A HITCHHIKER'S GUIDE TO TROUBLESHOOTING IBM CONNECTIONS – 1409A

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ELP ENGINEERING

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BEFORE WE START

- Any reference to Hitchhiker's Guide to the Galaxy © Douglas Adams

- IBM Connections, DB2, WebSphere etc © IBM

- Only 40 mins !! Lots to talk about please find us after if you have questions

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A Hitchhiker's Guide to Troubleshooting IBM Connections

The answer isn't 42

WHO ARE WE?

Sharon James

- IBM WebSphere since 1999 & Connections since 2 / 2008

- Many years experience with migrations, installations, administration, integration, customization & documentation

- Part of the team that brings you ICON UK

- IBM Champion since 2011

Roberto Boccadoro

- Former Lotus / IBMer

- Working with IBM Collaboration since 1994

- Many years experience with IBM Domino, Sametime, Connections, Docs and associated products

- IBM Champion since 2016
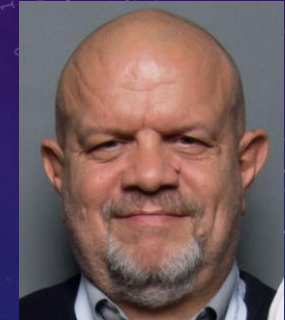
OVERVIEW

KNOW YOUR ENVIRONMENT
WHERE ARE THE LOGS
COMMON ISSUES
TROUBLESHOOTING
GETTING HELP

DON'T PANIC

KNOW YOUR ENVIRONMENT

Which topology?

- Small – one jvm – single WebSphere server

- Medium – applications split over multiple jvms – typically 3 or more, usually clustered across machines

