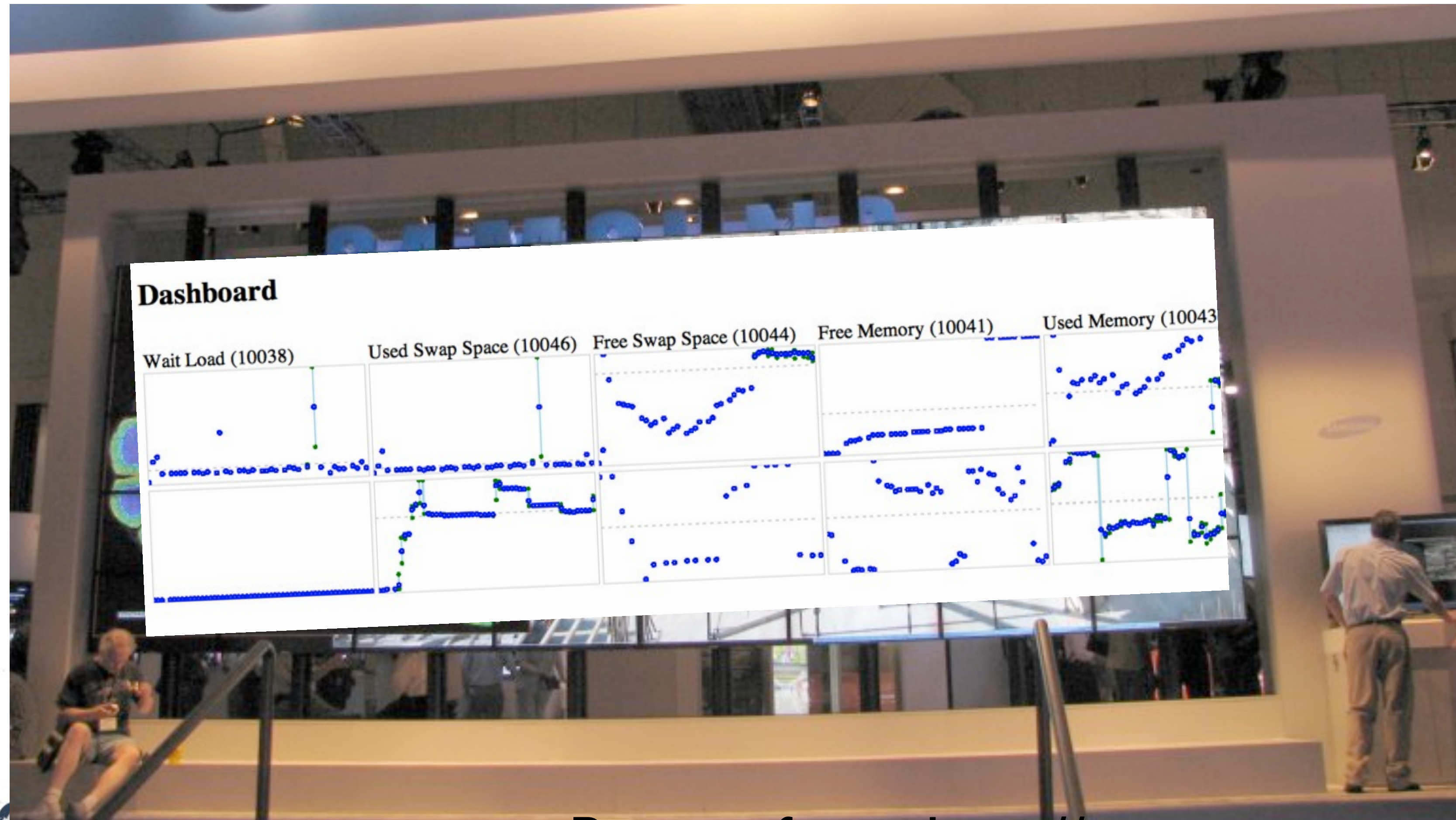
RHQ and REST

- 