Title:

# **Manage git checkouts of repositories to deploy files or software.**

Description:

Workflow for handling packages related to do a Git pull and cloning on a Repository. This bundle has dependency on Core and Validation KI 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 GIt and perform Git cloning and Git pull operations 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 GitCloneWorkflow.xml and GitPullWorkflow.xml(attached with this bundle) in AutoPilot engine
4. Put the Issue in AutoPilot engine to trigger this KI
   * For your reference, please see sample issue below
5. This will trigger the KI and run the workflow to Git clone and Git pull 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. Install Git if not present on the machine.
2. Clone a remote repository
3. Do a Git pull/clone on the given repository.

Sample Issue

1.Git Clone Issue

Issue:

NodeID: OpexSoftware:Workflow:Machine:Shree

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

IssueSubject: 'Clone the given Repository'

GitCloneWorkflow:

GitRepoUrl: https://github.com/gkhakare/CoreKIs.git

TargetMachine: Shree

TargetState: Created

TargetPath: /home/shreyas/Downloads

GitUser: Techy

GitPassword: shree

GitRepoName: CoreKIs

User: shreyas

Host: 192.168.1.69

GitBranch: UnderDevelopment

GitOrigin: master

Issue:

NodeID: OpexSoftware:Workflow:Machine:Shree

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

IssueSubject: 'Do a Git pull on the given Repository'

GitPullWorkflow:

TargetMachine: Shree

TargetState: Created

TargetPath: /home/shreyas/

GitUser: Techy

GitPassword: shree

GitRepoName: CoreKIs

User: shreyas

Host: 192.168.1.69

Machine Node

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

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

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

<Dependencies>

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

</Dependencies>

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

<Extensions>

<ssh User="shreyas" />

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

</Extensions>

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

<NetworkInformation>

<InterfaceInformation>

<Interface Name="eth1" IP="172.27.220.23" />

</InterfaceInformation>

</NetworkInformation>

</Linux>

Software Node

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

NodeType="Software" SoftwareClass="Automation"

SoftwareSubClass="AutoPilot" NodeName="GIT">

<Dependencies>

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

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

</Dependencies>

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

</AutoPilot>

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:GIT" />

<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>