- Large – one jvm per app, highly clustered, typically customers (tens / hundreds of thousands of users)
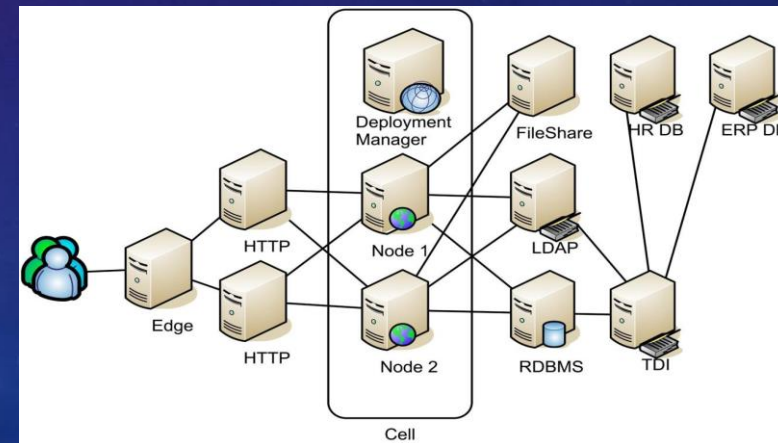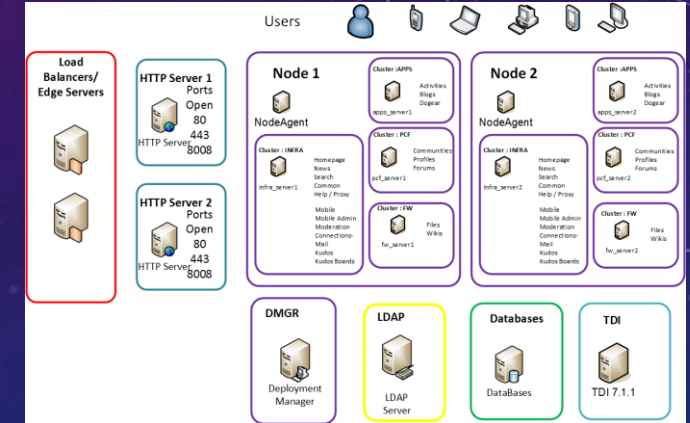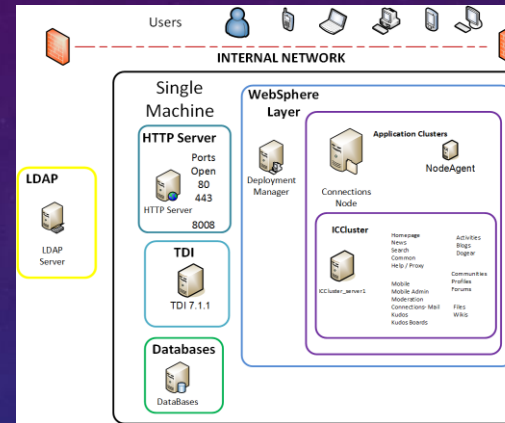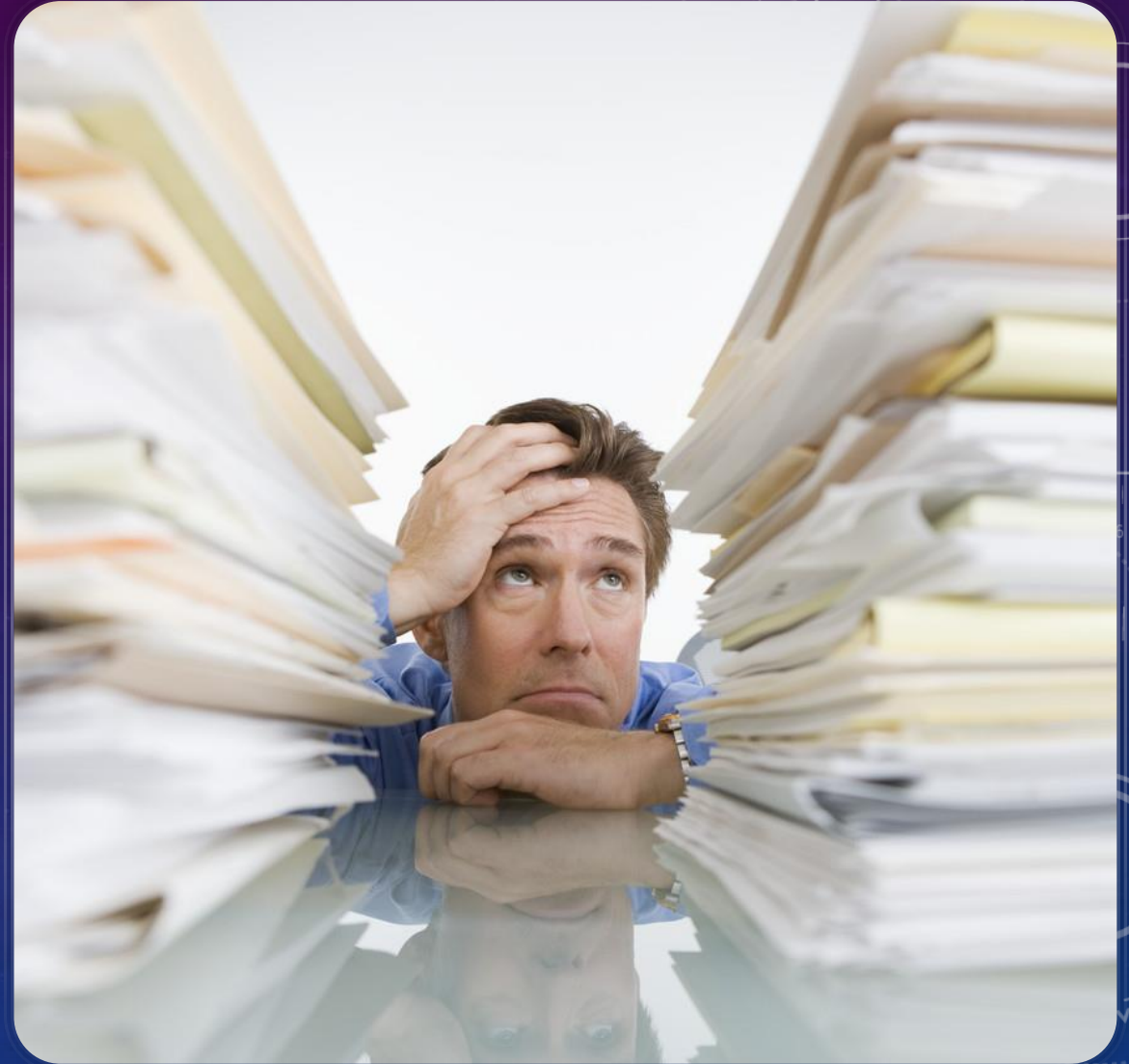
KNOW YOUR ENVIRONMENT