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

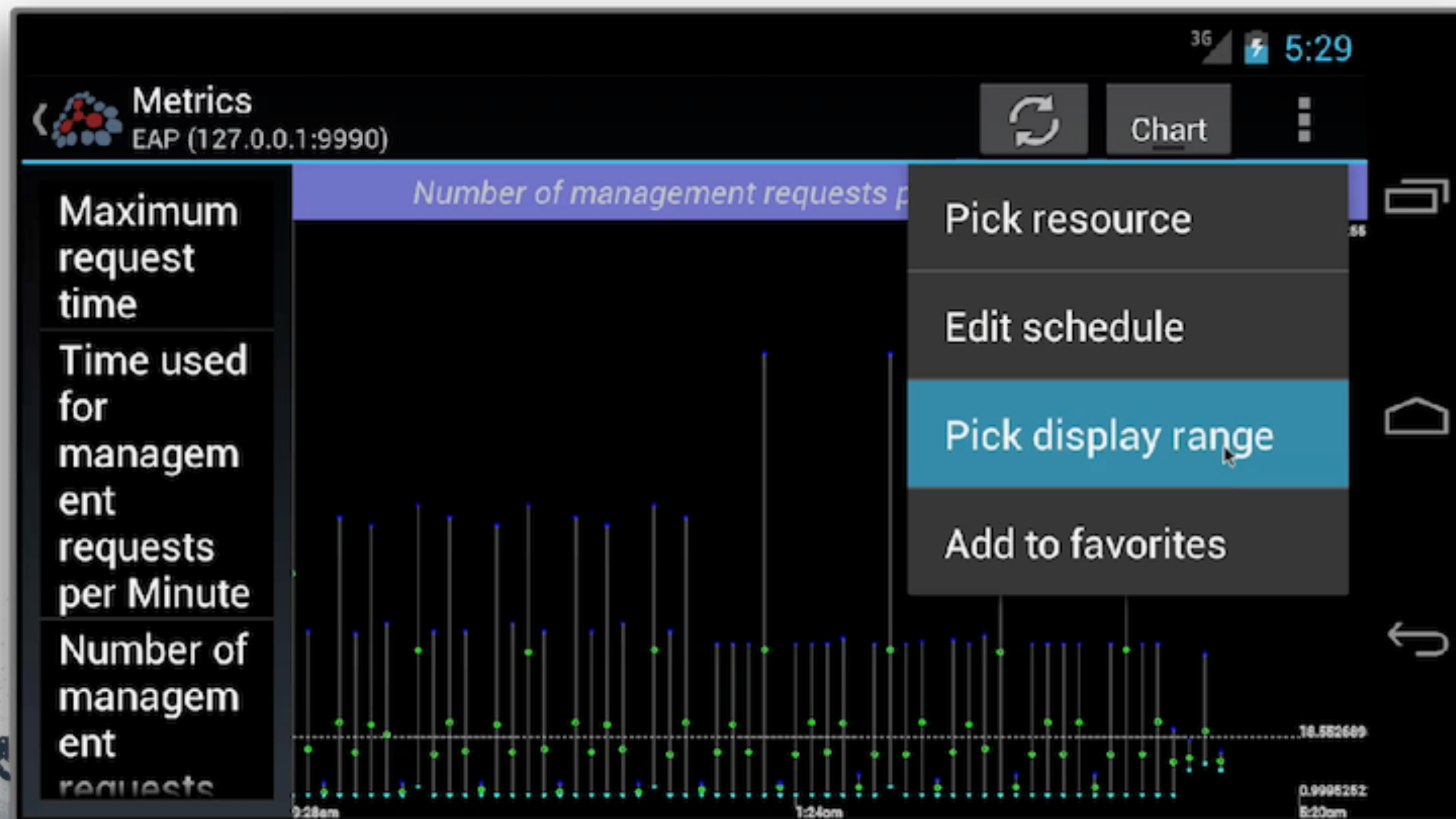


