

JBoss Operations Network JON

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Operational Challenges

Our Customers tell us that...

- **Managing middleware is complex**
 - Multiple solutions, multiple versions, mixed source, mixed vendor environment
 - Lack of tools / too many tools

- **Development vs. Operations**
 - Conflicting requirements (innovation vs. stability)
 - Varying priorities for long term support
 - Different criteria for evaluating software

- **Customers that leverage JBoss ON are more productive**
 - Automation of common administrative tasks (reactive to proactive)
 - Operational control of all environments (dev, test, prod)
 - Experience less operational issues throughout the application lifecycle

Application Management: Users & Challenges

<java>



Developer

- ❑ Configuration Management
- ❑ Deploy/Update Application
- ❑ Test for Performance, Scale



Operations

- ❑ Availability & Performance Monitoring
- ❑ Reducing MTTR
- ❑ Change Management

Enterprise Application Management

Challenges

Increasing Costs

- Increasing Application Complexity
- High Rate of Change

Increasing Risks

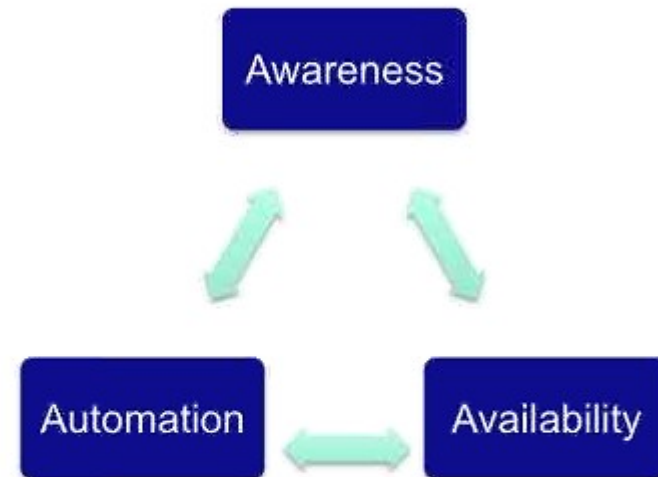
- Lack of Understanding of Business Impact of Incidents
- Lack of Understanding of Change

Inconsistent Quality of Service

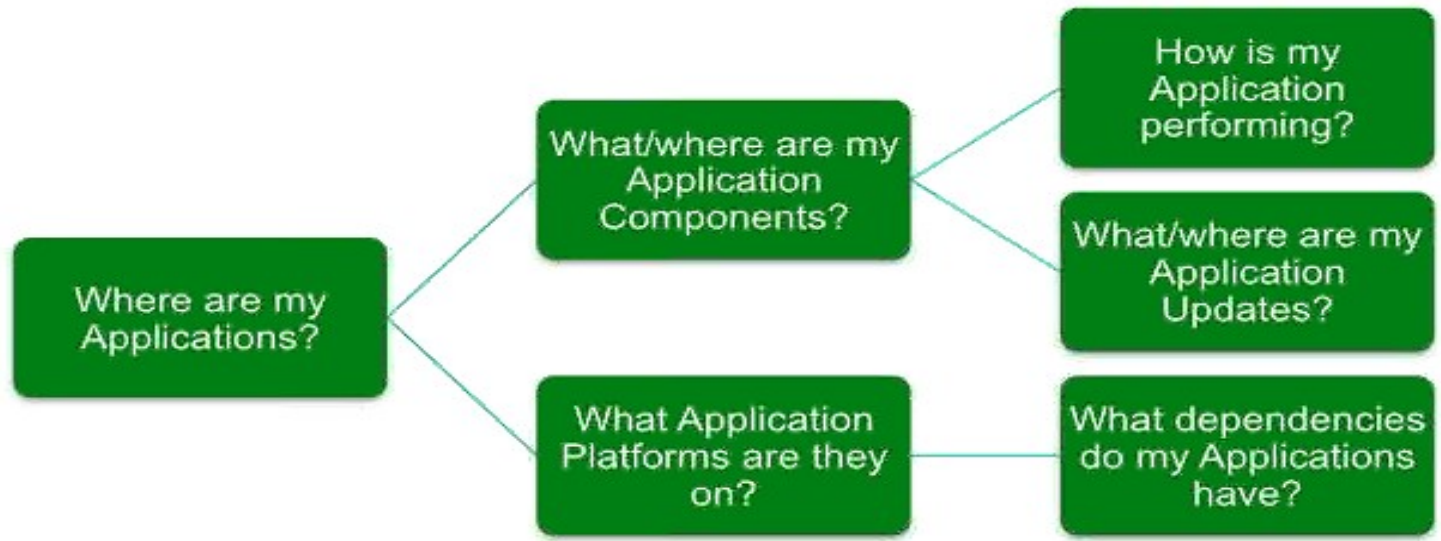
- Lack of Consistent set of tools and practices
- Silo management



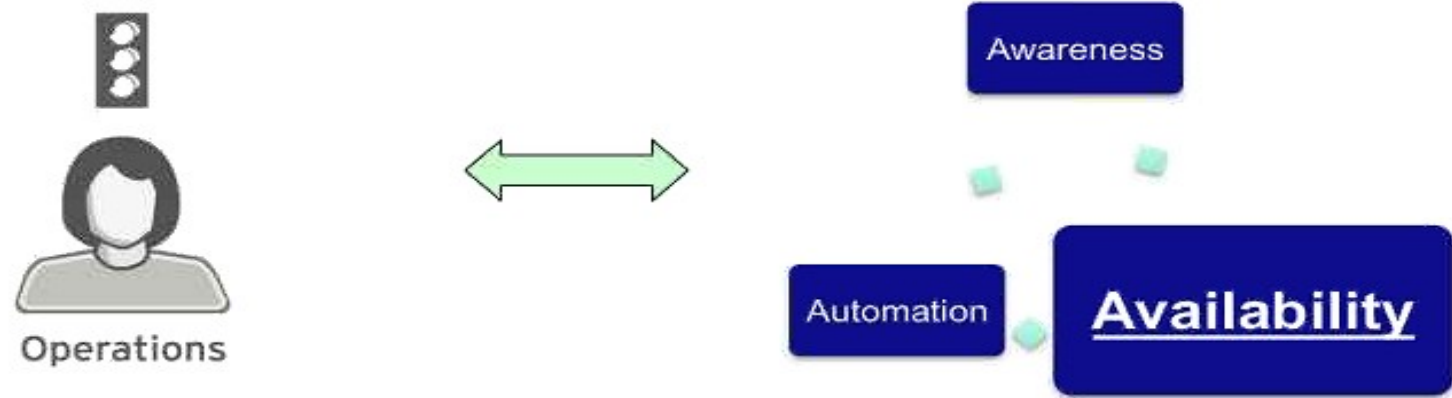
Related to...