- Connections has many parts
- Basic understanding of how they fit
- You don't need to be an expert
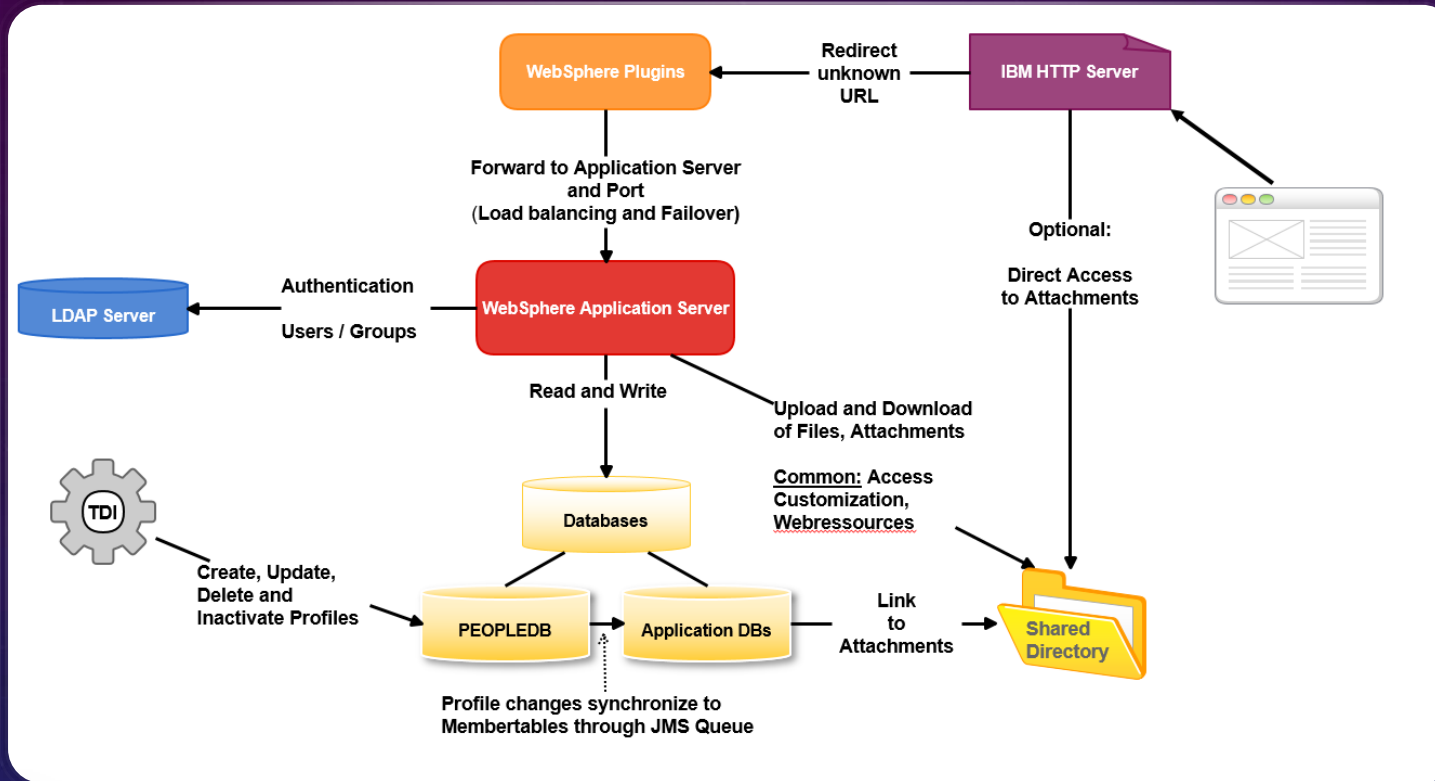
KNOW YOUR ENVIRONMENT

- What else is deployed?
  - IBM Docs
  - CCM / Filenet
  - Cognos
- SSO? Mail integration?
- It's all documented right?
  - If it isn't, spend the time to do it – it can save time, assist troubleshooting
  - Templates are available

WHERE ARE THE LOGS?

