CoMinder

LVOUG

MeetUp #11
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WebLogic Scripting
basics

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- Certified on:
  - Oracle Database Administrator (8i-11g)
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Agenda

- WebLogic administration tools - overview
- What is WLST ?!
- What can I do with WLST ?!
- WLST scripting step by step.
- Q + A

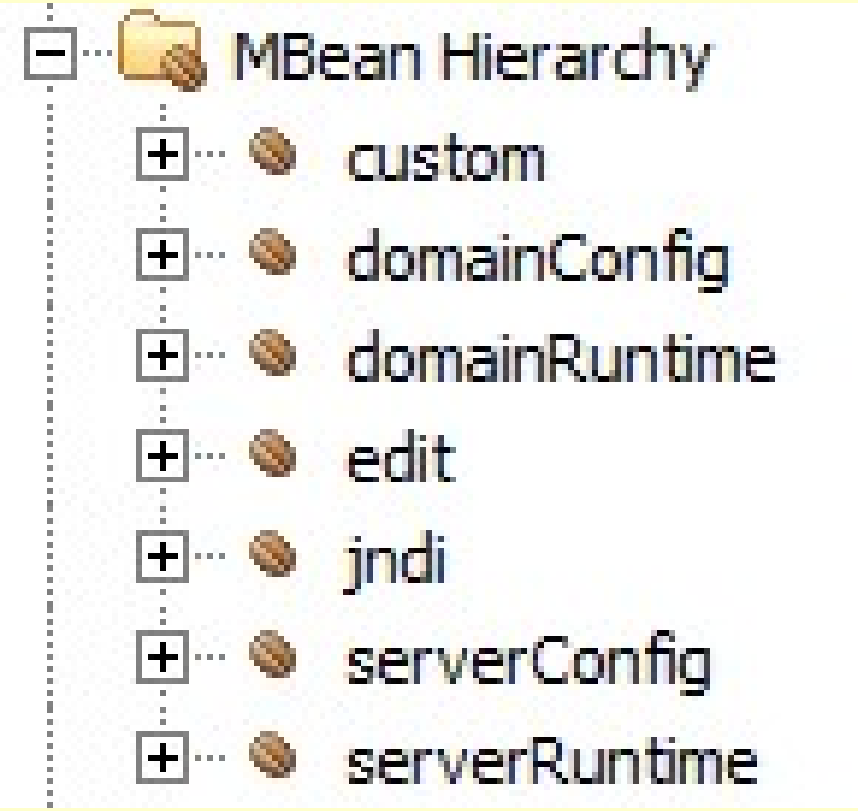
WebLogic administrator tools

overview

WL admin. tools

- WL Console
  - http://wlhost:7001/console/
- WL EM portal
  - http://wlhost:7001/em/
- WL autodeployment (in non-PROD mode)
- WL admin java packages
  - java weblogic.Admin HELP
  - java weblogic.Admin help ALL
- WLST
  - java weblogic.WLST
  - console application
  - scripts processing

What is WLST?!

- WL MBeans Tree browsing and manipulating tool
- http://gerardnico.com/wiki/wlst/navigation
- 

WLST – What can I do?!

- Browse and discover:
  - WL and Domain objects tree
  - WL objects properties
- Start/Stop
- Backup, clone, configuration (domain templates, etc.)
- Depoly/Undeploy/other actions with VM and applications
- Monitoring
  - VM (health) status
  - Applications (health) status
  - Statistic
- Anything else

Links and Notes

Links: learn more about WLST

- Oracle documentation:

http://docs.oracle.com/cd/E17904_01/web.1111/e13728/understandwls.htm

http://docs.oracle.com/cd/E28280_01/web.1111/e13715/monitoring.htm

- WLST - Mbean Tree Navigation: http://gerardnico.com/wiki/wlst/navigation
- http://wlstbyexamples.blogspot.com/
- http://weblogic-wonders.com/weblogic/
- http://weblogiccommunity.com/
- https://pineapple.java.net/index.html

WL Scripting
step by step examples

Start WLST

- Setup environment first:

  . /u01/Middleware/wlserver_10.3/server/bin/setWLSEnv.sh

  ! make sure to load variables into current shell session!