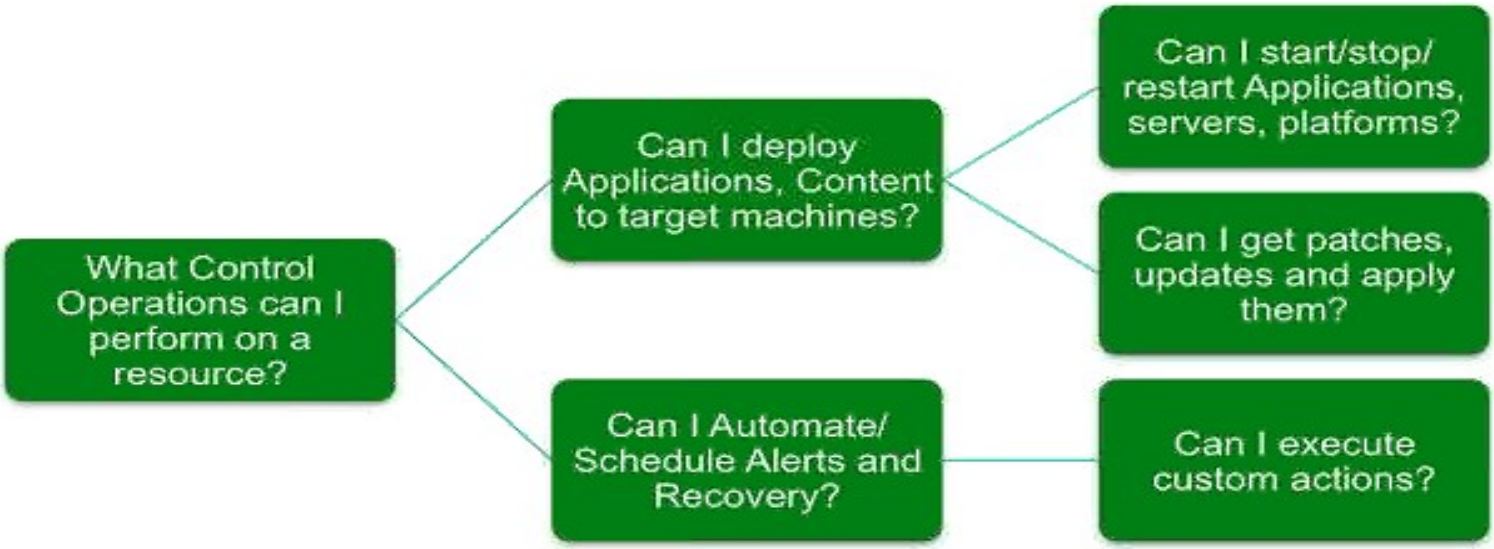
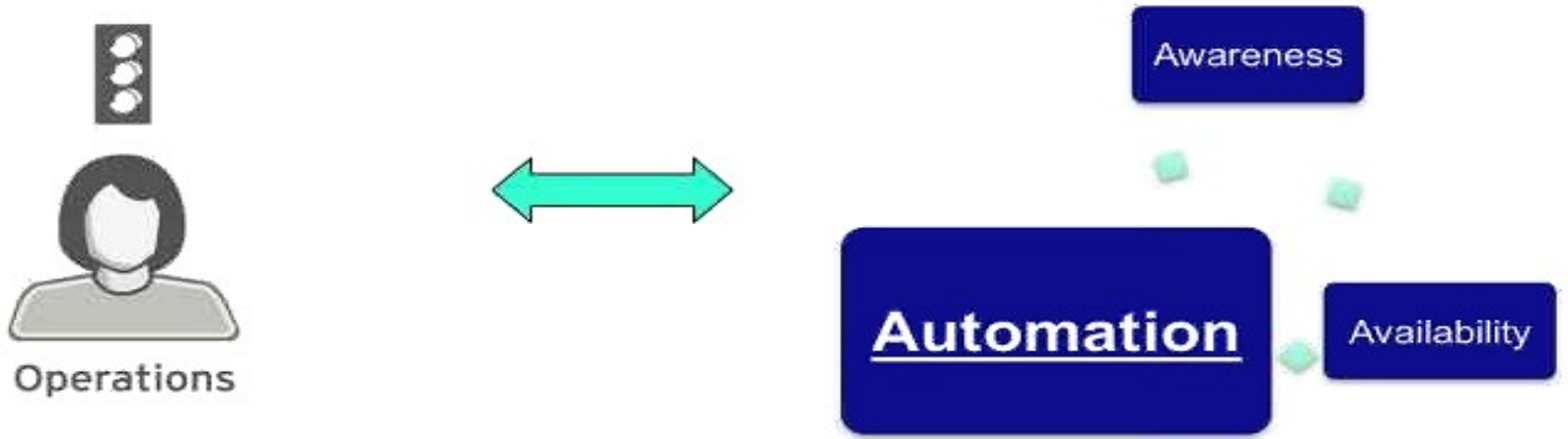
Awareness