Everything (almost) has a log

- WebSphere SystemOut – Great starting point for troubleshooting

- HTTP Access / Error - 404's, other access issues

- HTTP Plugin - SSL issues, HTTP to WAS connection issues

- TDI - Sync issues
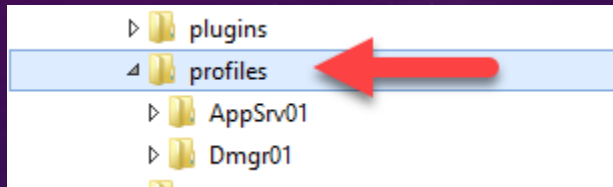
- DB - DB2 diag & admin logs, Oracle and MS SQL

Associated Software also has logs

- IBM Docs – WAS logs

- CCM/Filenet – WAS logs / P8 Logs

- LDAP – LDAP logs / domino / AD etc.

- Cognos – WAS logs
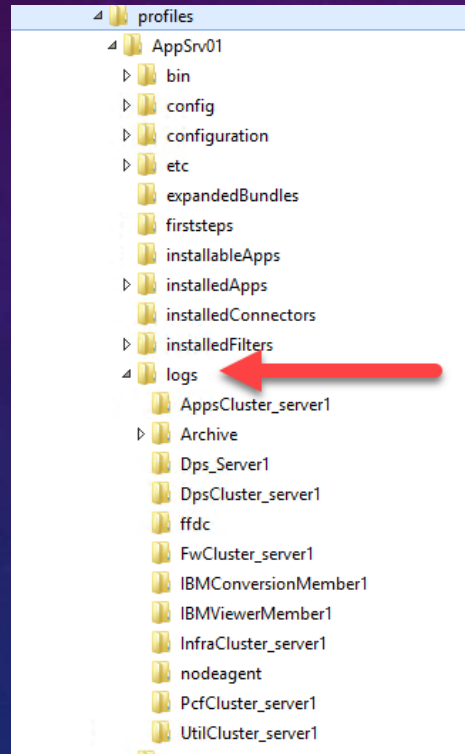
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WHERE YOUR LOGS LIVE – WEBSPHERE & TDI

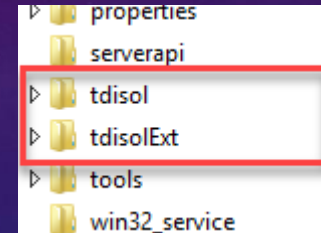**WebSphere – Under the profile directory**

Each WAS server has its own set of logs

Profiles > *Profile Name* > logs
SystemOut.log
SystemErr.log
+ trace.log if tracing on

TDI – Under TDISOL logs directory

Each TDISOL directory has its own set of logs

TDI > *TDISOL*> logs
ibmdi.log

SyncUpdates.log appends when sync is run

WHERE YOUR LOGS LIVE - DATABASE

DB2

Log Type	Windows	Linux
Transaction log files	DB2\NODE0000\SQL00001\LOGSTREAM0000	/home/db2inst1/db2inst1/NODE0000/SQL00001/LOGSTREAM0000
db2diag log files	C:\ProgramData\IBM\DB2\DB2COPY1\DB2	home/db2inst1/sqllib/db2dump
DB2 Connections Wizard	C:\Users\Administrator\lcWizard\log\dbWizard	/home/db2inst1/lcWizard/log/dbWizard

Oracle

Log Type	Windows	Linux
Transaction / Redo log files	D:\oracle\oralog\<database name>	/u02/oralog/<database name>
Archive Transaction logs	D:\oracle\fast_recovery_area\<database name>\archivelog	/u03/fast_recovery_area/<database name>/archivelog
Connections Wizard	C:\Users\Administrator\lcWizard\log\dbWizard	/home/<db user>/lcWizard/log/dbWizard

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WHERE YOUR LOGS LIVE - DATABASE

