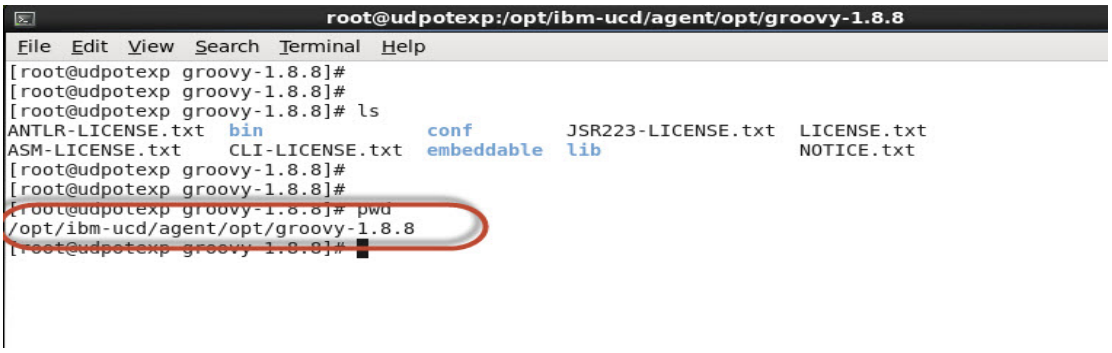
Notes from Wyndham on Groovy scripts w/ UCD

There are different approaches to using groovy, however an easy way to handle various tasks is to use it as a scripting language. All you need is to import the the Groovy plugin (http://plugins.urbancode.com/uBuild/plugin/Groovy/3.0). It's easy to get started with writing and testing groovy scripts since there's a groovy environment available wherever there's a UCD agent.



If you're testing scripts from the command line, you may want to set $GROOVY_HOME and add $GROOVY_HOME/bin to your path. Once the script is tested you can paste the script right into the Run Groovy Script step in the process. You can also test scripts in your browser (http://groovyconsole.appspot.com/) and you can find examples of groovy scripts other people have written.

I found a few sites fishing around for some general context on groovy

- primer on writing groovy scripts http://groovy.codehaus.org/Groovy+as+script
- getting started tutorial http://groovy.codehaus.org/Tutorial+1+-+Getting+started

Getting Ready

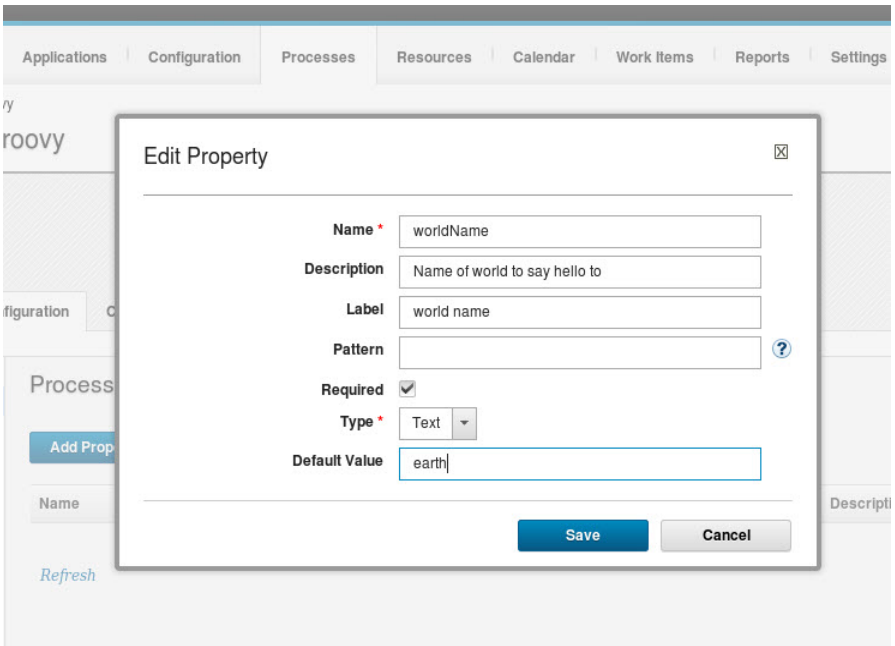
Before we start with our example, here are a few things you may want to do:

- make sure you've loaded the groovy plug-in
- set $GROOVY_HOME to point the groovy directory under the agent.. [agent install dir]/opt/groovy-...
- add $GROOVY_HOME/bin to path..scripts get executed by calling ***groovy [scriptName] [args]***

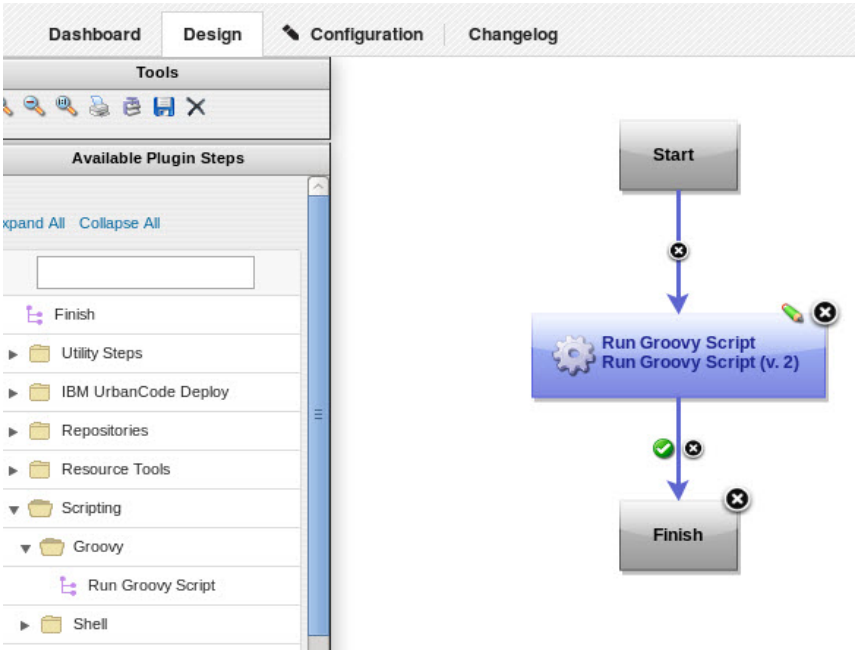
Writing a groovy script and generic process