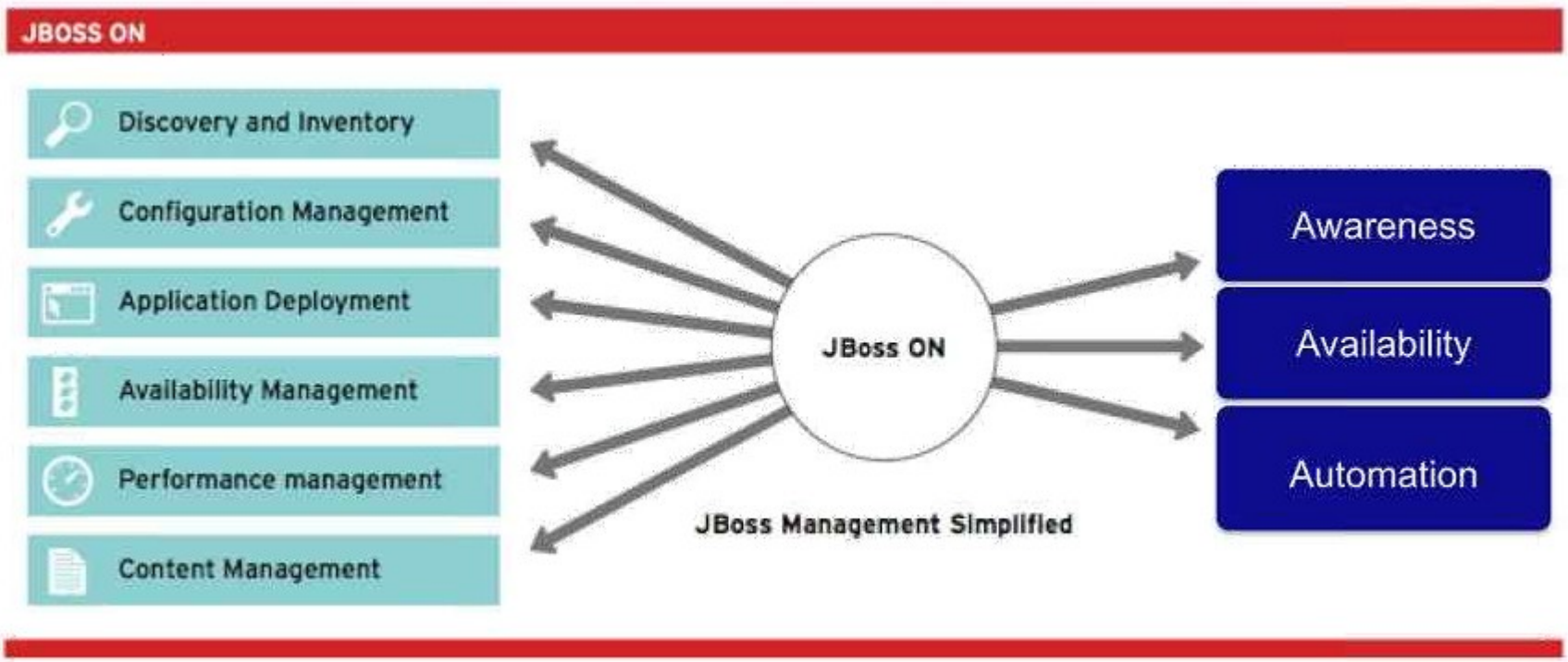
Availability



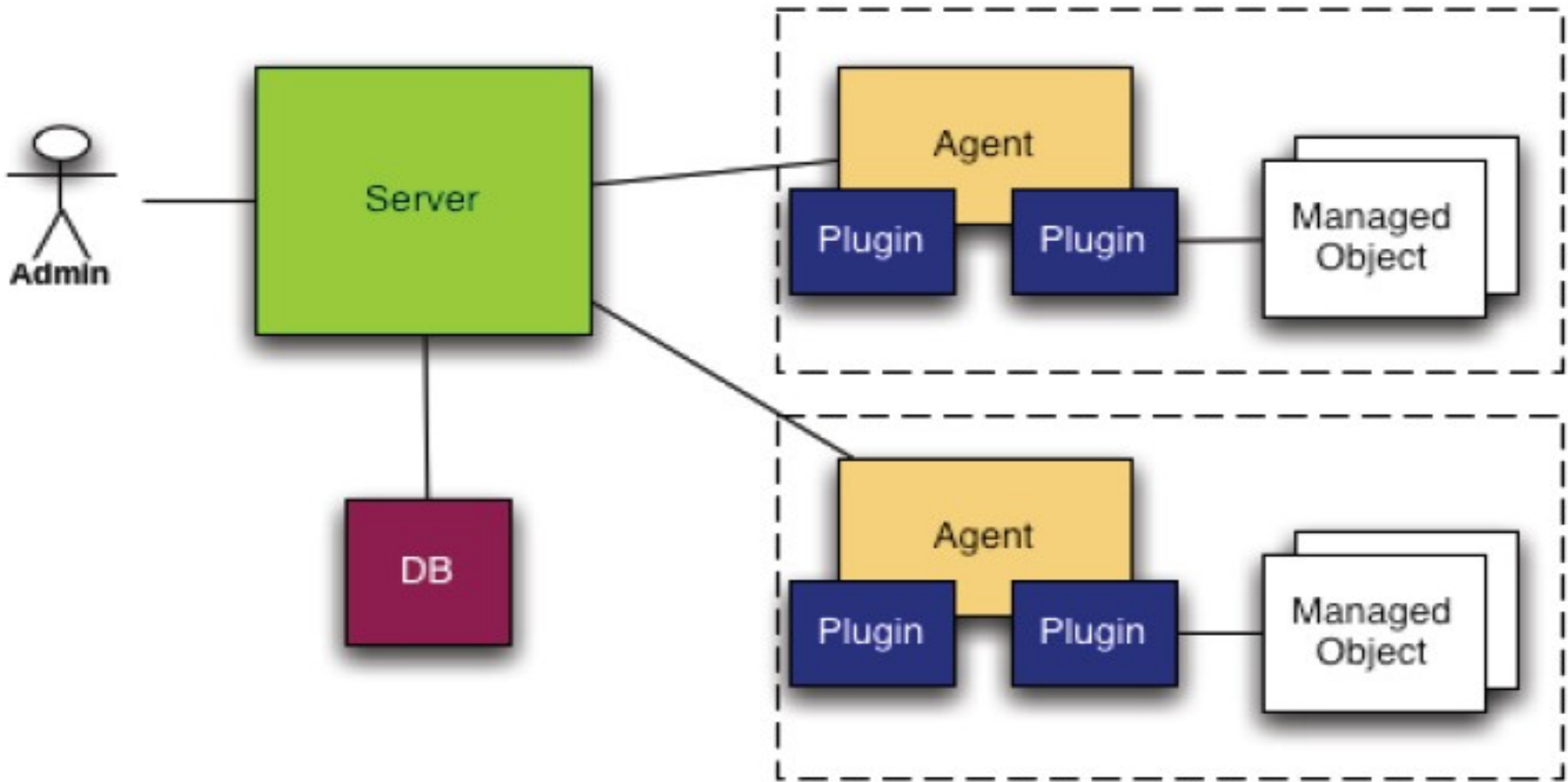
Automation



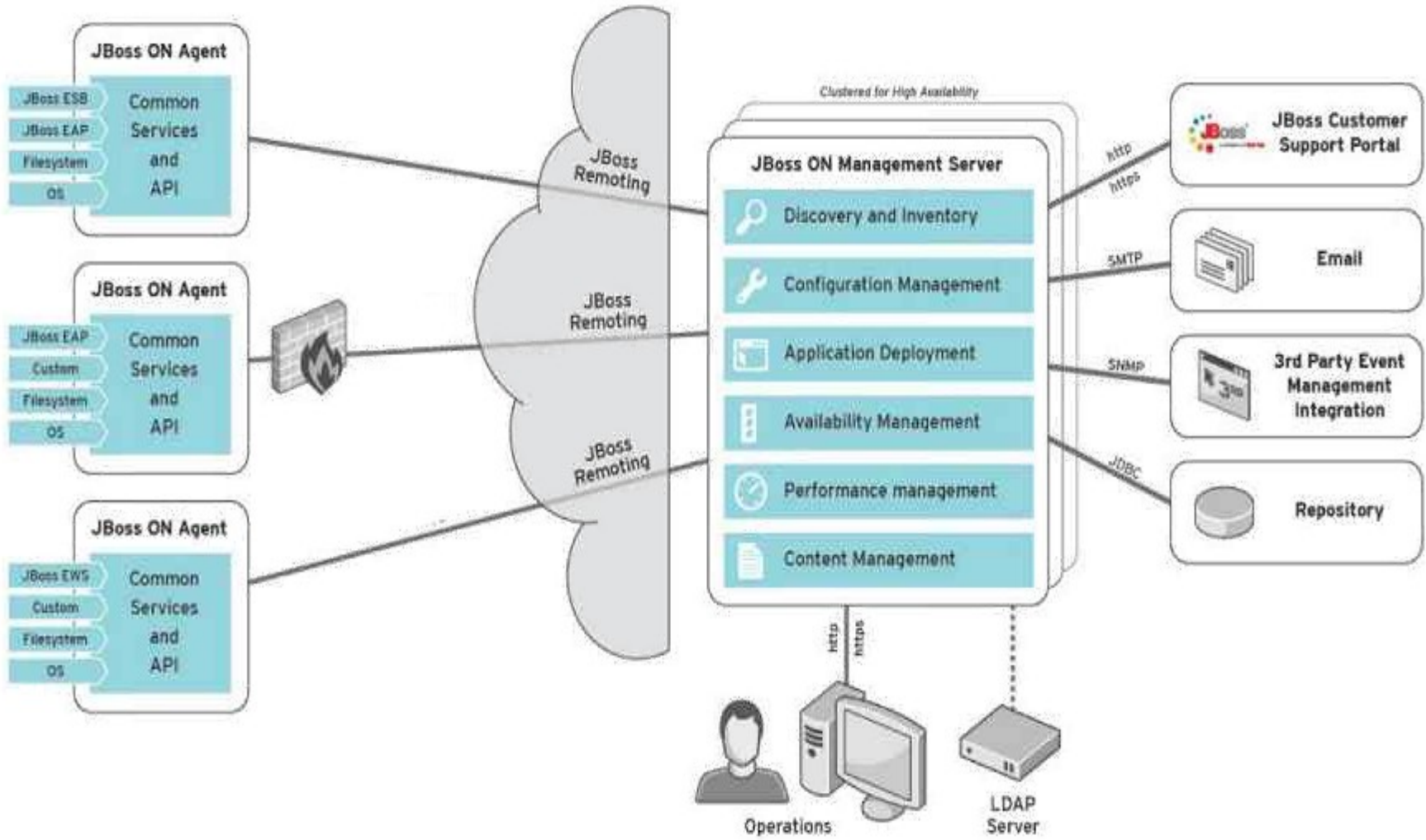
JBoss ON



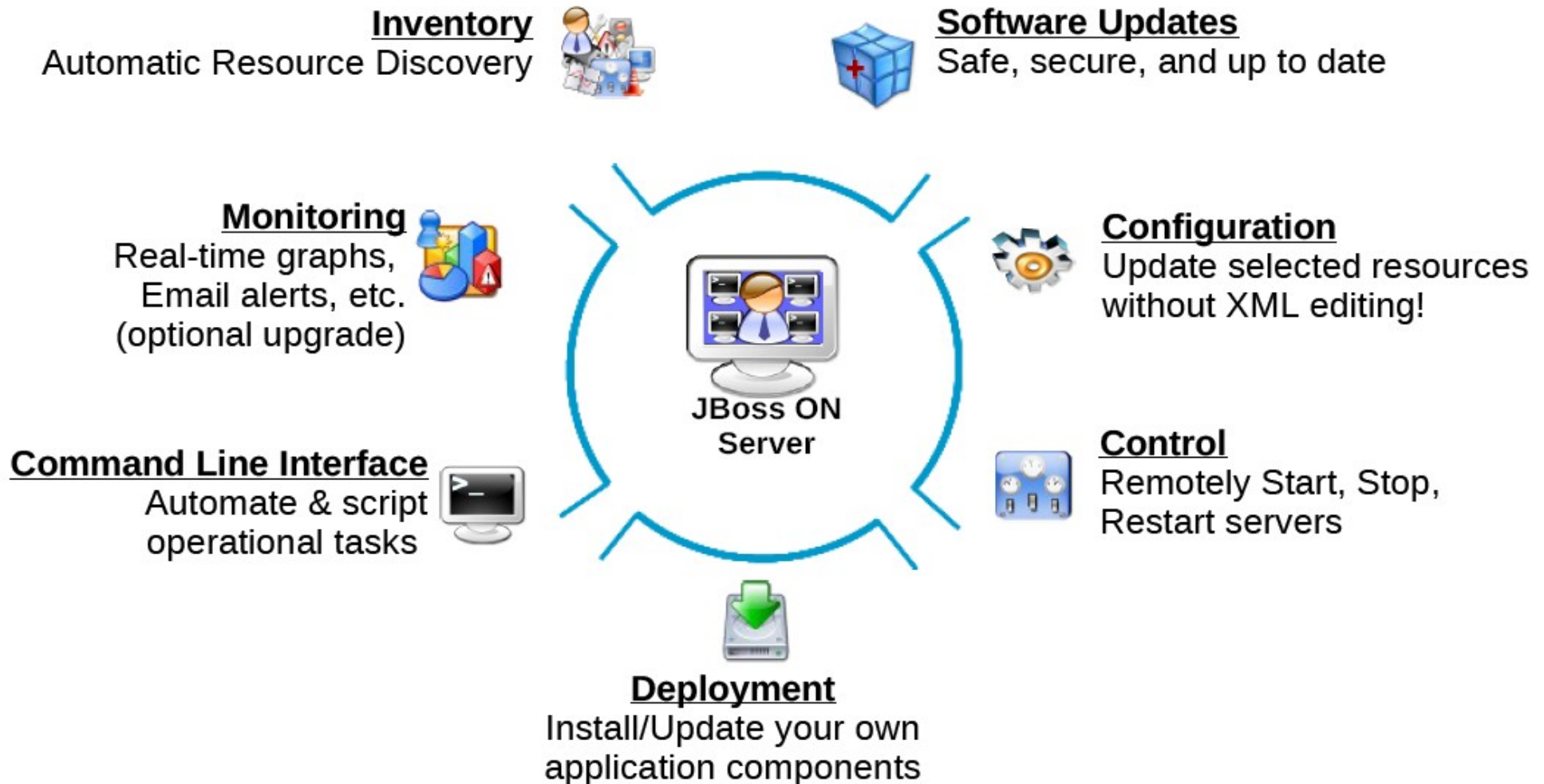
JON Architecture



JBoss ON - Architecture



JON Services



Managing the Enterprise



JON Open Source Model

- RHQ – administration infrastructure, community
 - Infrastructure: server and agent
 - Plugins developed by community
 - Platform, RHQ Agent, Database, JMX, Network Services, IIS, apt, grub, Hardware, hosts, Hudson, Virtualization, Postgres, MySQL, Oracle, Jira, OpenSSH, Snmptrapd
- Jopr – community
 - RHQ + JBoss related plugins
- Embedded Jopr –community
 - Administration console for standalone JBoss AS
 - Uses RHQ/JOPR components, different UI
- JON – derived from Jopr, enterprise grade
 - EWS Plugins
 - EAP Plugins
 - SOAP Plugins
- JBoss AS Administration Console – derived from Embedded Jopr, part of EAP

JON Dashboard

Search Resources

Saved Charts

No charts to display

Summary Counts

Platform Total 1

Server Total 6

Service Total 429

Compatible Group Total 2