REST-API

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

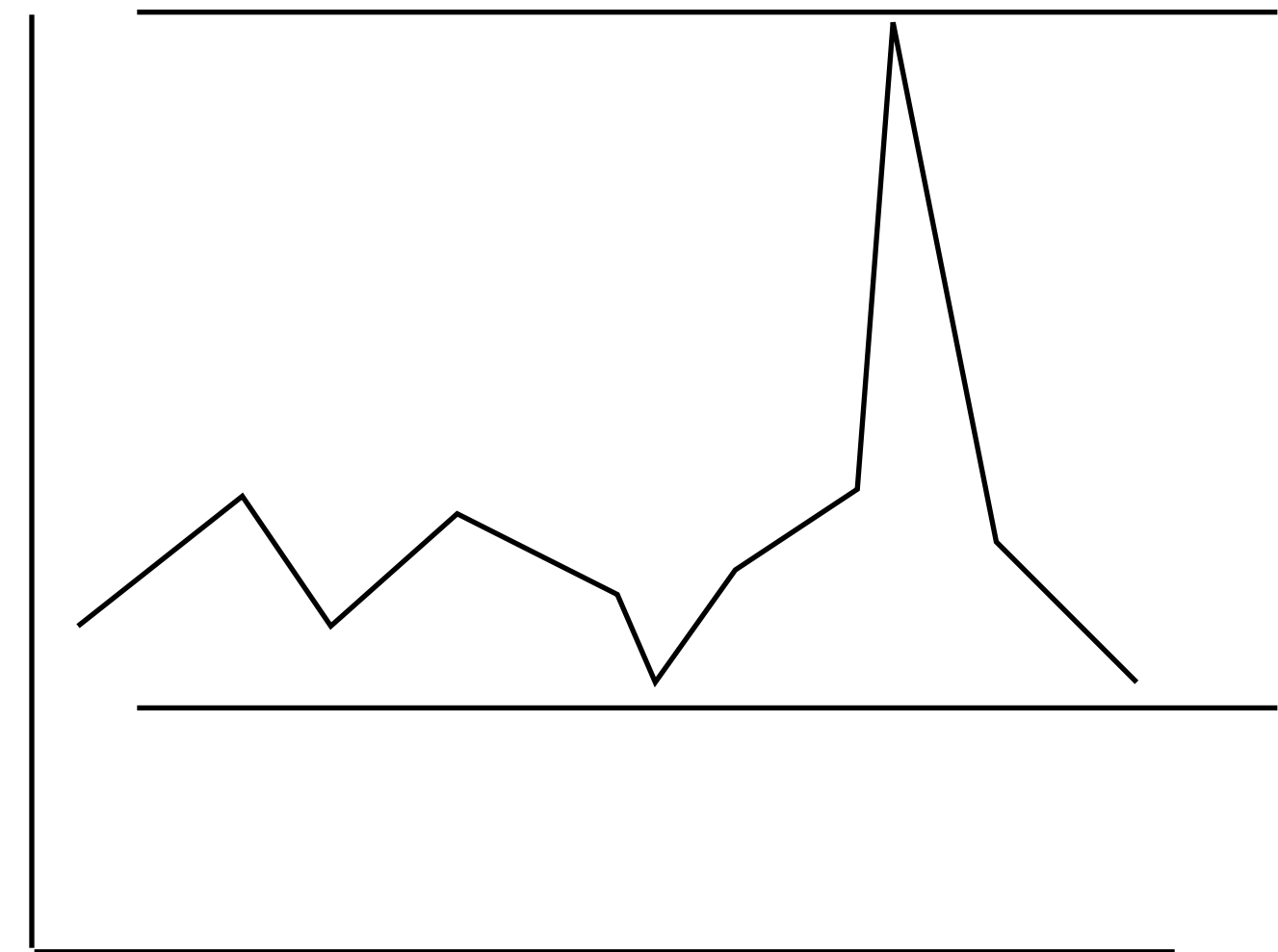
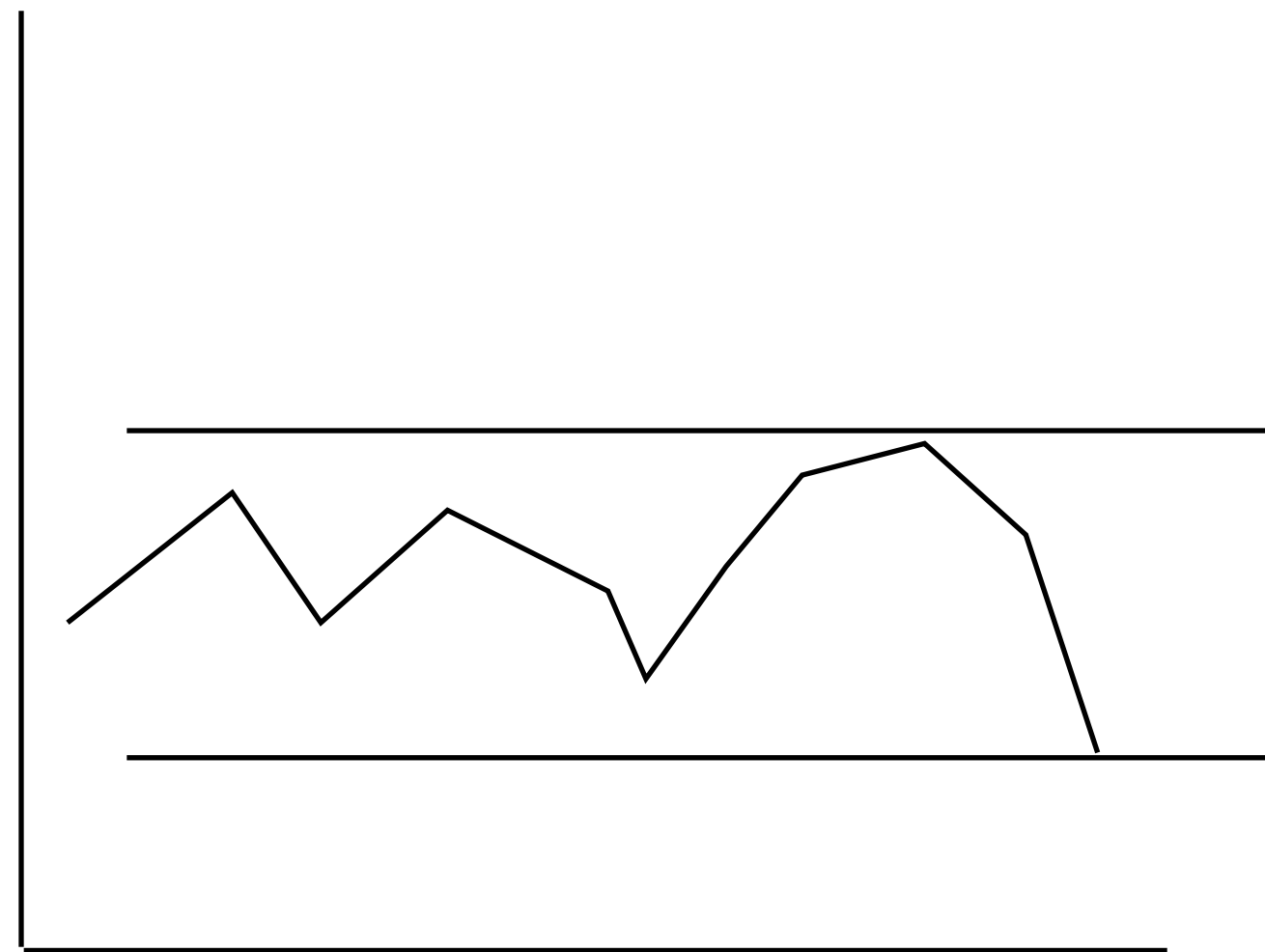
REST-API