MS SQL

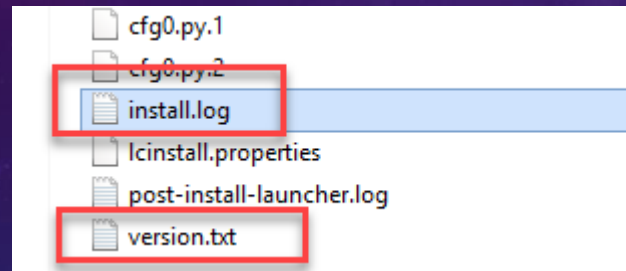| Log Type	Windows
Transaction log files - *DBName.ldf*	C:\Program Files\ Microsoft SQL Server\MSSQL*nn*.<InstanceID>\MSSQL\Data
Error log files - *ERRORLOG.X*	C:\Program Files\ Microsoft SQL Server\MSSQL*nn*.<InstanceID>\MSSQL\Data\
DB2 Connections Wizard	C:\Users\Administrator\lcWizard\log\dbWizard

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OTHER USEFUL LOG FILES

- Connections Install logs - Install root folder /IBM/Connections
    - Install.log
    - Version.txt

- IBM HTTP Server – Install root/logs /IBM/HTTPServer/logs
    - access.log
    - error.log
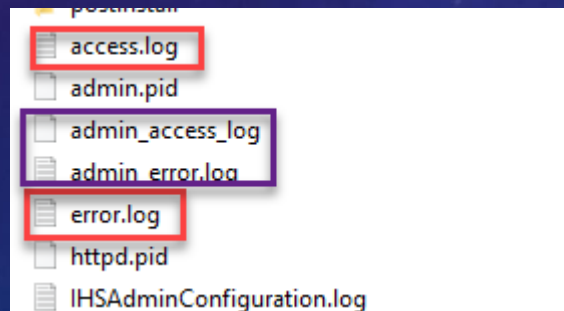
- Docs Install logs – Root folder of every piece /IBM/ConnectionsDocs/Conversion/logs /IBM/ConnectionsDocs/Docs/logs etc.
    - *app*_install.log

- FileNet/P8 – under WAS profile …/FileNet/*servername*
    - p8_server_error.log
    - p8_server_trace.log
    - pesvr_system.log
    - pesvr_trace.log

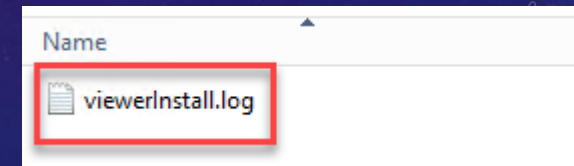# COMMON ISSUES

LDAP

- Password issues

- WAS / TDI can't connect to LDAP

WebSphere

- JVM Out Of Memory (a favourite)

- SIB issues – check queue depth


```
[3/16/17 16:30:01:941 CET] 0000441a exception       E com.ibm.ws.wim.adapter.ldap.LdapConnection DirContext
reCreateDirContext(String errorMessage) CWWIM4520E  The 'javax.naming.CommunicationException: ldap.domain.com:389 [Root
exception is java.net.ConnectException: Connection refused: connect]' naming exception occurred during processing.
[3/16/17 16:30:01:941 CET] 0000441a exception       E com.ibm.ws.wim.adapter.ldap.LdapConnection DirContext
reCreateDirContext(String errorMessage)
                          com.ibm.websphere.wim.exception.WIMSystemException: CWWIM4520E  The
'javax.naming.CommunicationException: ldap.domain.com:389 [Root exception is java.net.ConnectException: Connection
refused: connect]' naming exception occurred during processing.
        at com.ibm.ws.wim.adapter.ldap.LdapConnection.reCreateDirContext(LdapConnection.java:931)
```

COMMON ISSUES

DB

- Stale connections
- Network errors

[3/17/17 2:24:14:385 PDT] 000000b8 ConnectionEve W   J2CA0206W: A connection error occurred. To help determine the problem, enable the Diagnose Connection Usage option on the Connection Factory or Data Source. This is the multithreaded access detection option. Alternatively check that the Database or MessageProvider is available.
[3/17/17 2:24:14:385 PDT] 000000b8 ConnectionEve A   J2CA0056I: The Connection Manager received a fatal connection error from the Resource Adapter for resource com/ibm/concord/datasource. The exception is: com.ibm.db2.jcc.am.DisconnectNonTransientConnectionException: [jcc][t4][2030][11211][4.19.49] A communication error occurred during operations on the connection's underlying socket, socket input stream,
or socket output stream. Error location: Reply.fill() - insufficient data (-1). Message: Insufficient data. ERRORCODE=-4499, SQLSTATE=08001
[3/17/17 2:24:14:385 PDT] 000000b8 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003I: FFDC Incident emitted on D:\IBM\WebSphere\AppServer\profiles\AppSrv01\logs\ffdc\IBMDocsMember1_f6901a0_17.03.17_02.24.14.3858247250288498337048.txt
com.ibm.ws.scheduler.TaskStoreImpl.findTasksBeforeNotComplete 713