Mixed Group Total 1

Average Metrics per Minute 351

Auto-Discovery

No resources to display

Recently Added Resources

No resources to display

Favorite Resources XML

Resource Name ▲ 1	Resource Type	Alerts	Availability
GHINKLE2	Windows	11	✓
GHINKLE2 JBossAS 4.2.1.GA default (2099)	JBossAS Server	0	✓
RHQ Hibernate statistics	Hibernate Statistics	0	✓

Recent Alerts XML

Resource Name ▲	Alert Name	Date / Time
GHINKLE2	Low Memory	02/13/2008 01:38:28 AM
GHINKLE2	Low Memory	02/13/2008 01:37:28 AM
GHINKLE2	Low Memory	02/13/2008 01:36:28 AM
GHINKLE2	Low Memory	02/13/2008 01:35:28 AM
GHINKLE2	Low Memory	02/13/2008 01:34:28 AM

Operations

Recent Operations

Resource Name	Resource Type	Operation	Date / Time ▼	Status
RHQ Hibernate statistics	Hibernate Statistics	View Queries	02/13/2008 01:33:21 AM	✓

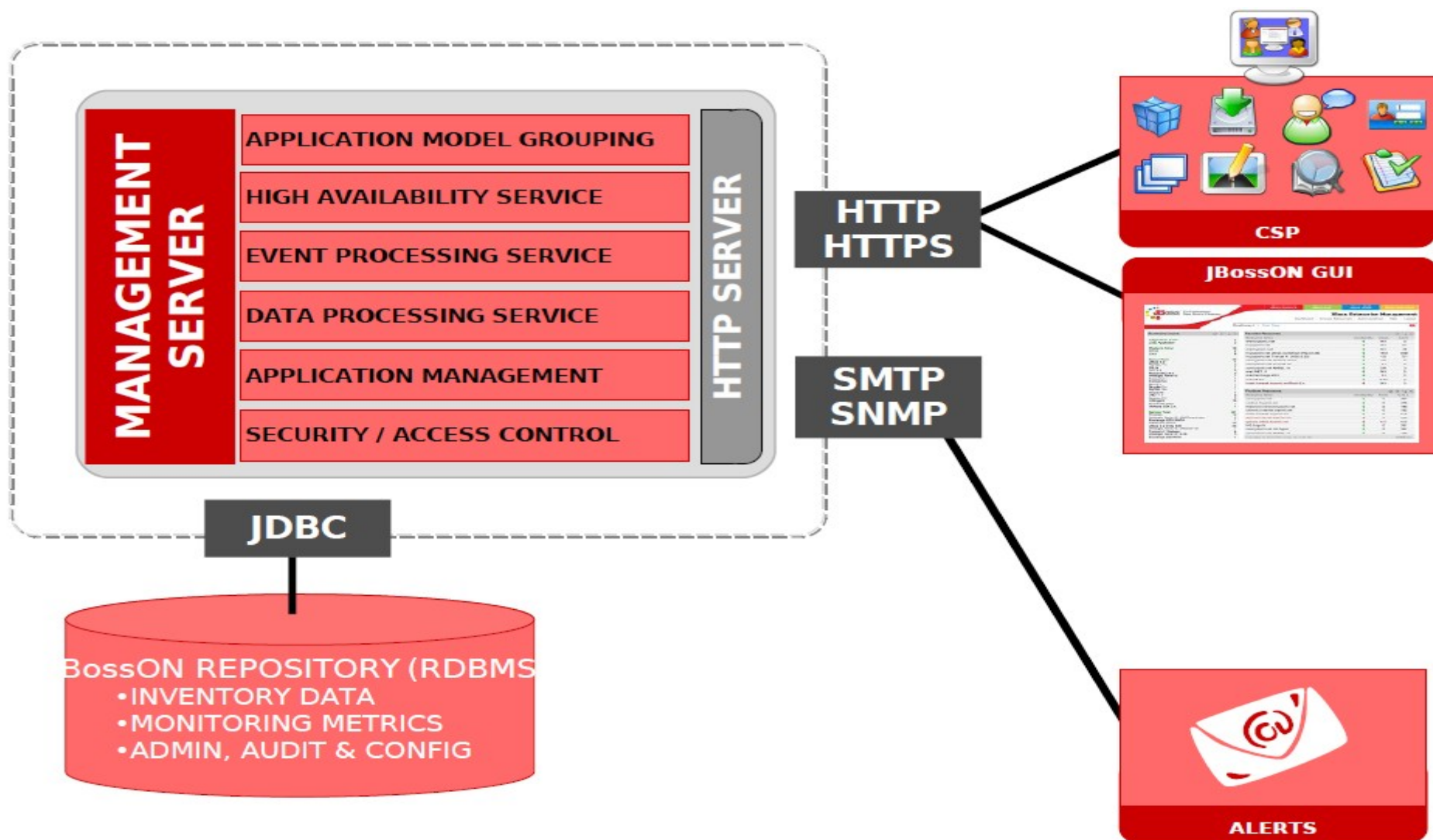
Scheduled Operations

Resource Name	Resource Type	Operation	Date / Time ▼
RHQ Hibernate statistics	Hibernate Statistics	View Queries	02/13/2008 02:00:00 AM

Problem Resources XML

Resource Name	Alerts	O.O.B.	Current Availability
GHINKLE2	11	0	✓
ROOT.war	0	0	!