1. Make a generic process named "hello world groovy"

2. Make a process property called "worldName" and mark it required



3. Add a step to the process diagram to run a groovy script



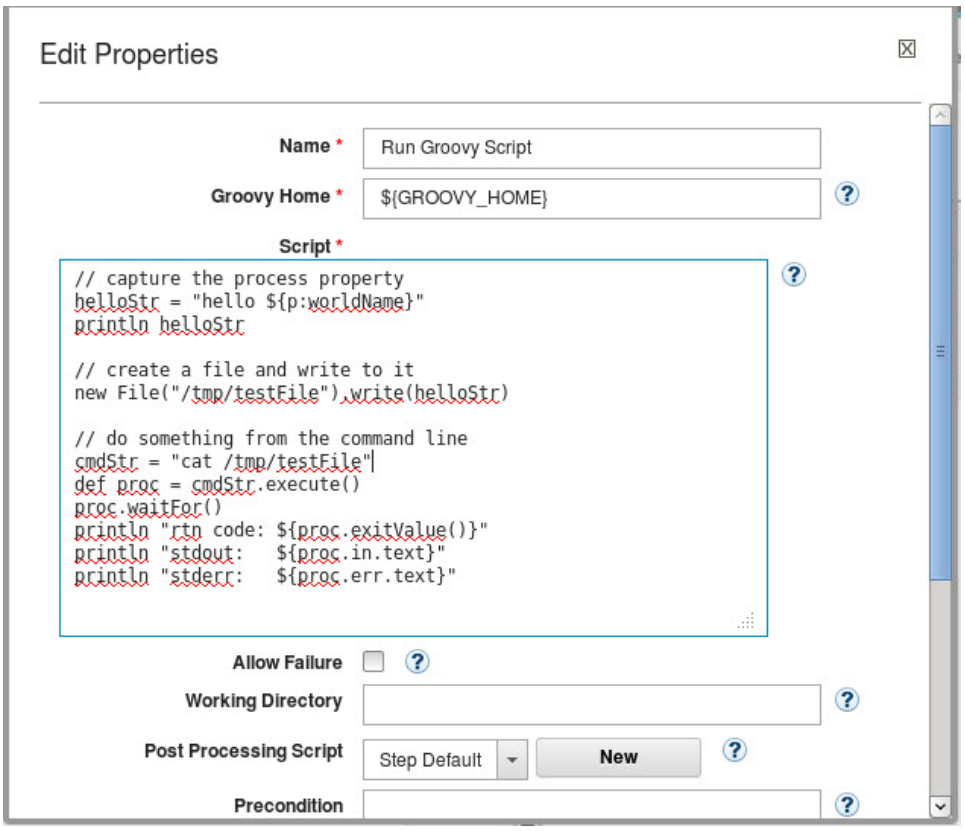
4. Add something for the script to do... In this example the process takes a value accepted from the user, creates a string and writes it to a file.

Files are pretty easy to read, write and iterate through. In this example the step writes a string to a file using the File Object

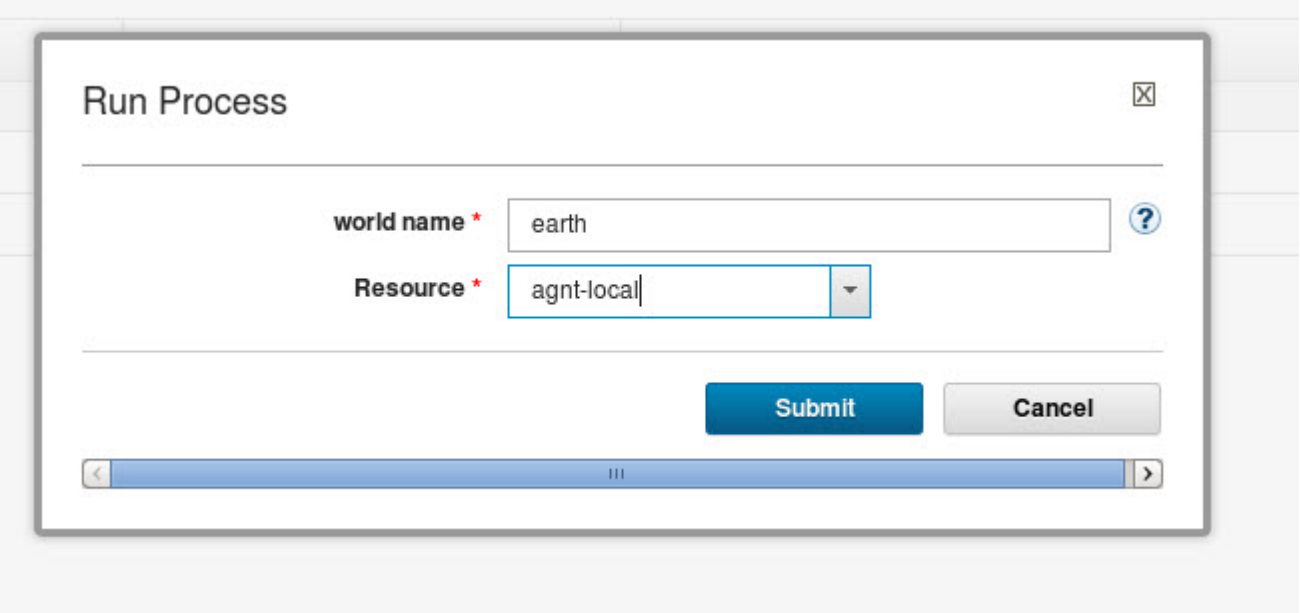
Here are docs for the file object, and a some examples
http://groovy.codehaus.org/groovy-jdk/java/io/File.html
http://groovy.codehaus.org/JN2015-Files