TDI

- User sync issues – normally LDAP account related
- Check profiles DB / LDAP record

WHEN IS AN ERROR NOT AN ERROR

- Service Integration Bus errors at initial start up - System is looking for Busses that aren't available yet

```
[3/27/17 12:28:16:307 EDT] 0000008b SibMessage    W   [ConnectionsBus:PcfCluster.000-ConnectionsBus] CWSIP0381W: No Response received from messaging engine
UtilCluster.000-ConnectionsBus for subscription request message.
[3/27/17 12:28:16:307 EDT] 0000008b SibMessage    W   [ConnectionsBus:PcfCluster.000-ConnectionsBus] CWSIP0381W: No Response received from messaging engine
FwCluster.000-ConnectionsBus for subscription request message.
[3/27/17 12:28:16:307 EDT] 0000008b SibMessage    W   [ConnectionsBus:PcfCluster.000-ConnectionsBus] CWSIP0381W: No Response received from messaging engine
AppsCluster.000-ConnectionsBus for subscription request message.
```

- LTPA errors for stale user connections

- WAS thread alarms - Known non issue if you google it

```
[3/30/17 13:17:18:644 EDT] 000000d3 HAManagedItem I    HAMI0023I: Controller com.ibm.ws.xd.nodedetect.overlay.NodeDetectConsumer changed state from INACTIVE to
ACTIVE_DORMANT
[3/30/17 13:17:30:189 EDT] 0000001d AlarmThreadMo W    UTLS0008W: The return of alarm thread "Non-deferrable Alarm : 1" (00000045) to the alarm thread pool has
been delayed for 13418 milliseconds. This may be preventing normal alarm function within the application server. The alarm listener stack trace is as follows:
        at java.net.PlainSocketImpl.socketConnect(Native Method)
```

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TROUBLESHOOTING – USEFUL TOOLS

A decent txt editor

- Notepad is useless notepad++, editpad lite
- Linux use gedit etc.

Web debugging tools

- Fiddler is a must
- Firebug is also useful

LDAP browser

- Softerra
- Apache Directory Studio

Compression / Zip

- Winrar, 7 Zip etc.
- Checking / replacing items in jars, ears and war files

TROUBLESHOOTING

Connections down?

- Check WAS servers / Apps

- WebSphere SystemOut log

- HTTP server issues

- Error 500 – WAS down

- Firewall blocking ports?

Connections up but errors

- Login – User password issues, LDAP connectivity

- Database – data source issues, j2cc alias password, network connectivity

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GETTING HELP

- Google is your friend
  - Community bloggers may have seen your issue
  - IBM Technote
  - IBMer may have blogged on developer works
- Connections skype chat or Watson workspace
  - Ask the community, we help each other

- Open a PMR
  - Usually the last resort if the above haven't helped
  - Know the issue, describe it accurately
  - Have product versions, screen shots, logs etc. to hand
 - Ensure log language is set to English for support – they will thank you
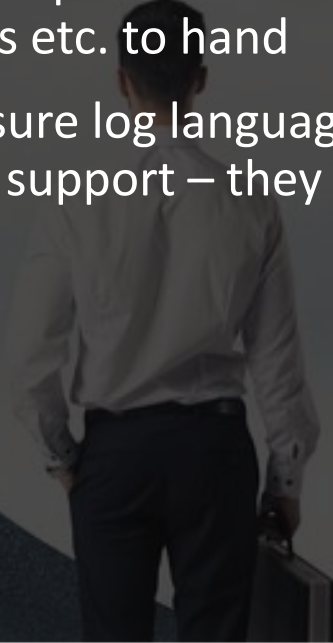
NEED TO OPEN A PMR – WHAT DO YOU NEED?