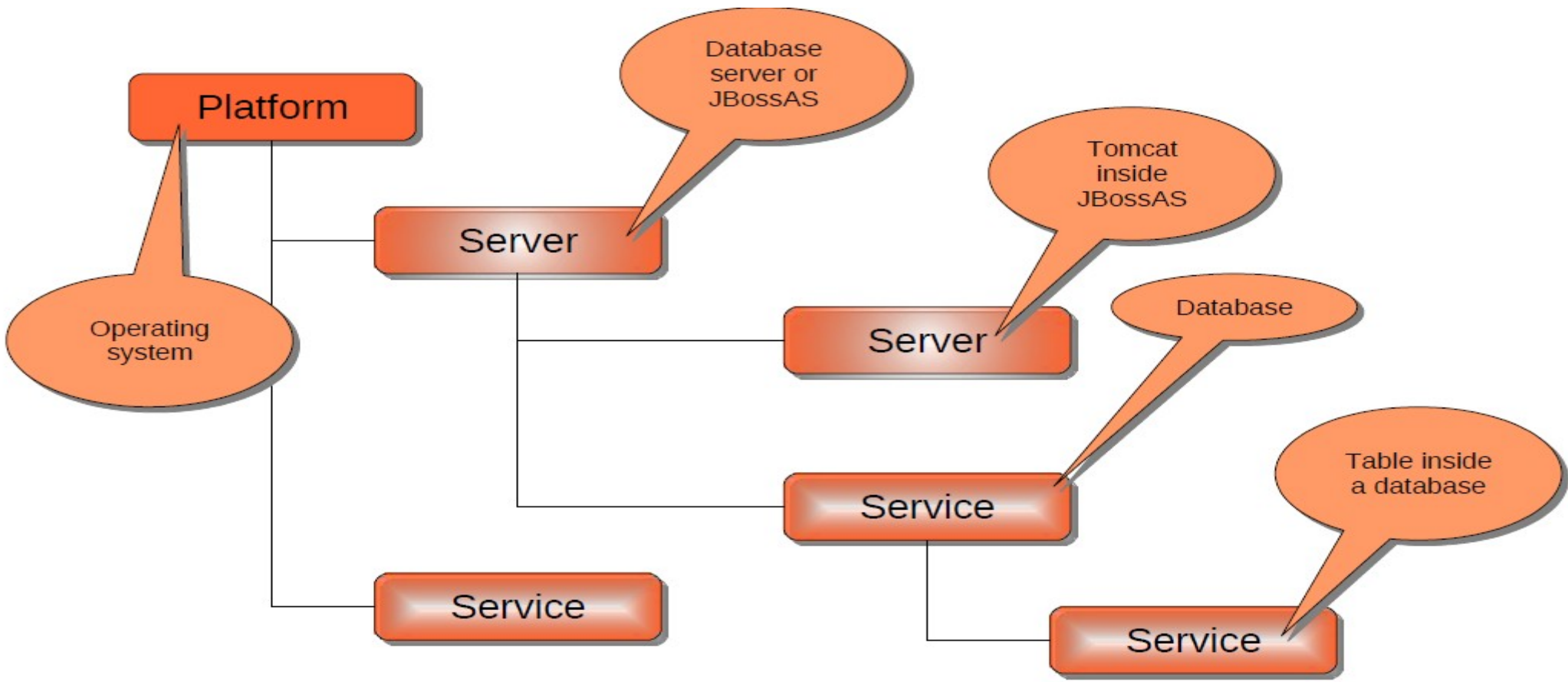
Server Architecture



Server and Agent Modules



Resource Hierarchies



Grouping

- Mixed groups
 - ✓ Any kind of resources can be added to it
 - ✓ Used mainly for security :
 - ✓ granting access to some profiles
 - ✓ authorize/forbid some operations according to profile
 - ✓ recursive group
 - ✓ if selected (creation time), any resource added will register children resources as well ; same for removing
- Compatible groups
 - ✓ Resources have to be of the same type
 - ✓ Can be used for security
 - ✓ Better overview of a type
 - ✓ Global management settings on the group members

Dynamic groups

Configuration



Platforms (1) | Servers (10) | Services (415) | Compatible Groups (2) | Mixed

View: All Server Types

Server ▲ 1			
<input type="checkbox"/>	M I	A	JBoss AS JVM
<input type="checkbox"/>	M I	A	pascal-laptop Embedded JBossWeb Server 2.0.0.GA (0.0.0.0)
<input type="checkbox"/>	M I	A	pascal-laptop Embedded JBossWeb Server 2.0.1.GA (127.0.0.1)
<input type="checkbox"/>	M I	A	pascal-laptop Embedded JBossWeb Server 2.0.1.GA (127.0.0.1)
<input type="checkbox"/>	M I	O A P	pascal-laptop JBossAS 4.2.2.GA server1 (1099)
<input type="checkbox"/>	M I	O A P	pascal-laptop JBossAS 4.2.2.GA server2 (1299)
<input type="checkbox"/>	M I	C A	pascal-laptop RHQ Agent

Operations

MONITOR INVENTORY **OPERATIONS** ALERT PACKAGES

▶ NEW SCHEDULE HISTORY

Supported Operations

Name	Description
Restart *	Shutdown and then sta
Shutdown	Shutdown this applicati
Start	Start this application s

Operation Parameters

This operation does not take any parameters.

Operation Schedule Details

Start: Immediately
 (MM/dd/yyyy HH:mm:ss)

Recur: Never
 Every

Recurrence End: None
 (MM/dd/yyyy HH:mm:ss)

Other Options

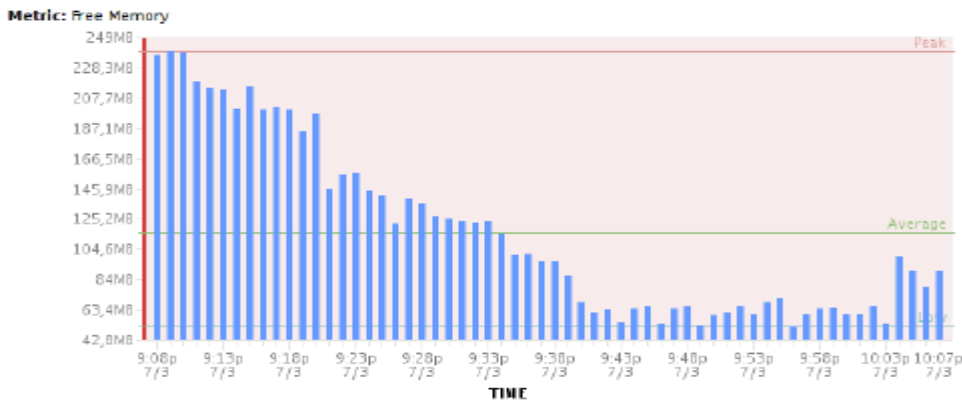
Timeout: The maximum time this operation is given to finish, in milliseconds

Notes: Optional notes about the scheduled operation

SCHEDULE

Monitoring

- Numerical metrics->Graphs
- Traits->Text seldomly changed, no graph
- Response times->array of numerical values



Only traits marked as "summary" in the plugin descriptor are shown at the top of the page. All traits can be accessed on the "Metric data" tab. Clicking on a trait there also shows its history

Network Adapter (Service)
Location: none
Host: Mac OS X '172.31.7.7'
Net4Address: 172.31.7.7

MONITOR INVENTORY ALERT

INDICATORS	METRIC DATA	RESPONSE TIME					
Metric Display Range: Last 8 Hours - Advanced Settings...							
<input checked="" type="checkbox"/> Low	<input checked="" type="checkbox"/> Average	<input checked="" type="checkbox"/> Peak					
To control which charts are displayed below, use the column headers and page controls for the table to the left.							
URL: /resource/common/monitor/Visibility.do							
Calls: 20							
	Call Time (ms)						
	0,0	666,6	1.333,3	1.999,9	2.666,5	3.333,1	3.999,8
Low	[Bar chart showing Low response times]						
Avg	[Bar chart showing Average response times]						
Peak	[Bar chart showing Peak response times]						

