THE BASICS

APACHE HTTPD

APACHE TOMCAT
- my-app.war
- my-app.war configurations

JDK/JRE

APACHE TOMCAT
- my-app.war
- my-app.war configurations

JDK/JRE
REAL WORLD

Load Balancer

APACHE HTTPD

/App1

APACHE HTTPD

/App2

APACHE HTTPD

/App3
CONFIGURE
- Define JVMs, Web Servers, Resources

DEPLOY
- Generate/Deploy Web Servers
- Generate/Deploy JVMs

OPERATE
- Start/Stop JVMs
- Start/Stop Web Servers
- Real-time status updates
- Support Tools

AUDIT
RESTful APIs

- `https://<host>/aem/v1.0/`
- `/jvms/<name>/start :json`
- `/jvms/<name>/stop :json`
- `/webservers/<name>/start :json`
- `/webservers/<name>/stop :json`

REMOTE CONNECTIVITY

SSH/HTTP(S)
AGENDA

CONFIGURE
- Media
- Groups
- JVMs
- Web Servers
- Web Apps
- Resources

DEPLOY
- JVMs
- Web Servers
- Resources

MANAGE
- Groups
- JVMs
- Web Servers
CONFIGURE

Add JVM

- Name
  - messages-jvm-4
- Host
centos02
- HTTP Port
8180
- HTTPS Port
8181
- Redirect Port
8182
- Shutdown Port
8183
- AJP Port
8184
- Status Path
http://centos02:8180/tomcat-power.gif
- Username
- Password
- JDK Version
  - jdk-8u92-linux-x64
- Group
  - messages
  - contacts
  - calendar

Delete Add
CONFIGURE
CONFIGURE

Web Apps
server.xml

```xml
<Connector port="${jvm.portNo}">
</Connector>
```

Generated server.xml file for jvm-1

```xml
<Connector port="2901"/>
```

---

```
server.xml.md.json
```

```json
{
  "deployPath": "/opt/jvms/${jvm.jvmName}/conf",
  "deployFileName": "server.xml",
}
```

jvm(1).portNo = 2901
jvm(2).portNo = 2911

Generated server.xml file for jvm-2

```xml
<Connector port="2911"/>
```
DEPLOY

- Web Server
- JVM
- Resource

- GENERATE/DEPLOY ALL WEB SERVERS
- GENERATE/DEPLOY ONE WEB SERVER
### Deploy Web Server

#### JVM Resource

### Remove Web Server

---

**Operations**

<table>
<thead>
<tr>
<th>Group Name</th>
<th>Start Group</th>
<th>Stop Group</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>calendar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>contacts</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Web Servers**

<table>
<thead>
<tr>
<th>Name</th>
<th>Host</th>
<th>HTTP</th>
<th>HTTPS</th>
<th>Group</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>http01</td>
<td>centos01</td>
<td>80</td>
<td>443</td>
<td>messages, contacts</td>
<td>status httpd.conf</td>
</tr>
<tr>
<td>http02</td>
<td>centos01</td>
<td>90</td>
<td>943</td>
<td>messages, contacts</td>
<td>status httpd.conf</td>
</tr>
</tbody>
</table>

**JVMs**

<table>
<thead>
<tr>
<th>Name</th>
<th>Host</th>
<th>HTTP</th>
<th>HTTPS</th>
<th>Group</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>contacts-jvm-1</td>
<td>centos01</td>
<td>8380</td>
<td>8381</td>
<td>contacts</td>
<td>STARTED</td>
</tr>
<tr>
<td>contacts-jvm-2</td>
<td>centos01</td>
<td>8480</td>
<td>8481</td>
<td>contacts</td>
<td>STARTED</td>
</tr>
<tr>
<td>contacts-jvm-3</td>
<td>centos01</td>
<td>8780</td>
<td>8781</td>
<td>contacts</td>
<td>STARTED</td>
</tr>
</tbody>
</table>
DEPLOY

Web Server ➤ JVM ➤ Resource

GENERATE/DEPLOY RESOURCES
MANAGE

START/STOP EVERYTHING

AGGREGATE STATUS REAL TIME UPDATES
MANAGE

START/STOP GROUP WEB SERVERS

START/STOP ONE WEB SERVER

START/STOP WEB SERVERS
MANAGE

Group | Web Servers | JVMs

Operations | Configuration | Admin

Show 25 entries

Group Name:

- calendar
- contacts

- Action and Event Logs:
  05/13/2017 Web Server httpd1: STARTED
  05/13/2017 Web Server httpd2: STOP SENT
  05/13/2017 Web Server httpd3: STARTED

- Web Servers:
  Name | Host | HTTP | HTTPS | Group
  httpd1 | contex01 | 80 | 443 | message,contacts
  httpd2 | contex01 | 90 | 943 | contacts

- JVMs:
  Name | Host | HTTP | HTTPS | Group
  contacts-jvm-1 | contex01 | 8380 | 8381 | contacts
  contacts-jvm-2 | contex01 | 8480 | 8481 | contacts
  contacts-jvm-3 | contex01 | 8780 | 8781 | contacts

- Applications

LINK TO mod_proxy UI

LINK TO httpd.conf
MANAGE

Group

Web Servers

JVMs

DRAIN SESSIONS PER GROUP ALL JVMS

DRAIN SESSIONS PER GROUP ONE JVM
MANAGE

Web Servers

JVMs

- Link to Tomcat Manager
- Thread Dump
- Heap Dump

Operations
Configuration
Admin

Show 25 entries

Group Name
- calendar
- contacts

- Action and Event Logs
  - 09/13/2017 Web Server httpd1
  - 19:34:46 jwala STOP SENT
  - 09/13/2017 Web Server httpd0
  - 19:34:57 jwala STOP SENT

- Web Servers
  - Name
    - httpd1
    - httpd2

- JVMs
  - Name
    - contacts-jvm1
    - contacts-jvm2
    - contacts-jvm3

- Applications
## JWALA ARCHITECTURE

### APACHE TOMCAT

- React UI
- Groovy
- slf4j/log4j
- JSch
- JGroups
- Spring Framework
- Embedded H2 DB

### JDK
BUILD JWALA

1. Install Git
2. Install JDK
3. Install Gradle
4. Clone jwala as follows
   git clone https://github.com/cerner/jwala.git
5. Build jwala bundle using
   gradle clean zipJwalaToTomcat
6. Set JAVA_HOME and run
   apache-tomcat set JAVA_HOME=jdk1.7.0_45
7. Run jwala on tomcat
   cd /jwala/jwala-tomcat/build/apache-tomcat-7.0.85/bin
   Start Tomcat as follows
   catalina.bat run

Run Jwala
CONTRIBUTE

Contributing

Help us to make this project better by contributing. Whether it’s new features, bug fixes, or simply improving documentation, your contributions are welcome. Please start with logging a github issue or submit a pull request.

Before you contribute, please review these guidelines to help ensure a smooth process for everyone.

Thanks.

Issue Reporting

- Please browse our existing issues before logging new issues.
THE TEAM
THANK YOU