- RHQPocket
 - <https://github.com/pilhuhn/RHQPocket>



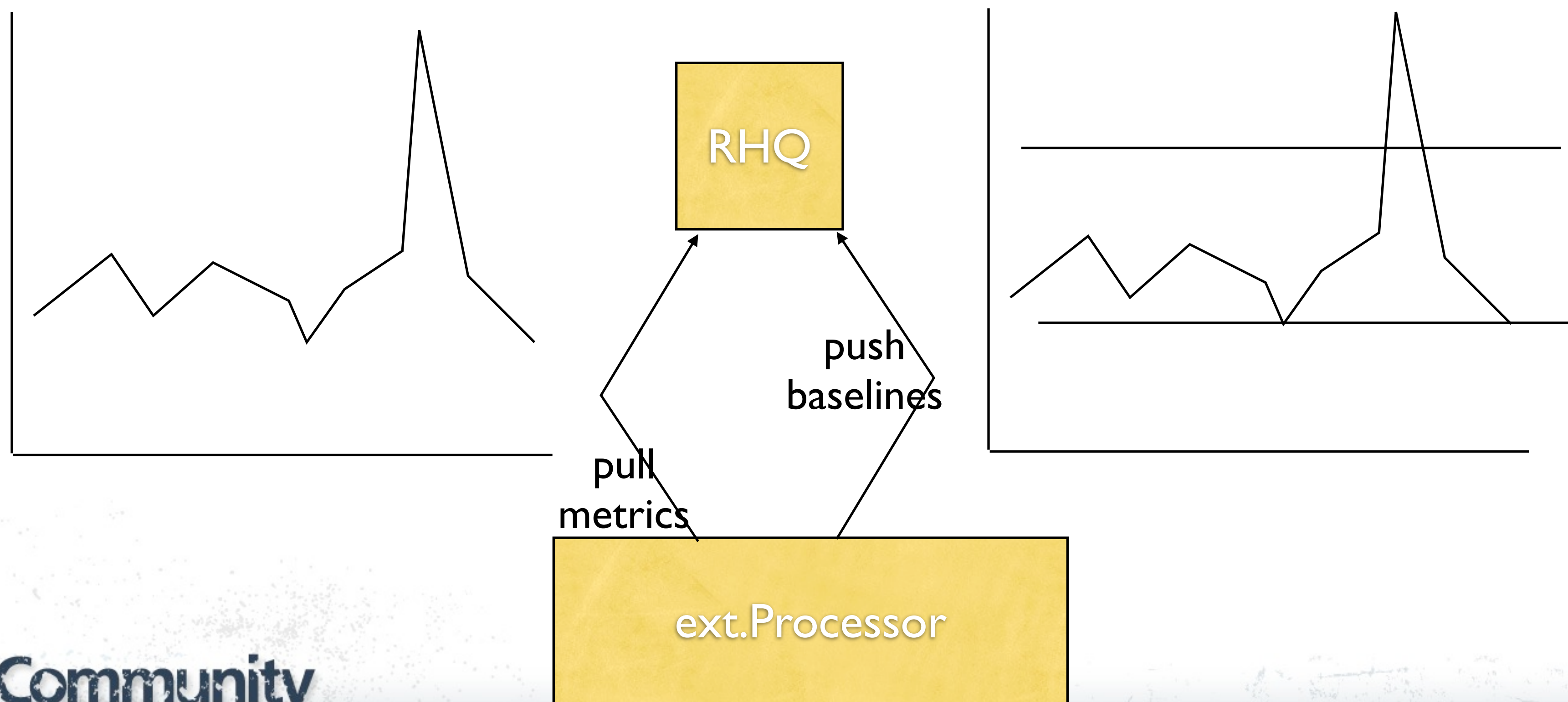
REST-Api

- External Baselines (1)



REST-Api

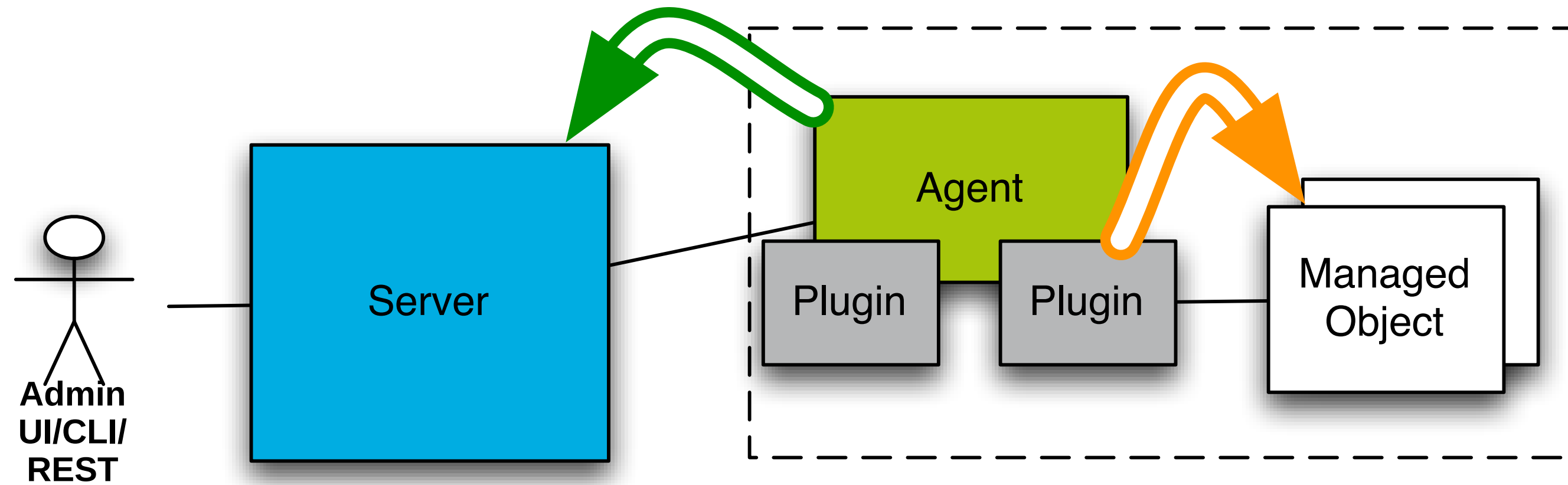
- External Baselines (2)