Running OS Commands - Operating system commands can be executed by calling the execute method on a string. ex: ***"ls -la".execute()***

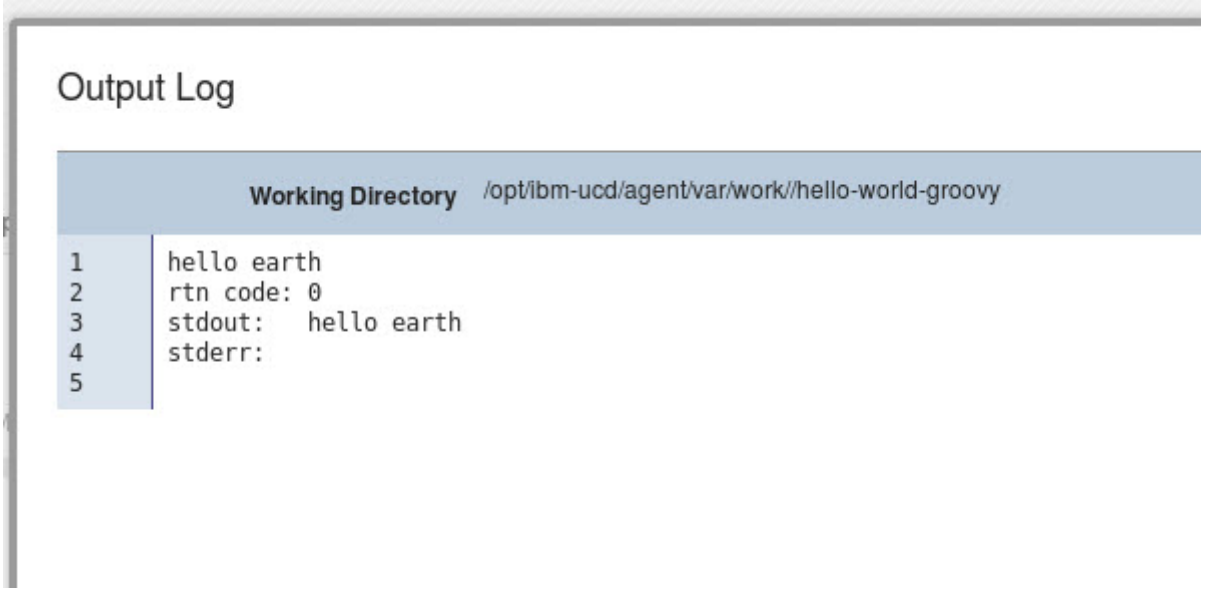
Here are some docs for the execute command
http://groovy.codehaus.org/groovy-jdk/java/lang/String.html#execute()



5. Choose a resource, enter a value and run the process. For simplicity I've kept everything local... I'm running as root on the UCD server, the script is in my home directory, and there's an agent running locally on the server as well.

