

# IBM Connections Administration Tips, Tricks and Essential Skills

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# The Iam Lotus User Group







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# What We'll Cover ...

- •The Four Spheres of Administration
- IBM WebSphere Administration
- **·IBM Connections UI based Administration**
- **•IBM Connections the Command Line**
- •Tips, Tricks and Must-Does
- Wrap-up/Summary/Questions (you choose)

# **The Four Levels of Administration**

# BM WebSphere Administration

- The IBM Console
- WebSphere commands Command line Glory
- **·IBM Connections UI based Administration**
- •The UI what can you do as an administrator?
- **•IBM Connections the Command Line** 
  - Wsadmin commands and WebSphere commands access to the guts of Connections

# •The Database

• When nothing else helps – you go to the source . . .

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# •What is WebSphere?

- •The Lingo
- •The IBM Console

# Some WebSphere Resources

# Why WebSphere and What is it?

•Simply put – if you want to administrate Connections you need to know WebSphere – it is where it all begins.

# WebSphere in Lay Terms

- → WebSphere is both a brand and a technology. The WebSphere brand covers a whole host of technologies that come together to create business solutions. For example, IBM Connections is a business solution -- underneath the covers it uses WebSphere Application Server (WAS), which is a runtime environment that Connections runs on.
- → WAS provides a bunch of services (called J2EE) that Java applications use. Services like database access, mail services and security services. Without an application WAS does nothing it has an administration interface but, unlike Domino you can't "do" anything with out of the box without an application. <u>Simply put, WebSphere runs Java (J2EE) programs</u>.

# •Some WAS Terminology:

- •Node an individual system, either physical or virtual
- •Node Manager the process controlling the individual node and all servers in all cells, it executes the commands of the Deployment Manager
- Profile a WebSphere entity similar to a node
- •Application Server a Java Virtual Machine process
- •Application a Java server application
- •Cluster a group of Servers, all running the same applications
- •Cell an administrative domain of one or more servers
- Deployment Manager (DM) the administration application for a cell

How do all these pieces work together?

# "Multiple Nodes in a Cell run Servers that contain Applications. All pieces are controlled via the Deployment Manager"

# •Your Graphical Interface to control WebSphere

 In network deployments the only server running an IBM console is the Deployment Manager

•The default administrator for WebSphere is called "wasadmin", you need that account to administrate through the Console and via the command line

•The IBM console runs ONLY on the DM, it is where all administration takes place

•The console is what stands between you and a whole bunch of XML files that would would have to edit manually otherwise . . .

# Security comes first

•The first thing to do after you set up WebSphere:

- Create individual WebSphere administration accounts for all admins
- ► Synch all the nodes <u>BEFORE</u> you take the next step
- Change the wasadmin password and keep it secret ....
- •Give each admin only the rights they need ....
- •Take a backup before doing this, DELETE it after you verified everything works ....

# Product Homepage

- http://www-01.ibm.com/software/websphere/
- Websphere 7 Infocenter
  - http://pic.dhe.ibm.com/infocenter/wasinfo/v7r0/index.jsp
- **·IBM Developerworks Websphere** 
  - http://www.ibm.com/developerworks/websphere/
- •WebSphere Related WIKIS:
  - <u>https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/public?sort=updated&tag=websphere</u>
- •Websphere Forums and Community:
  - http://www.ibm.com/developerworks/websphere/community/

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# **IBM Connections – The UI**

# •Being an Admin of Connections Features lets you

- Homepage
  - Add/remove Widgets
- Metrics
  - Review global system Metrics
- Blogs
  - Basic settings, theme settings, administrate individual users' blogs
- Communities
  - Add sources to catalog crawler

# • ..... continued

- Activities
  - Access to public trash
- Mobile / MobileAdmin
  - Access via https://<connectionsurl>/mobileAdmin/login
  - Devise security, settings, users, wipe commands,
- •WIKIS
  - Some special rights in individual WIKIS, even those you do not own (version control, etc.)

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# •Command Line Commands come in two Flavors

## •wsadmin commands

Works with Connections internal data and settings

# •WebSphere Command Line tools

Works with WebSphere settings and capabilities, not directly related to Connections data

# •wsadmin – what is it?

•A command shell to administrate aspects of a WebSphere Application Server Cell

•Can invoked to execute scripts written in <u>JACL</u> or <u>JYTHON</u>

- •Can execute almost all actions of the IBM Console and many that the console is not able to
- •We will concentrate on Connections specific wsadmin commands today

► <u>Note</u>: ALLWAYS execute wsadmin commands on the Deployment Manager (DM) and only in the DM's /bin directory – be careful if you run a managed node on the same server as the DM!