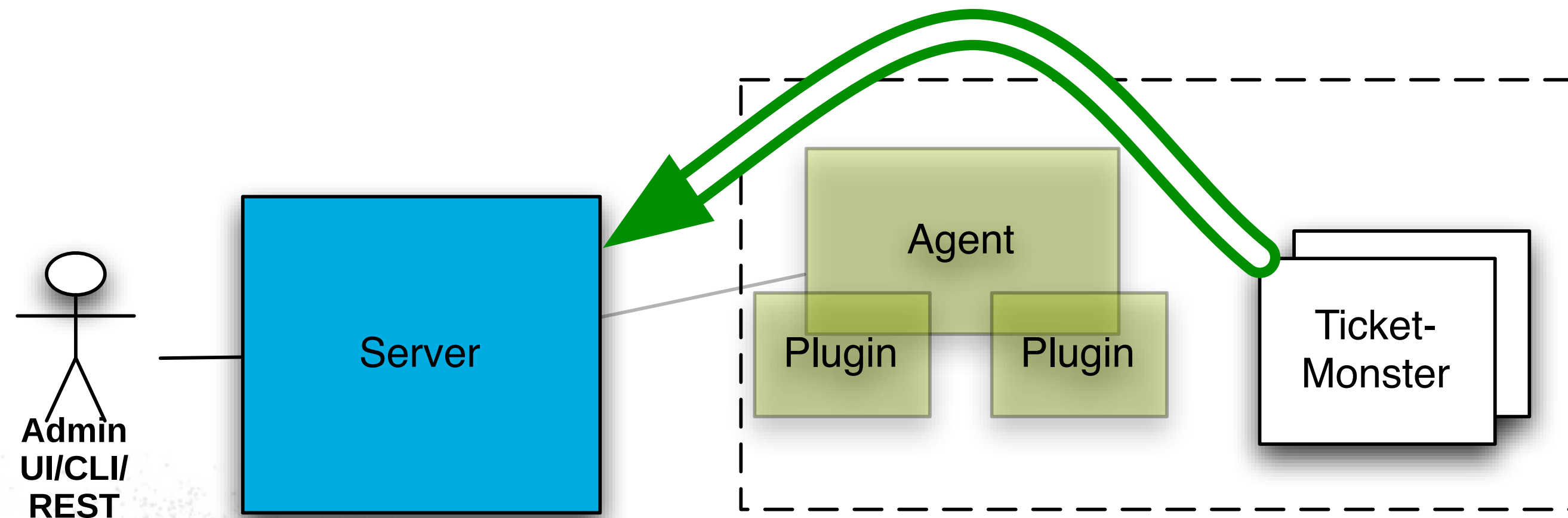
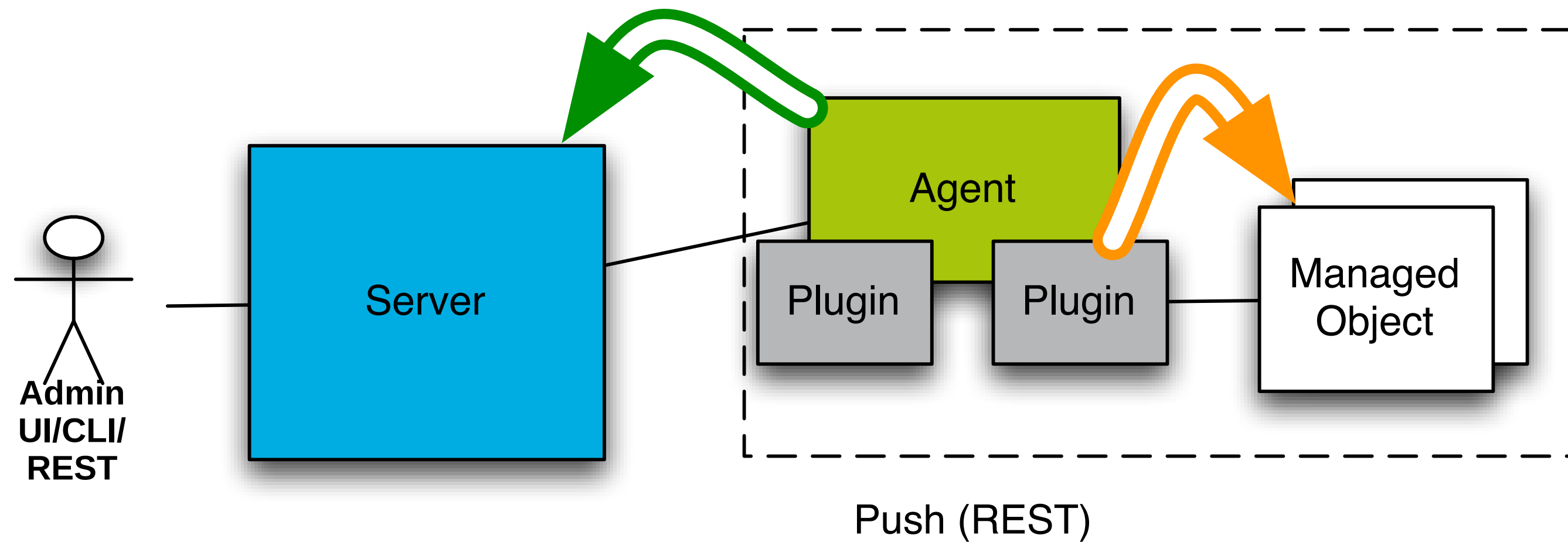
REST-API: push

