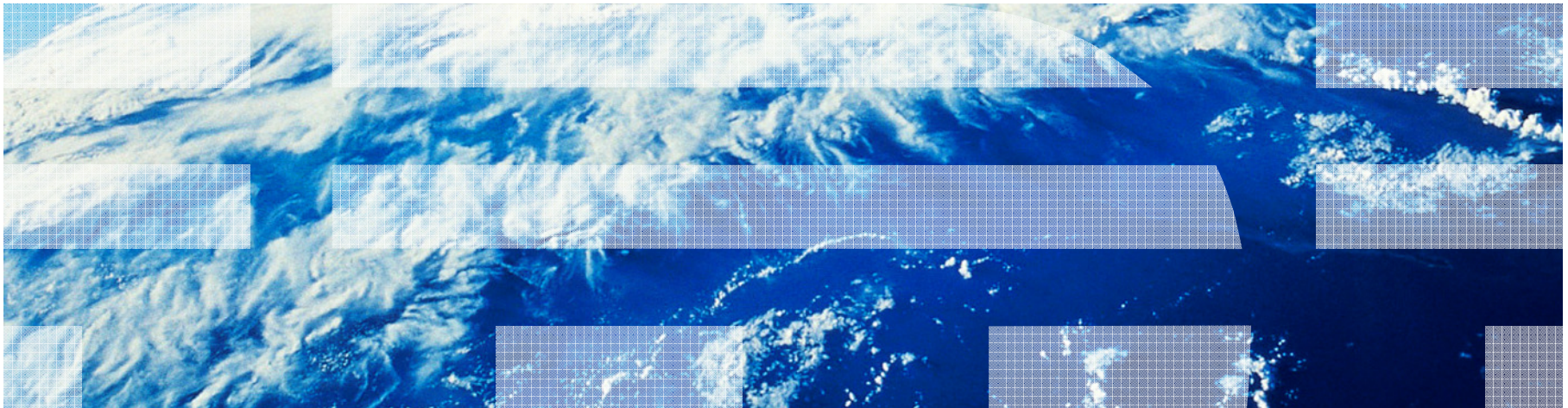

InfoSphere Information Server DataStage V8 and later releases

Setting up basic DataStage users

