**Title:**

# Installation and Deployment of HAProxy

**Description:**

Workflow for installing and deployment of HAProxy war. This bundle has dependency on Core and Validation KIs bundles.

**Readme**

Important: the Knowledge Items of this bundle try to simulate Workflows seen in frameworks such as Chef, Puppet and Ansible.

For this reason, Workflow KIs seem to not follow traditional best practices of KI Creation in terms of reusability. They are, however atomic pieces of knowledge, meaning the knowledge cannot be broken down further while still maintaining the same level of functionality.

Due to the controlled nature of the Workflow approach, the Workflow KIs try to structure Tasks like steps in a sequence rather than letting AutoPilot pick the path to a solution.

In order to simulate these Workflows, the Knowledge Items are split into 3 groups:

* Workflow KIs
* Validation KIs and
* Core KIs.

This bundle intends to install and deploy HAProxy with all its related application and libraries on the given host.

**Dependencies**

1. Core KIs bundle
2. Validation KIs bundle

For this bundle to run, you will need MARS nodes in AutoPilot engine. For your reference, please see sample nodes below (at the end of this readme).

Steps to run

1. Put the validation KIs bundle in AutoPilot engine
2. Put the core KIs bundle in AutoPilot engine
3. Put the Workflow KI HAProxyWorkflowHandlePKG.xml (attached with this bundle) in AutoPilot engine
4. Put the Issue in AutoPilot engine to trigger this KI
5. For your reference, please see sample issue below
6. This will trigger the KI and run the workflow to install and deploy HAProxy war on your machine (as specified in the Issue)

Workflow KI in this bundle, runs below installation steps on the target machine (as specified in the Issue)

1. Installs HAProxy
2. Install tomcat7
3. Download war into tomcat webapp
4. Enable haproxy
5. Configure haproxy
6. Start the HAProxy server

**Sample Issue**

Issue:

NodeID: OpexSoftware:UseCase:Application:HAProxy

xmlns: http://www.arago.de/IssueSchema

IssueSubject: 'Please install HAProxy and Deploy war'

HAProxyWorkflowHandlePKG:

TargetApp: HAProxy

TargetMachine: HAProxy

WARUrl: http://104.236.227.163:8080/CitrusTestKit.war

TargetTar\_FileName: CitrusTestKit.war

ProxyEnableUrl: http://104.236.227.163:8080/haproxy

ProxyConfigURL: http://104.236.227.163:8080/haproxy.cfg

TomcatPKG: tomcat7

TargetState: Created

User: ashish

Host: 192.168.1.53

**Machine Node**

<Linux xmlns="http://mars-o-matic.com" ID="OpexSoftware:Workflow:Machine:Ganesh"

HasAgentType\_WatchMe="False" MachineArchitecture="x86\_64"

NodeType="Machine" MachineClass="Linux" NodeName="Ganesh">

<Dependencies>

<Node ID="OpexSoftware:Workflow:Software:HAProxy" />

</Dependencies>

<CustomerInformation ID="opex.com" Name="opex"/>

<Extensions>

<ssh User="bhagyashree" />

<PasswordPolicy MinLength="8" MaxLength="14" CharSet="alnum" />

</Extensions>

<OSInformation Name="Ubuntu" MajorVersion="14" Vendor="Ubuntu" />

<NetworkInformation>

<InterfaceInformation>

<Interface Name="eth1" IP="192.168.1.89" />

</InterfaceInformation>

</NetworkInformation>

</Linux>

**Software Node**

<Tomcat xmlns="http://mars-o-matic.com" ID="OpexSoftware:Workflow:Software:HAProxy"

NodeType="Software" SoftwareClass="ApplicationServer"

SoftwareSubClass="Tomcat" NodeName="HAProxy">

<Dependencies>

<Node ID="OpexSoftware:Workflow:Machine:Ganesh" />

<Node ID="OpexSoftware:Workflow:Resource:WebResource" />

</Dependencies>

<CustomerInformation ID="opex.com" Name="opex"/>

</Tomcat>

**Resource Node**

<Service xmlns="http://mars-o-matic.com" ID="OpexSoftware:Workflow:Resource:WebResource"

NodeType="Resource" ResourceClass="Service" NodeName="WebResource">

<Dependencies>

<Node ID="OpexSoftware:Workflow:Software:HAProxy" />

<Node ID="OpexSoftware:Workflow:Application:EnterpriseInfrastructure" />

</Dependencies>

<CustomerInformation ID="opex.com" Name="OpexSoftware" />

</Service>

**Application Node**

<EnterpriseInfrastructure xmlns="http://mars-o-matic.com" ID="OpexSoftware:Workflow:Application:EnterpriseInfrastructure"

NodeType="Application" ApplicationClass="Enterprise"

ApplicationSubClass="EnterpriseInfrastructure" NodeName="EnterpriseInfrastructure">

<Dependencies>

<Node ID="OpexSoftware:Workflow:Resource:WebResource" />

</Dependencies>

<CustomerInformation ID="opex.com" Name="OpexSoftware" />

</EnterpriseInfrastructure>