2) push

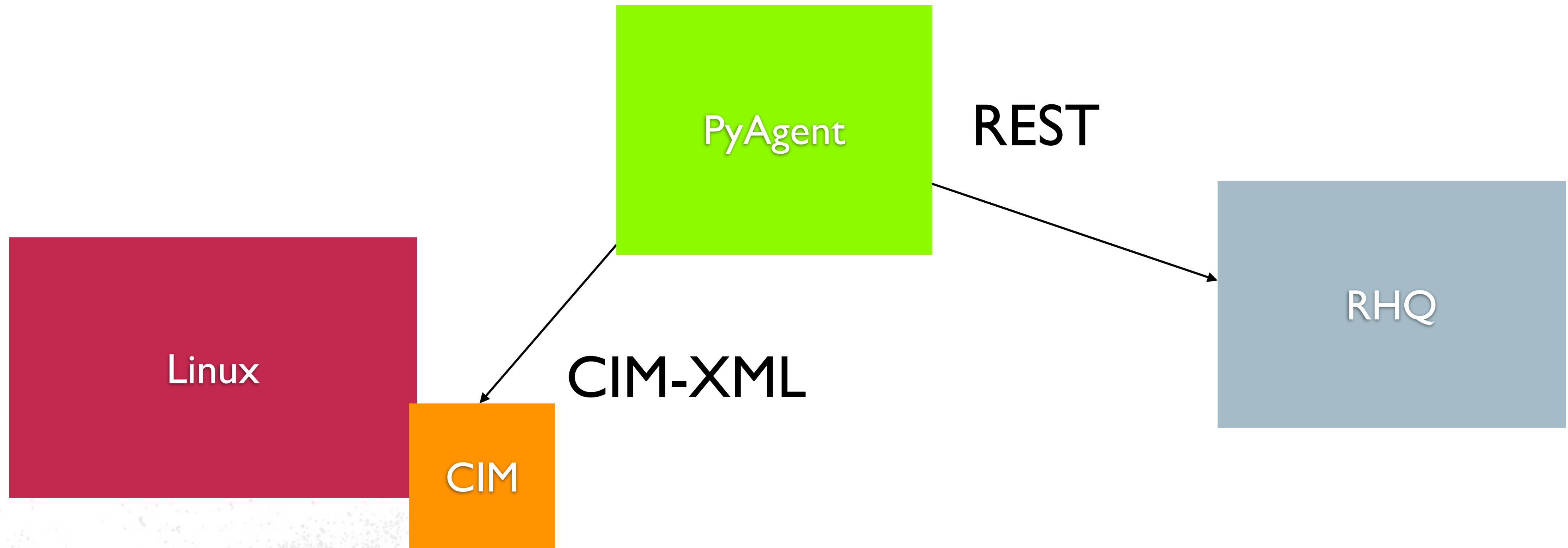
1) pull



REST-API: push



REST-Api



Future: Wintermute¹

- 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)