- Start WLST in required mode:

  a) Console mode:

  java weblogic.WLST

  b) Script mode:

  java weblogic.WLST my_wlst_script.py 1>/tmp/wlst_script.out 2>&1

  c) Importing WLST as a Jython Module:
  http://docs.oracle.com/cd/E13222_01/wls/docs90/config_scripting/using_WLST.html#1081491

First steps

- Connect to server (2 options to specify user/pwd + 1 – WLST will ask):

  connect([username, password],[url],[adminServerName], [timeout])

  connect([userConfigFile,userKeyFile],[adminServerName], [timeout])

  connect(url='t3://localhost:7001')

- Usefull command after connected / before exit:

  startRecording(recordFilePath,[recordAll])

  stopRecording()

  redirect('my_wlst_protocol.log', 'false')

  stopRedirect()

  exit()

Basic commands:

- Get help on any command or list of methods:

  help()

- Usefull command after connected / before exit:

  startRecording(recordFilePath,[recordAll])

  stopRecording()

  redirect(outputFile,[toStdOut])

  stopRedirect()

Getting help:

- Get help on any command or list of methods:

  help()

  wls:/offline> help('online')

  wls:/offline> help('offline')

- What help show:
  - Description of the action, references
  - Syntax
  - Usage Example
- Detailed java call stack on error: dumpStack()
- Print variables, expressions for debug: print

Browsing:

- Set WL objects tree context before browse

  serverConfig()

  domainRuntime()

  ….

- Navigate and show context info like in files system:

  cd('/')

  cd('AppRuntimeStateRuntime/AppRuntimeStateRuntime')

  ls()

  or use context specific methods like:

  listApplications()

Do scripting:

- Save required set of commands in file:

```
redirect('owl_mon_serversapp_1.log', 'false')
connect(url='t3://localhost:7001')
domainRuntime()
cd('AppRuntimeStateRuntime/AppRuntimeStateRuntime')
ls()
disconnect()
stopRedirect()
exit()
```

- Execute the script:

```
java weblogic.WLST  wlst_list_appruntime.py
```

Use subroutines:

WLST – is really Python adopted for WL. So, use it's constructions:

```
1
2  def conn():
3      uname = "weblogic"
4      pwd = "weblogicadminpwd"
5      sADMURL = "t3://localhost:7001"
6
7      try:
8        connect(uname, pwd, sADMURL)
9        print 'OK: I am connected'
10     except ConnectionException,e:
11         print 'ERROR: Unable to connect admin server...'
12         exit()
13
14 def quit():
15      disconnect()
16      stopRedirect()
17      exit()
18
19 if __name__ == "main":
20     redirect('owl_console_mode.out', 'false')
21     conn()
22     ls()
23     quit()
24
```

Use loops and collections:

```
31
32 def showServersState():
33     print 'Fetching state of every WebLogic instance'
34     cd('ServerRuntimes')
35     servers=domainRuntimeService.getServerRuntimes()
36     for server in servers:
37         serverName=server.getName();
38         serverState=server.getState();
39         print "WL.SERVER="+serverName+";STATE="+serverState+";HEALTH_STATE=",server.getHealthState();
40         if serverState == "RUNNING":
41           cd("/ServerRuntimes/"+serverName+"/JVMRuntime/"+serverName)
42           heapSize = cmo.getHeapSizeCurrent()
43           print "WL.SERVER="+serverName+";CTYPE=SRV"+";NAME="+serverName+";JVM_HEAP_SIZE=",heapSize;
44
```

Q + A

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Спасибо за внимание!
Paldies par uzmanību!
Thanks for attention!

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