# •How to execute the WSADMIN command shell

# •Go to DM executable folder, execute the wsadmin and initiate a Connections app and run a Connections command ...

😣 🕒 🗉 victor@vthome302:/opt/IBM/WebSphere/AppServer/profiles/Dmgr01/bin

[victor@vthome302 bin]\$ cd /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/bin [victor@vthome302 bin]\$ ./wsadmin.sh -lang jython -user wasadmin -password passw ord1 -port 8879 WASX7209I: Connected to process "dmgr" on node vthome302CellManager01 using SOAP connector; The type of process is: DeploymentManager WASX7031I: For help, enter: "print Help.help()" wsadmin>execfile ("connectionsConfig.py") Connections Administration initialized wsadmin>LCConfigService.checkOutConfig("/opt/IBM/connectexport/xml","vthome302Ce ll01") Connections configuration file successfully checked out wsadmin>

# It's by the book, but a bit slooooow ...

# Wsadmin ... One Step up

# wsadmin command executed ... call the Jython script as a profile and save a step:

😣 🗨 🗉 victor@vthome302:/opt/IBM/WebSphere/AppServer/profiles/Dmgr01/bin
[victor@vthome302 bin]\$ cd /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/bin [victor@vthome302 bin]\$ ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile connec tionsConfig py
WASX7209I: Connected to process "dmgr" on node vthome302CellManager01 using SOAP connector; The typ e of process is: DeploymentManager Connections Administration initialized
WASX7031I: For help, enter: "print Help.help()" wsadmin>LCConfigService.checkOutConfig("/opt/IBM/connectexport/xml","vthome302Cell01") Connections configuration file successfully checked out wsadmin>
$\mathbf{E}_{\mathbf{r}}$

## Faster - you save a step, but . . . is there another way?

# Wsadmin ... Run it all in one command!

# •You can call the Jython script as a profile AND execute a command all in one line ... save yourself some time and have a coffee!

victor@vthome302:/opt/IBM/WebSphere/AppServer/profiles/Dmgr01/bin

[victor@vthome302 bin]\$ cd /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/bin [victor@vthome302 bin]\$ ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile connec tionsConfig.py -c "LCConfigService.checkOutConfig('/opt/IBM/connectexport/xml','vthome302Cell01')" WASX7209I: Connected to process "dmgr" on node vthome302CellManager01 using SOAP connector; The typ e of process is: DeploymentManager Connections Administration initialized

Connections configuration file successfully checked out [victor@vthome302 bin]\$

[victor@vthome302 bin]\$

# OK, now this is fast - a one liner!

# Wsadmin recap – choose how you want to run it

•You have three options how to initiate wsadmin and call Jython scripts to then execute a Connections Commands:

# +3-Step: By The Book / WIKI:

- ./wsadmin.sh -lang jython -user wasadmin -password password1 -port 8879
- >execfile ("connectionsConfig.py")
- LCConfigService.checkOutConfig("/opt/IBM/connectexport/xml","vthome302Cell01")

## •2-Step: Launch a Profile:

- ../wsadmin.sh -lang jython -user wasadmin -password password1 -profile connectionsConfig.py
- LCConfigService.checkOutConfig("/opt/IBM/connectexport/xml","vthome302Ce II01")

# Wsadmin recap ... continued

1-Step: The "All-in-One" Option

 ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile connectionsConfig.py -c
 "LCConfigService.checkOutConfig('/opt/IBM/connectexport/xml','vthome302Cell01')"

> This is the option you want to use to create batch files and scripts to chain wsadmin commands!

Note: Sometimes you have to experiment with the order of

the ["] and ['] in the command - look at the commands I

share in the end for examples

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# •Dr. Vic's basic rules - 'Thou Shalt':

•Create separate IBM console admins accounts for all staff -INCLUDING YOURSELF (covered earlier) – Keep the wasadmin account separate and don't mess with it.