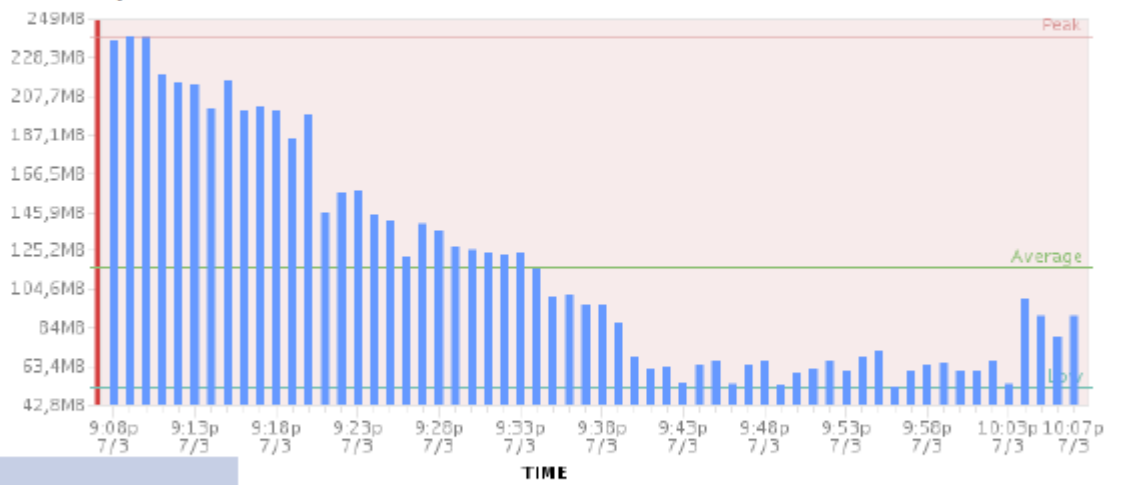
Baseline

- Actual
- Peak
- High Range
- Average
- Baseline
- Low
- Low Range

[Define New Alert](#)
[Save Chart to Dashboard](#)
[Back to Resource](#)

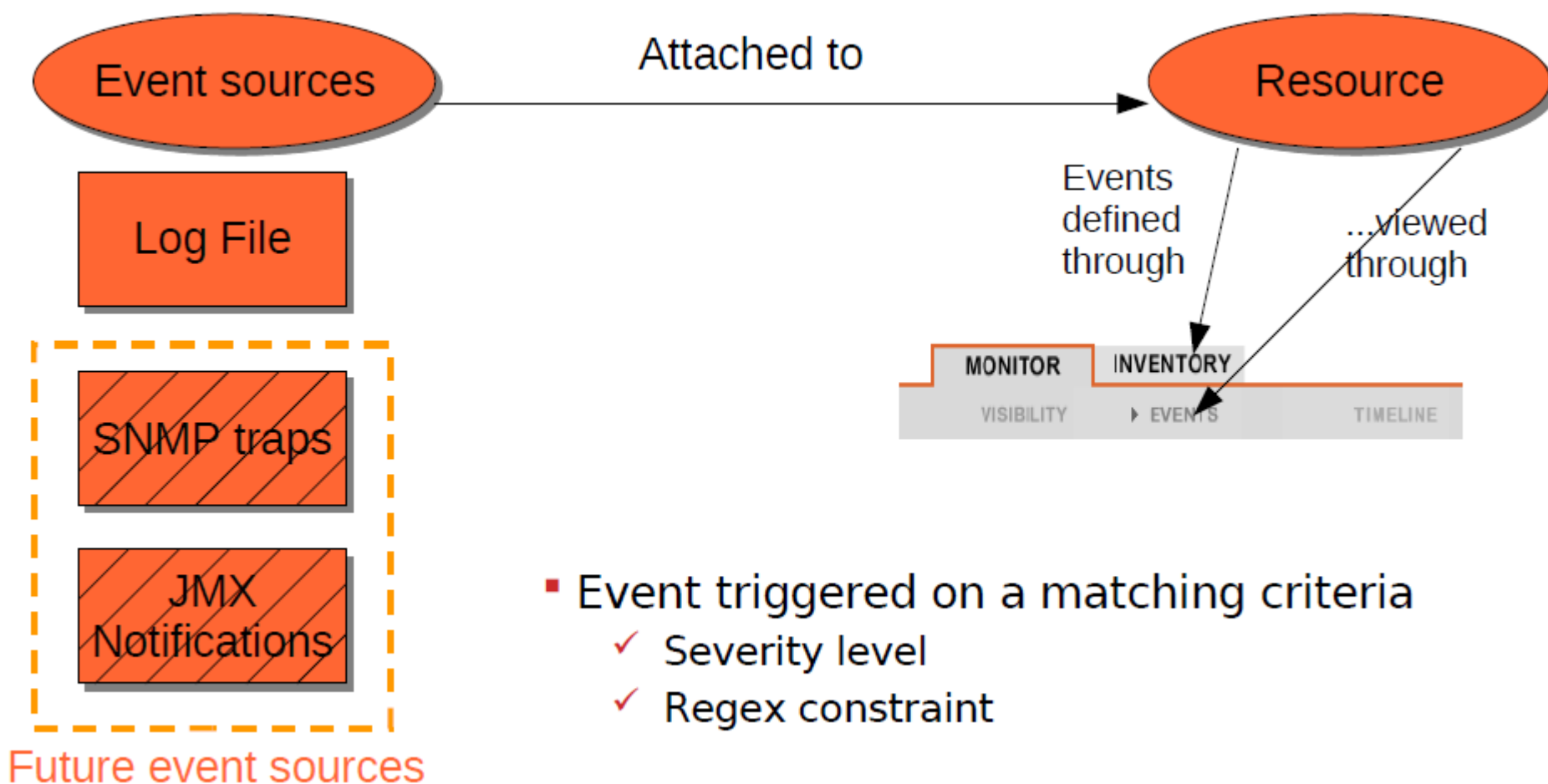
REDRAW

Metric: Free Memory

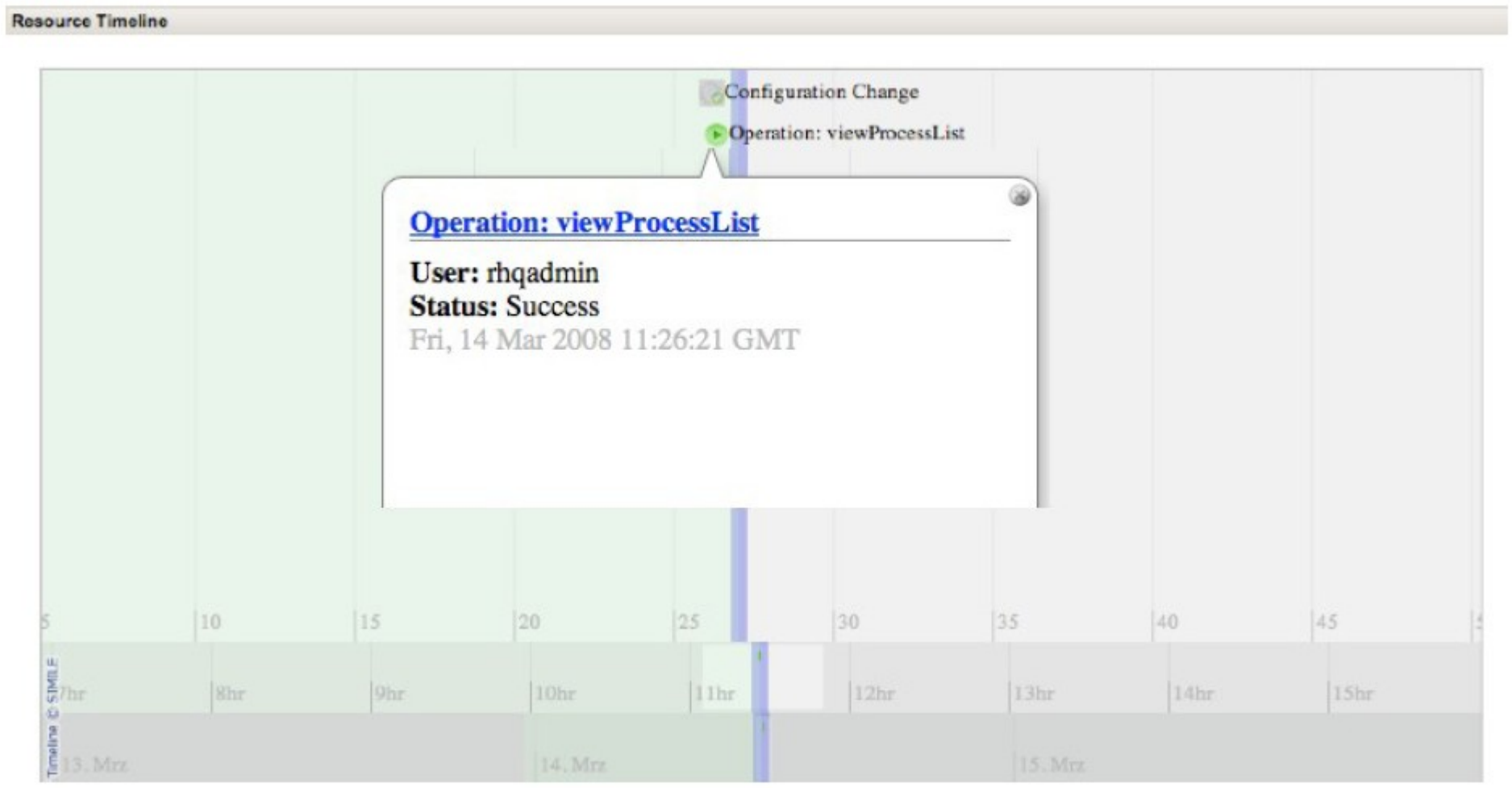


Metric Baseline & Expected Range
Baseline: 116,2MB - Change Value
Expected Range: High Range: 150,0MB - Change Value
Low Range: 100,0MB - Change Value