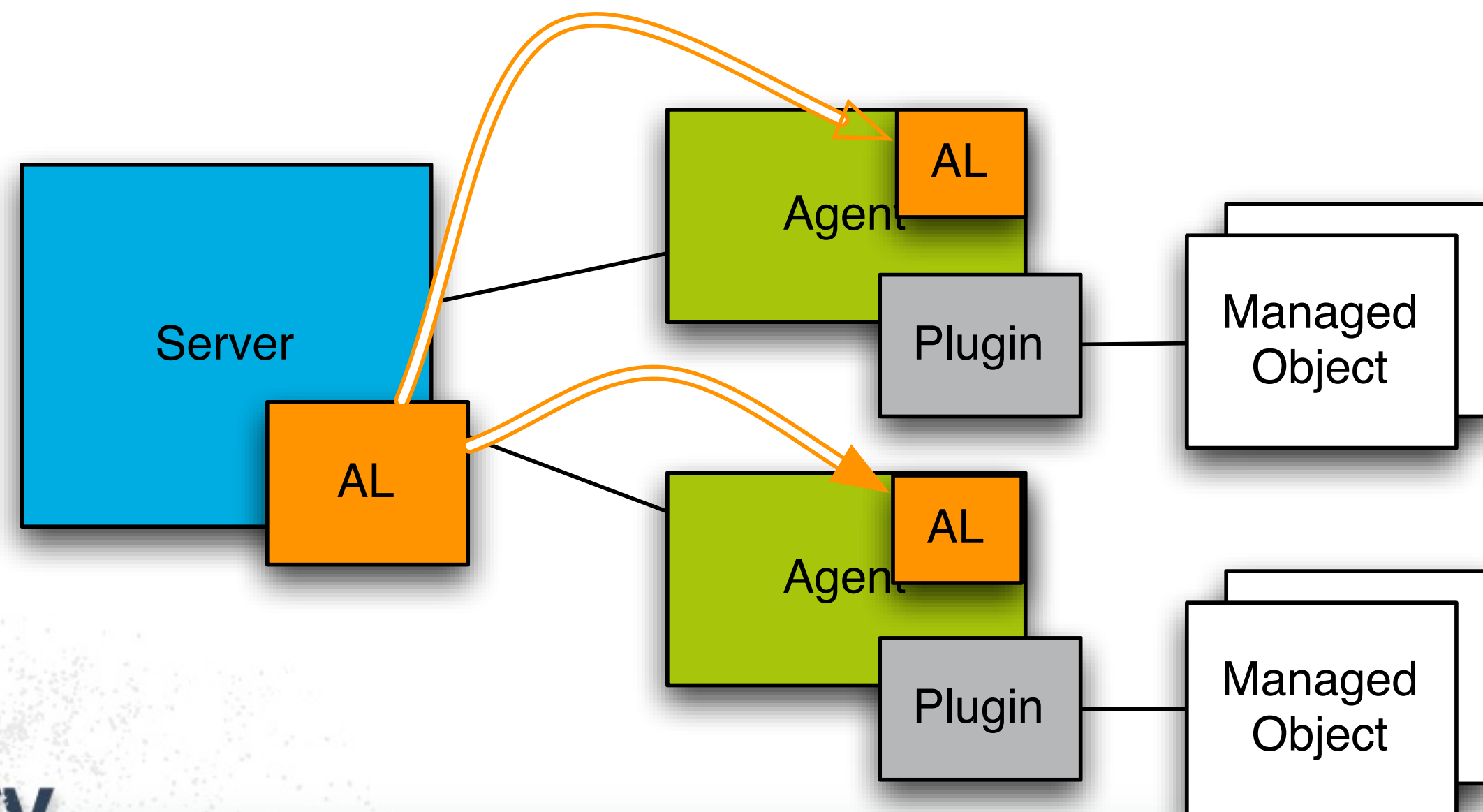
- Currently we don't have:
 - Notion of maintenance windows
 - Notion of "disabled by Admin"
 - A way of escalating of alerts
 - A way of conditional activation of alert senders
 - Comparison of two metrics
 - Comparison of different resources
 - A time factor in alert definition
 - Selection like 1 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: 118N 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
- Planned to move to GitHub in 1st half of 2012

Future: move to GitHub

- Sourcecode currently at git.fedorahosted.org
- Planned to move to GitHub in 1st half of 2012

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://pilhuhn.blogspot.com/>
 - Twitter: @pilhuhn

Thank you!

Question?