•All wsadmin commands MUST be run on the DM, or they will not work and will create allot of errors

•Learn command line basics for WebSphere, do not rely on ONLY the graphical interface, allot of things cannot be done there or not with the same detailed variables

•Take frequent back-ups (I'll teach you later how) when making system or security level changes, you will regret it otherwise

# •More of Dr. Vic's rules:

•Clean up after yourself and don't litter the WebSphere server with endless variants of back-uped/saved versions of configuration files. (I.e 'files-config.xml.bak.thisis mysafebackup', etc.) sometimes WebSphere picks them up and you have no clue as to why a change did not work .... and it just looks untidy! Yuck!

•Build a test/Dev system – you need a safe place to test changes in. Don't be the "I do all my test on live systems" guy/girl . . .

•Keep records of ALL changes you make – even the small ones – you will need to back-track your steps OFTEN

# •Exporting Connections Configuration Files

•DO NOT make a habit of copying/ftp Connections configuration xml files up-and-down from servers – export and then import them

Ensures you always have the CORRECT active version

Import checks for formatting errors and kicks them back at you (important for UNIX environments especially!!)

► Makes sure you have a back-up of the ORIGINAL xml files from the install **BEFORE** you first worked on them ... you might need to know what the default setting is at some time.

# **Connections Config Files ... continued**

# •Export command

• Have a default location on your DM to export/import files (for me '/opt/IBM/connectexport/xml')

# Check-out:

 ./wsadmin.sh -lang jython -user wasadmin -password password1 profile connectionsConfig.py -c "LCConfigService.checkOutConfig('/opt/IBM/connectexport/xml','vthom e302Cell01')"

# Check-in:

 ./wsadmin.sh -lang jython -user wasadmin -password WAS@dmin profile connectionsConfig.py -c "LCConfigService.checkInConfig('/opt/IBM/connectexport/xml','vthome 302Cell01')"

# **Import / Export Ear Files**

# •You need to know this – EAR files are all-mighty

- Ear files are not specific to any one WebSphere environment, they can be exported on one environment and imported into another one WITHOUT any problem
- Only become environment specific if YOU put specific customizations into it
- This is a combination of WAS specific wsadmin commands AND WebSphere native scripts!
- The commands contain the path to specific local folders, be sure they exist and DO NOT CHANGE THEM - it is important that all back-ups etc. are contained in one location so you do not have to hunt all over the file system for them.
- [/opt/IBM/connectexport/ear] my default location to export all ear files to
- [/opt/IBM/connectexport/ear/exp-xxx] separate folder for each expanded feature/ear file (create manually if it does not exist)
- All commands must be executed wile residing in the DM /bin, otherwise the the wsadmin commands will fail with cryptic errors

# Import / Export Ear Files ... continued

# •Example using COMMUNITIES

- Export ear file
  - ./wsadmin.sh -user wasadmin -password password1 -c '\$AdminApp export Communities /opt/IBM/connectexport/ear/communities.ear'
- Expand Ear file (so you can work on it)
  - ./wsadmin.sh -user wasadmin -password password1 -c '\$AdminApp export Communities /opt/IBM/connectexport/ear/communities.ear'
- Collapse/Repack ear file
  - ./EARExpander.sh -ear /opt/IBM/connectexport/ear/communities.ear operationDir /opt/IBM/connectexport/ear/exp-communities -operation collapse
- Install / re-import into WAS after change
  - ./wsadmin.sh -user wasadmin -password password1 -c '\$AdminApp install /opt/IBM/connectexport/ear/communities.ear {-update -appname Communities}'

# Sync Features with LDAP / Profiles

•Sync commands help keep the feature dB user entries synchronized with LDAP / Profiles

•Documentation days to run them whenever user errors appear in the log files ... I run them 1 – 3 times a week

•Can be run for each feature individually or a a batch file – I always run batch files and synchronize ALL features

► Note: not all features have synch commands as several features share databases (News, Homepage, etc.)

If you have clustered WebSphere servers that are all running, you will need to be there to respond to the system prompts!

•Different ways of synchronizing are possible – review the batch files in the end of the presentation

# •Example how to synch Communities

- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile communitiesAdmin.py -c "CommunitiesMemberService.syncAllMembersByExtId({'update OnEmailLoginMatch':'true'})"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile communitiesAdmin.py -c "CommunitiesMemberService.syncAllMemberExtIds()"
- ► Run both commands but not right after each other, leave some time between them.

 $\blacktriangleright$  Do not run the commands simultaneously on separate cluster members  $\rightarrow$  BIG PROBLEM!