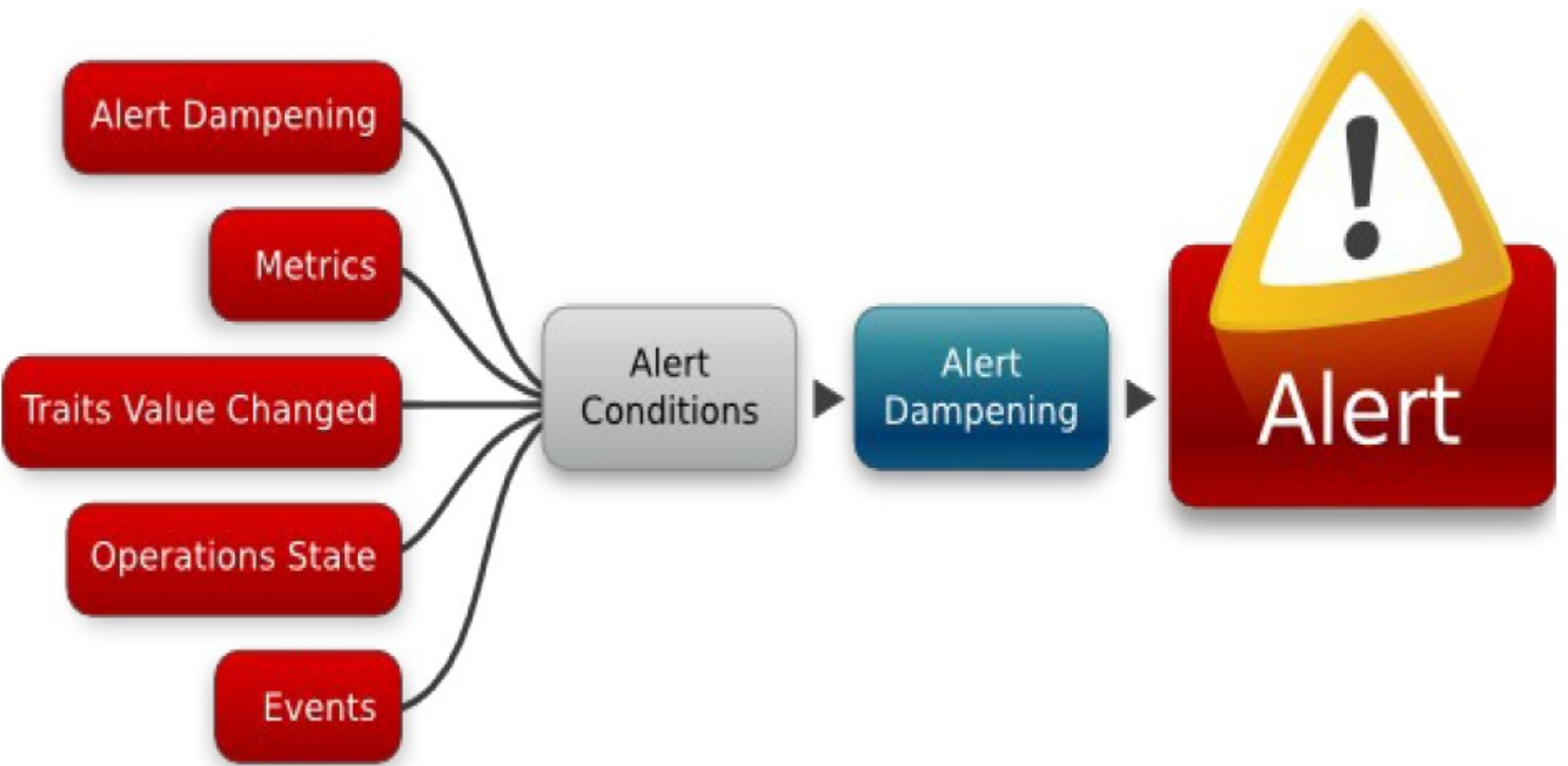
Events



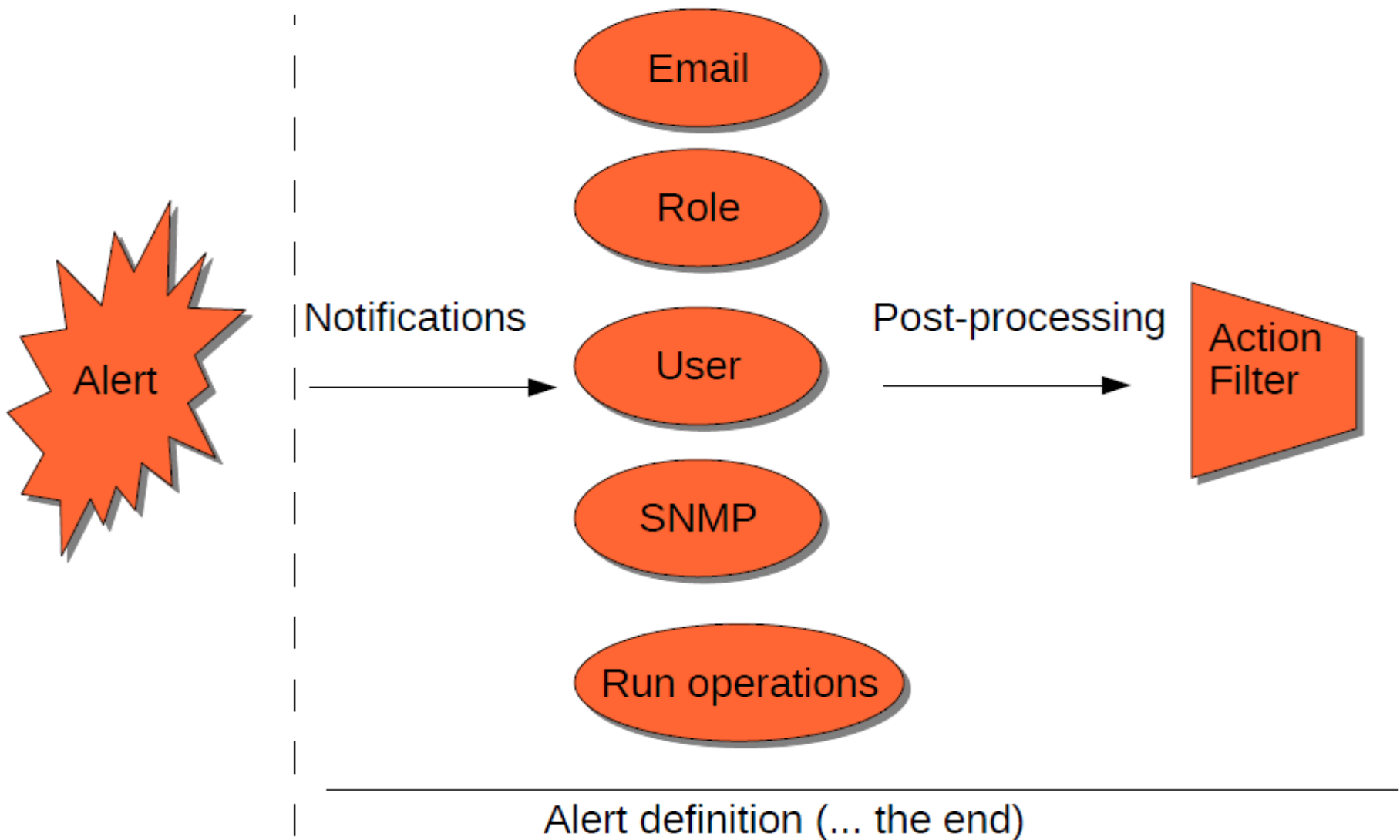
Timeline



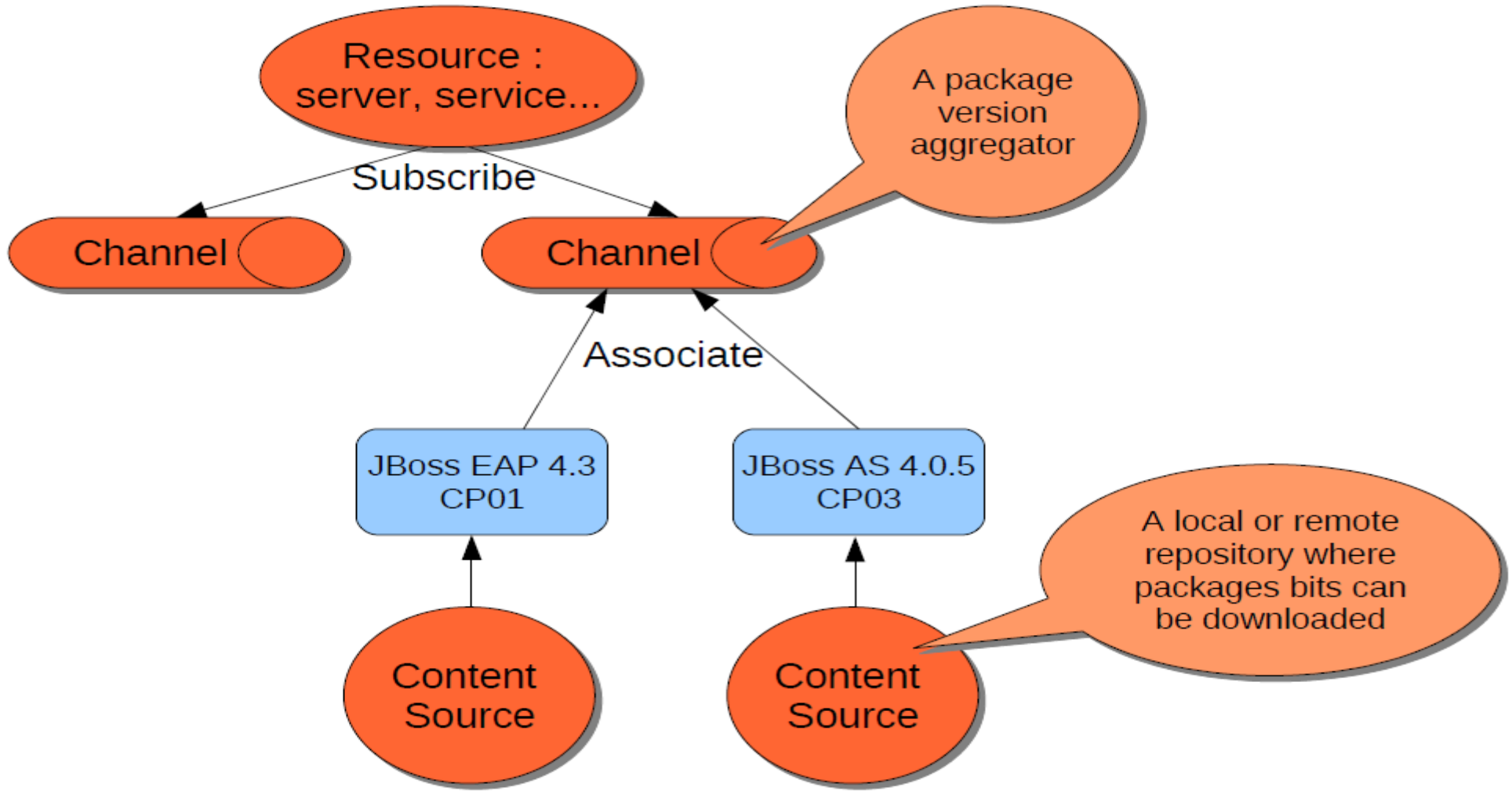
Alerts



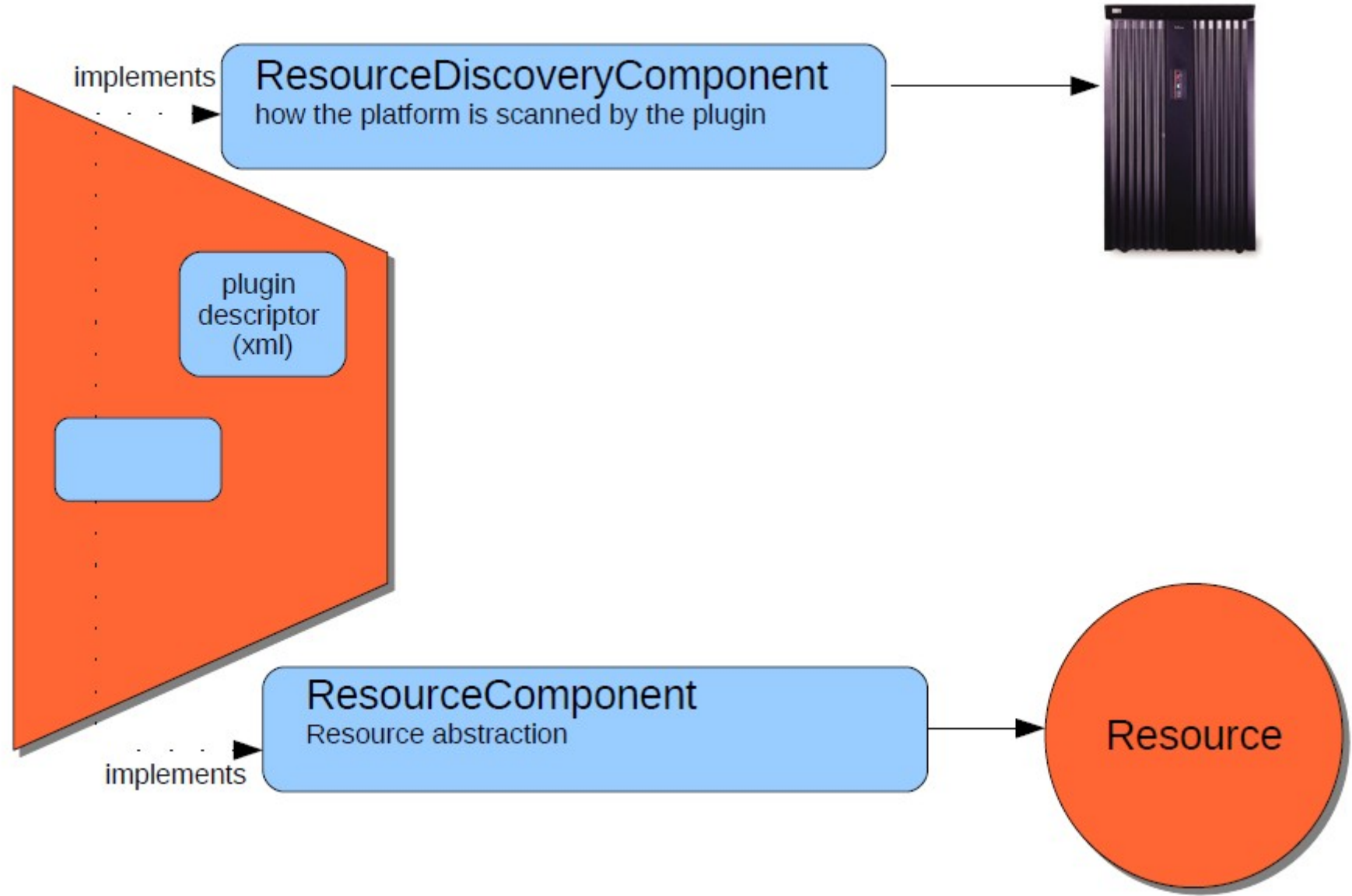
Alert Handling



Patching



Plugins



JBoss ON: v2.3*

- **EAP5**
 - **JBoss AS Server, JVM, Web Connector, Vhost**
 - **JBoss Messaging JMS Queue, Topic (with config)**
 - **Datasource & Connection Factory (no-tx,local,XA) (with config)**
- **Remote API**
 - **Available via SOAP or a Java client**
 - **Numerous Features Accessible**
- **CLI**
 - **Secured remote access**
 - **Stateful script execution**
 - **Access to all Remote APIs**
 - **Simplified API calling**
- **Reports**
 - **Installed Inventory Report**

Q & A

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