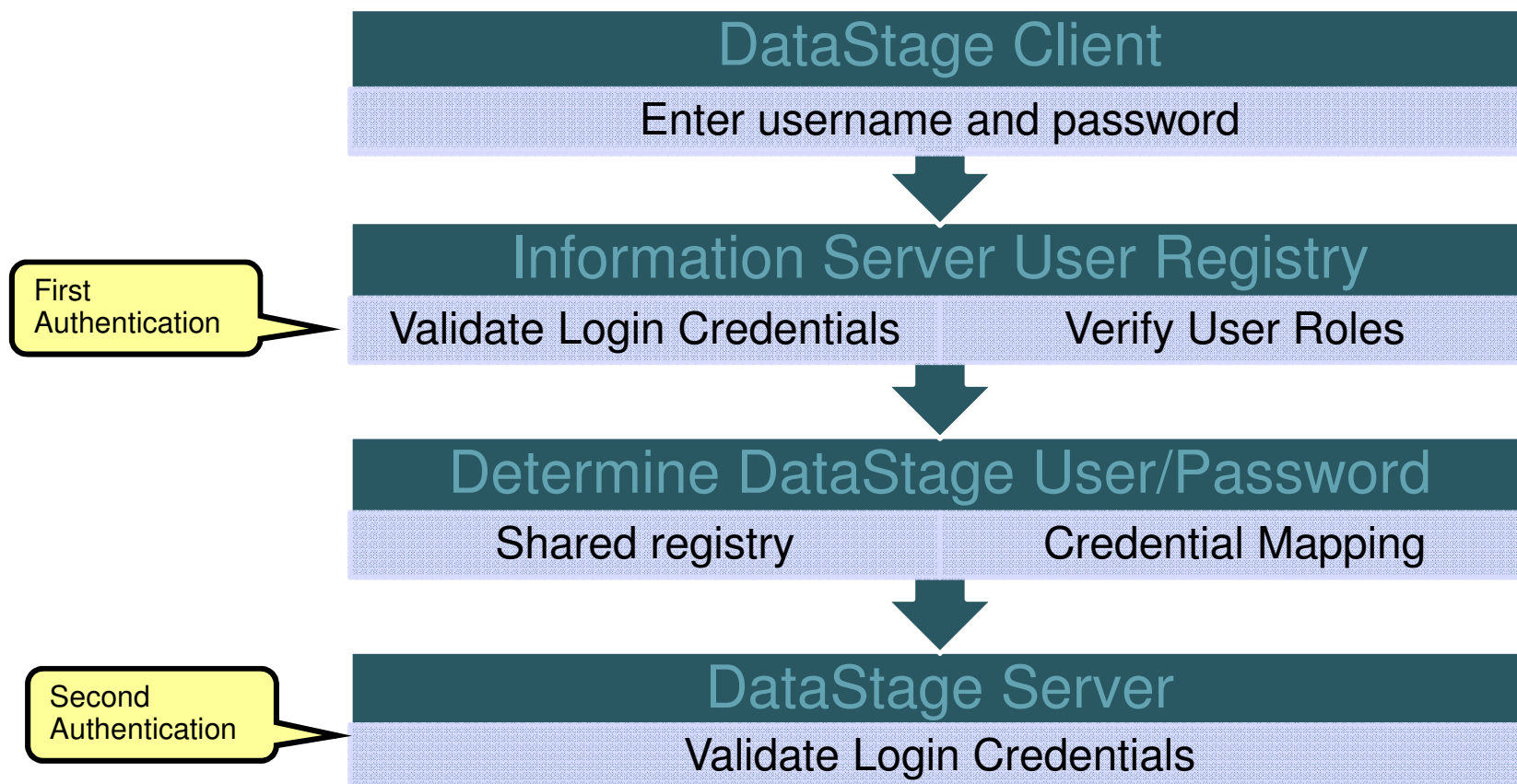


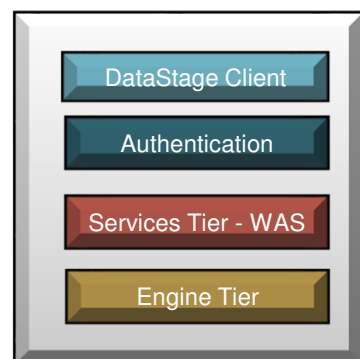
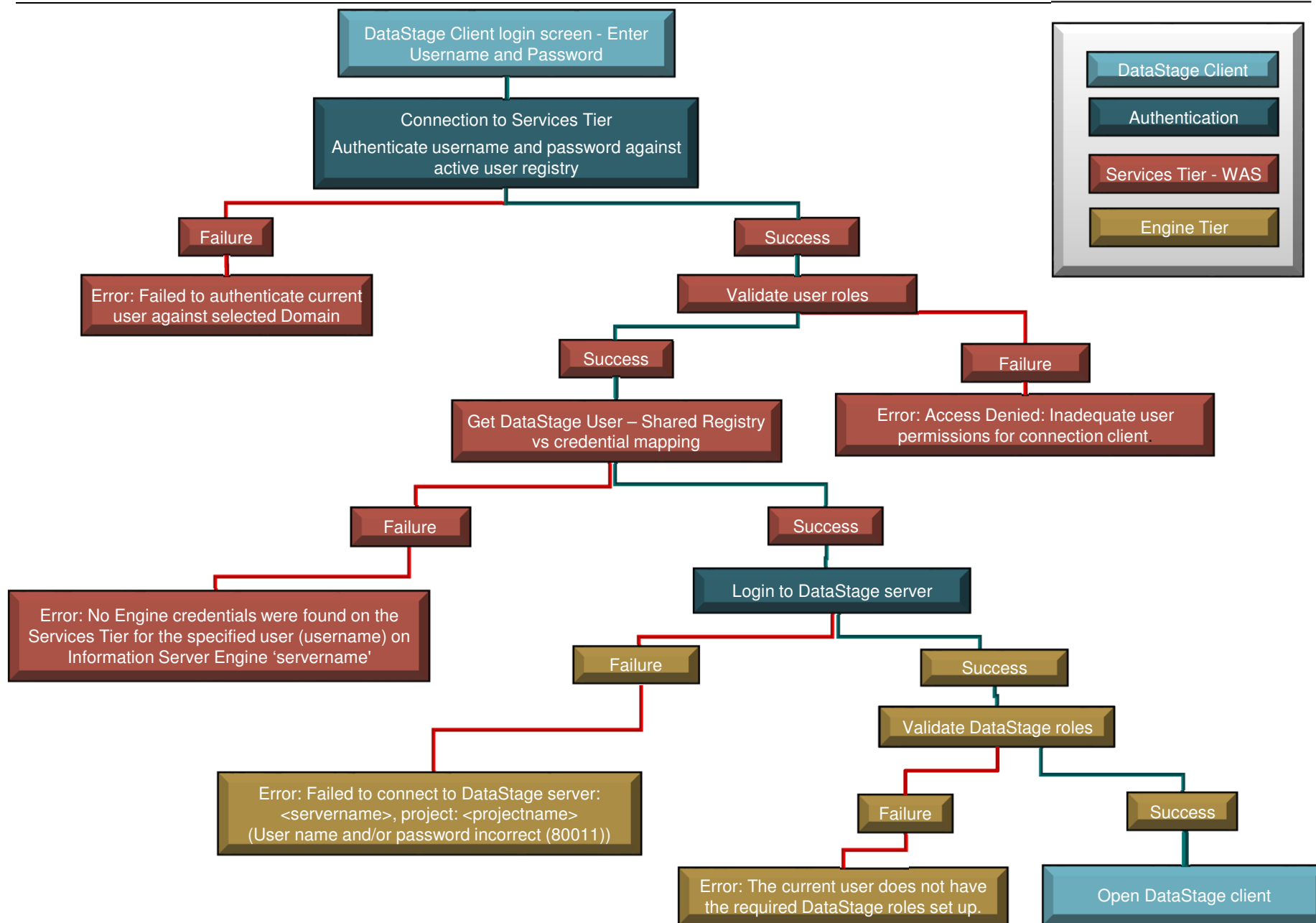
Objectives