# •Sync Script 1:

- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile filesAdmin.py -c "FilesMemberService.syncAllMemberExtIds()"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile communitiesAdmin.py -c "CommunitiesMemberService.syncAllMemberExtIds()"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile activitiesAdmin.py -c "ActivitiesMemberService.syncAllMemberExtIds()"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile blogsAdmin.py -c "BlogsMemberService.syncAllMemberExtIds()"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile dogearAdmin.py -c
  "DogearMemberService.syncAllMemberExtIds()"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile forumsAdmin.py -c "ForumsMemberService.syncAllMemberExtIds()"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile newsAdmin.py -c "NewsMemberService.syncAllMemberExtIds()"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile wikisAdmin.py -c
  "WikisMemberService.syncAllMemberExtIds()"

# •Sync Script 2:

- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile wikisAdmin.py -c "WikisMemberService.syncAllMembersByExtld({'updateOnEmailLoginMatch':'true'})"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile newsAdmin.py -c "NewsMemberService.syncAllMembersByExtld({'updateOnEmailLoginMatch':'true'})"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile forumsAdmin.py -c "ForumsMemberService.syncAllMembersByExtId({'updateOnEmailLoginMatch':'true'})"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile filesAdmin.py -c "FilesMemberService.syncAllMembersByExtId({'updateOnEmailLoginMatch':'true'})"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile communitiesAdmin.py
  -c "CommunitiesMemberService.syncAllMembersByExtld({'updateOnEmailLoginMatch':'true'})"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile dogearAdmin.py -c "DogearMemberService.syncAllMembersByExtld({'updateOnEmailLoginMatch':'true'})"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile blogsAdmin.py -c "BlogsMemberService.syncAllMembersByExtId({'updateOnEmailLoginMatch':'true'})"
- ./wsadmin.sh -lang jython -user wasadmin -password password1 -profile activitiesAdmin.py -c "ActivitiesMemberService.syncAllMembersByExtId({'updateOnEmailLoginMatch':'true'})"

# **Command Line Node Syncronization**

•When the synch commands in the GUI just do not appear to get the job done ...

- ./syncNode.sh [IP or FQHN] 8879 -conntype SOAP -username wasadmin -password password1
  - Replace the [IP or FQHN] with either an IP or a fully qualified DNS name – do not include the square brackets
  - Requires the Nodemanager to be stopped, but the DM MUST be running
  - If the node and DM share the same physical server you can enter LOCALAHOST as an address

•Remove all files in the

/opt/IBM/WebSphere/Appserver/profiles/AppServ01/wstemp first

•All Features have scheduled tasks that update data or run clean-ups

•Clear these lists when actions are not happening or if you see issues with upgrades

•They are recreated the next time the feature is restarted

•Tip1: I remove ALL scheduled tasks prior to ANY iFix installs or CR upgrades

•Tip2: If you are upgrading Connections to a new version, remove all tasks prior to shutting down for the dB migration. Run it once more AFTER starting the upgraded system and restart once more.

- Initialize wsadmin and call the Connections config script
  - ./wsadmin.sh -lang jython -user wasadmin -password \*\*\*\*\* port 8879
  - execfile ("connectionsConfig.py")
- List all Scheduled Tasks:
  - Scheduler.listAllTasks()
- Clear all Scheduled Tasks
  - Scheduler.clearAllTasks()

You can delete the tasks while your servers

Are running, just restart the clusters to

**Recreate the tasks** 

# Nodemanager commands

- •Stop Nodemanager AND all running servers simultaneously
- ./stopNode.sh -stopservers -username wasadmin -password password1
- Check status of ALL servers (incl. DM and nodemanagers)
  - ./serverStatus.sh -all -username wasadmin -password password1
  - Check status of a single server (incl. DM or nodemanagers)
    - ./serverStatus.sh [servername] -username wasadmin password password1

# Add a WAS Service to Windows – the quick way

# Now something JUST for Windows

•WASServicecmd.exe is a front-end utility for the native WebSphere WASServcice.exe

 It can add AND remove WebSphere servers/nodemanagers/DMs as Windows services

http://www-01.ibm.com/support/docview.wss?uid=swg21397335

Best practices suggests NOT to add Servers, but only nodemanagers and the DM as a service!

# Update / Change Profiles data

### Initiate wsadmin and the Profiles Admin Jython script

/wsadmin.sh -lang jython -user wasadmin -password WAS@dmin -profile profilesAdmin.py

## Edit BACKGROUND data in Profile

ProfilesService.updateExperience("ann\_jones@company.com","This is new text that will be entered into the Background field for Ann."