- WAS version
  - From the WAS_HOME\bin (i.e /IBM/WebSphere/AppServer/bin)
    run the *versioninfo* command - *versionInfo.bat /sh*
  - Run with additional flag to get info about installed fixpacks / iFixes
    versionInfo.bat /sh –maintenancePackages
- Connections version
  - Connections install_home\updateinstaller directory
    run *updateSilet.bat/sh –fix –installDir <connections_home>*
- Other useful information
  - DB type & version, Topology & number of nodes, additional software & versions (Docs, CCM, Cognos etc.)
  - Good description of the problem with screenshots, logs, fiddler trace etc.

CONNECTIONS IS EVOLVING .
THINK PINK!

Two Wrongs Don't Make a Right—Troubleshooting IBM Connections

Session:
1574A - Nico Meisenzahl
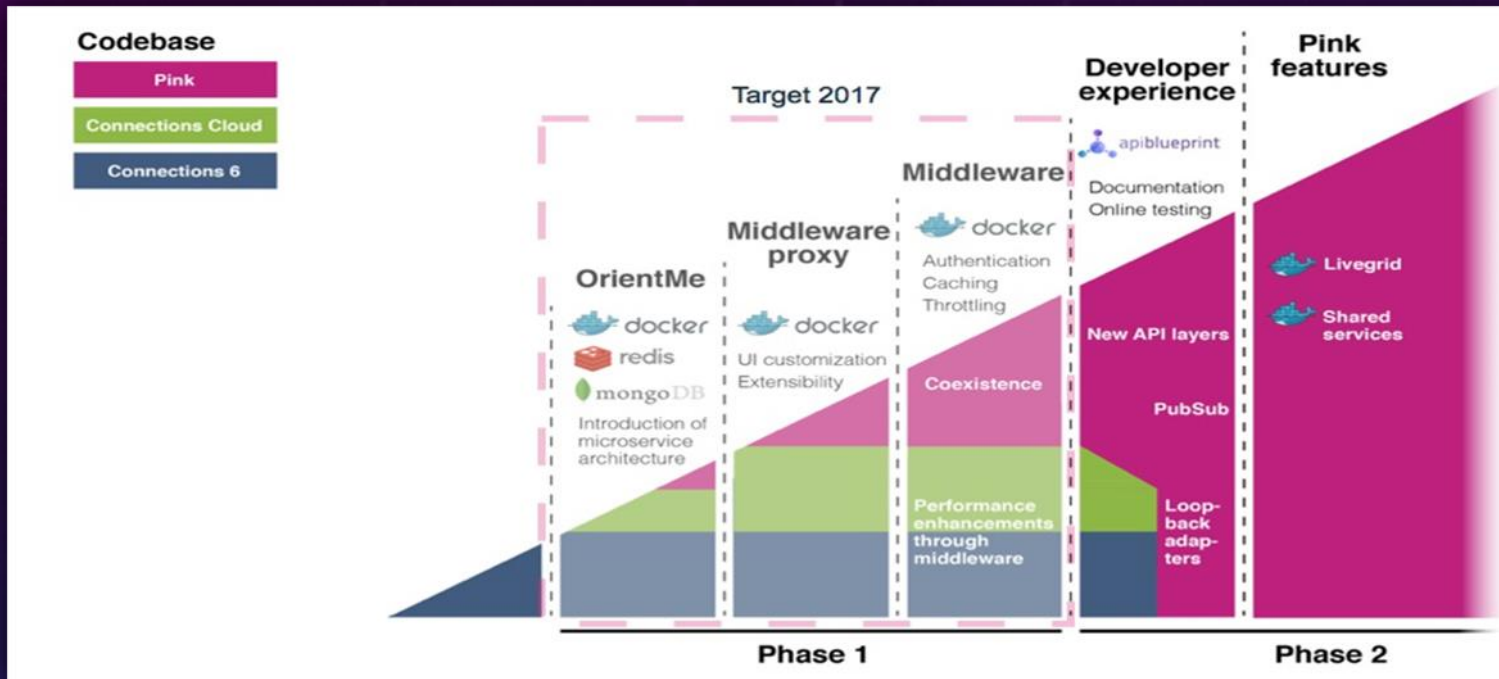
ANY QUESTIONS?

GET IN TOUCH

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