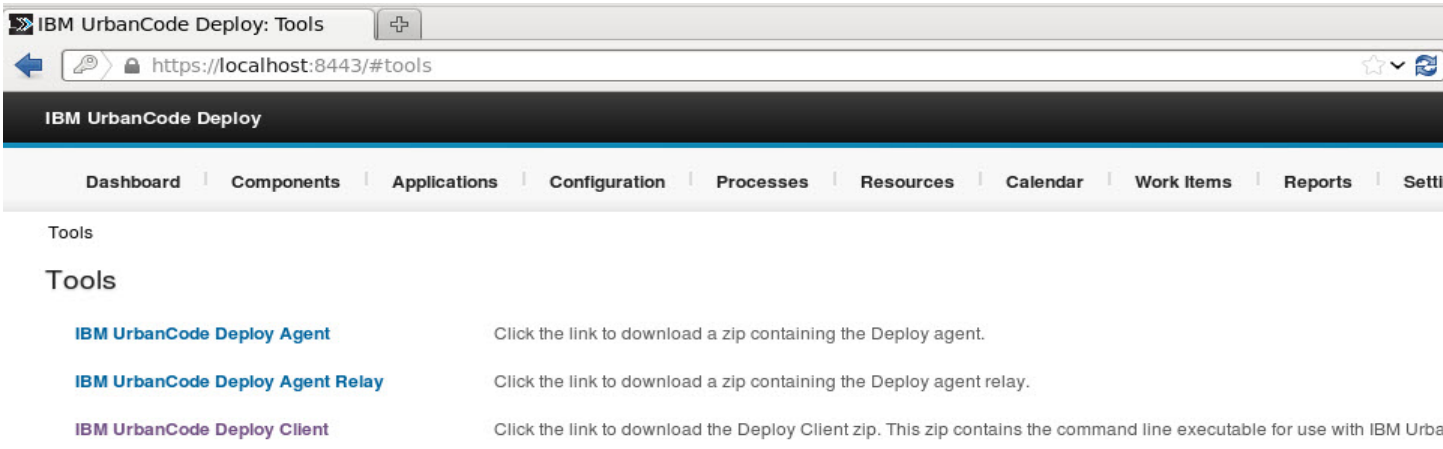


6. The log shows the result of running the process...



Calling the UCD Client from a groovy script

Get the UCD client from the tools page, unzip it and its ready to go.



Call it with url for the server, username and password to get the equivalent of "usage" for the client.... help is available for each of the features by adding the target command and -h to get details.

The generic process example above makes a call to an operating system program... calling the client from groovy is handled in a similar fashion
http://groovy.codehaus.org/Executing+External+Processes+From+Groovy

This example gets usage for the client, but does it from a groovy script.

```
def userName = "admin"
def password = "admin"
def serverUrl = "https://localhost:8443"
def ucdClient = "/opt/ibm-ucd/udclient/udclient"

def command = "$ucdClient -weburl $serverUrl -username $userName -password $password"
def proc = command.execute()
proc.waitFor() // Wait for the command to finish

// Get status and output
println "return code: ${ proc.exitValue()}"
println "stderr: ${proc.err.text}"
println "stdout: ${proc.in.text}" // *out* from the external program is *in* for groovy
```

Here are more details on managing processes.
http://groovy.codehaus.org/Process+Management
http://pleac.sourceforge.net/pleac_groovy/processmanagementetc.html

Here's an example of uploading files to a component with a groovy script

```
def String udClient(String command){
  def proc = command.execute()
  proc.waitFor()
  println "return code: ${proc.exitValue()}"
  println "stdout:      ${proc.in.text}"
  println "stderr:      ${proc.err.text}"
}// end udClient()


def userName  = "admin"
def password  = "admin"
def serverUrl = "https://localhost:8443"
def ucdClient = "/opt/ibm-ucd/udclient/udclient"
def component = "comp1"
def version   = "ver-0080"
def workDir   = "/root/gscript/tmp"

// create new version
def createVersionCmd   = "$ucdClient -weburl $serverUrl -username $userName -password $password createVersion
-component $component -name $version"
println "$createVersionCmd"
udClient(createVersionCmd)

//upload the target files to the component
def addVersionFilesCmd = "$ucdClient -weburl $serverUrl -username $userName -password $password addVersionFile
s -component $component -version $version -base $workDir"
println "$addVersionFilesCmd"
udClient(addVersionFilesCmd)
```