### Edit "ABOUT ME" data of Profile:

ProfilesService.updateDescription("ann\_jones@company.com","This is new text that will be entered into the About Me tab for Ann.")

**Delete Photo in Profile** 

ProfilesService.deletePhoto("john\_doe@company.com")

# Changing more Connections data ....

# Update / Change Communities data

Initiate wsadmin and the Profiles Admin Jython script

./wsadmin.sh -lang jython -user wasadmin -password WAS@dmin -profile communitiesAdmin.py

Change name of a Community

CommunitiesService.updateCommunityName("Community NAME or UUID", "New Name")

## Edit "Description" of Community Profile:

CommunitiesService.updateCommunityDescription("Community NAME or UUID", "New description.")

## **Delete Bookmarks in Community**

This requires a two step process

removeurl= ["http://valid1.url.com", "http://valid2.url.com", "http://valid3.url.com"]

CommunitiesService.removeReferencesByUri("Community NAME or UUID",removeurl) IamLUG 2013

# •Update / Change BLOGS data

## Initiate wsadmin and the Profiles Admin Jython script

/wsadmin.sh -lang jython -user wasadmin -password WAS@dmin -profile profilesAdmin.py

Edit Blog handle BlogsAdminService.renameWeblogHandle("<old\_handle>", "<new\_handle>")

Change the URL or blogs (system wide):

This is necessary if you change the base URL of the Connections system BlogsAdminService.fixBrokenUrls(<replacePattern>, <replaceValue>)

# Lets Report on some settings and data ....

# •Report on Libraries ... all them files!!

## Get list of all orphaned personal file libraries:

./wsadmin.sh -lang jython -user wasadmin -password WAS@dmin -profile filesAdmin.py -c 'FilesPrintService.saveToFile(FilesLibraryService.browsePersonalOrphan("size", "false", 1, 100000), "/opt/IBM/PersonalLibraries-Orphans.csv")'

#### List of All Community Libraries

./wsadmin.sh -lang jython -user wasadmin -password WAS@dmin -profile filesAdmin.py -c 'FilesPrintService.saveToFile(FilesLibraryService.browseCommunity("size", "false", 1, 100000), "/opt/IBM/CommunityLibraries.csv")'

# Lets Report on some settings and data .... continued

# •Report on Libraries ... more and morfe

## List of All User Libraries

./wsadmin.sh -lang jython -user wasadmin -password WAS@dmin -profile filesAdmin.py -c 'FilesPrintService.saveToFile(FilesLibraryService.browsePersonal("size", "false", 1, 100000), "/opt/IBM/PersonalLibraries.csv")'

#### List of File/Libraries Policies

./wsadmin.sh -lang jython -user wasadmin -password WAS@dmin -profile filesAdmin.py -c 'FilesPrintService.saveToFile(FilesPolicyService.browse("title", "true", 1, 25),"/opt/IBM/LibraryPolicies.csv")'

# Files ... do you have Orphans?

# •Find and move all orphaned files to a separate location

- ./wsadmin.sh -lang jython -user wasadmin -password WAS@dmin profile filesAdmin.py -c
- 'FilesDataIntegrityService.checkFiles("/opt/IBM/files\_orphaned")'
- ► This can happen after dB crashes or Connections server failures or after a migration.
- ► You will have to review the files manually and "just figure it out"

# Files ... What are your Policies for Libraries?

# •Find and move all orphaned files to a separate location

 ./wsadmin.sh -lang jython -user wasadmin -password WAS@dmin -profile filesAdmin.py -c 'FilesPrintService.saveToFile(FilesPolicyService.browse("title", "true", 1, 25),"/opt/IBM/LibraryPolicies.csv")'

•Or display it in the console

•wsadmin>FilesPolicyService.browse("title", "true", 1, 25)

# •My Script Library

•I will share more useful scripts on my blog site

•Wait until Friday .... then this URL will become active ... for 1 week then it disappears again .. until the next full moon!

•Go there and copy as much as you want – as long as you promise to share it with others!

http://wp.me/PNbq6-f3

# **Slide Title**

# •First level text

- Second level text
- ► Third level text
- Second level text
- •First level text

# Resources

# •My Blog:

http://notesbusters.com

# •Great WebSphere resource / Blog:

http://www.themiddlewareshop.com

# WebSphere User Group

http://www.websphereusergroup.com

# •WebSphere WIKI

http://www.bertucci.org





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