- DataStage client connection and how it works
 - High level overview
 - Step by step connection process
- How to set up basic DataStage users
 - Overview
 - Setting up DataStage Administrator account (dsadm)
 - Setting up DataStage user account
- Common issues with user setup
 - Possible scenarios for DataStage client login failures
 - 80011 errors
 - How to troubleshoot problem
 - How to resolve error

The screenshots within this presentation are from InfoSphere Information Server v11.3 and v8.

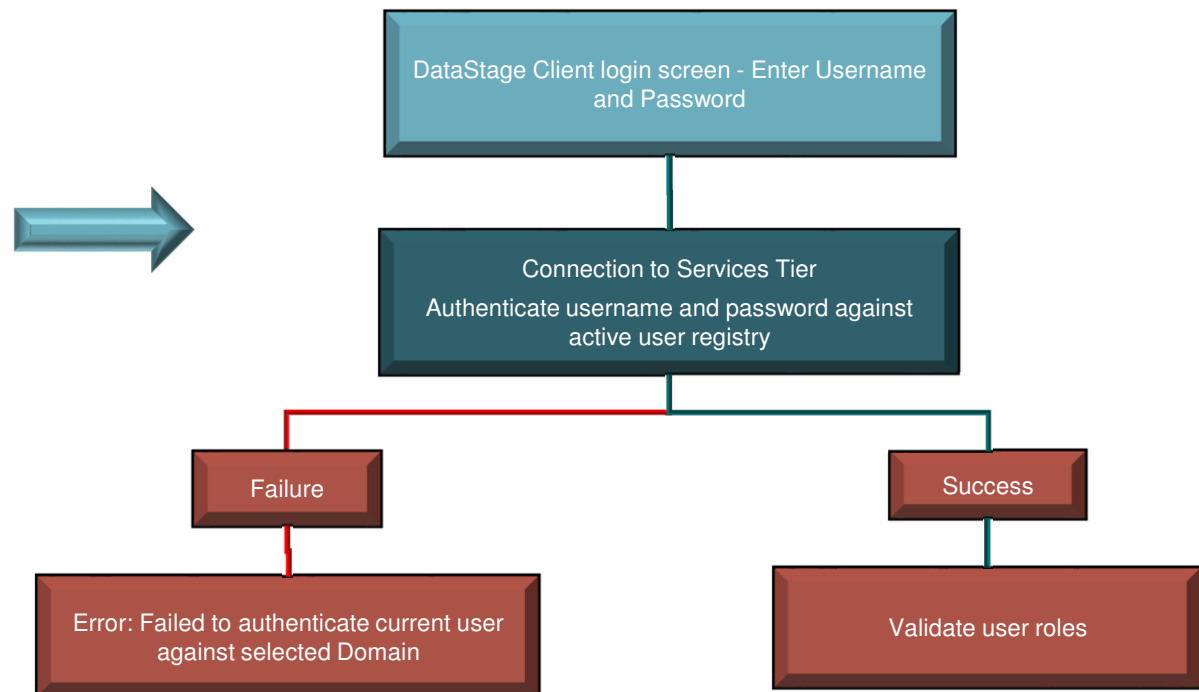
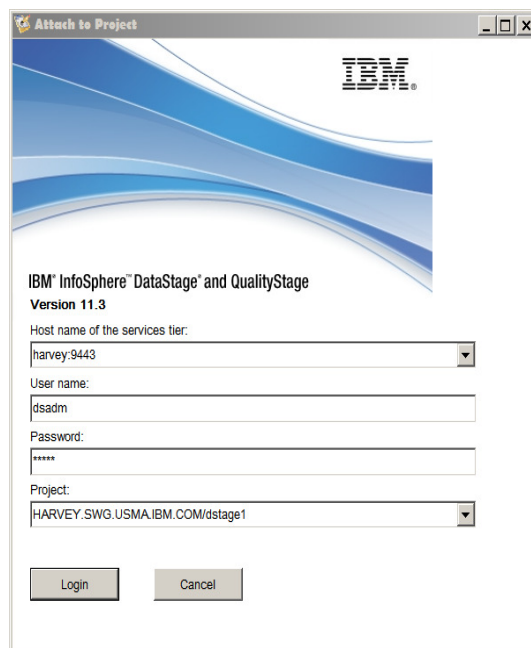
High level overview





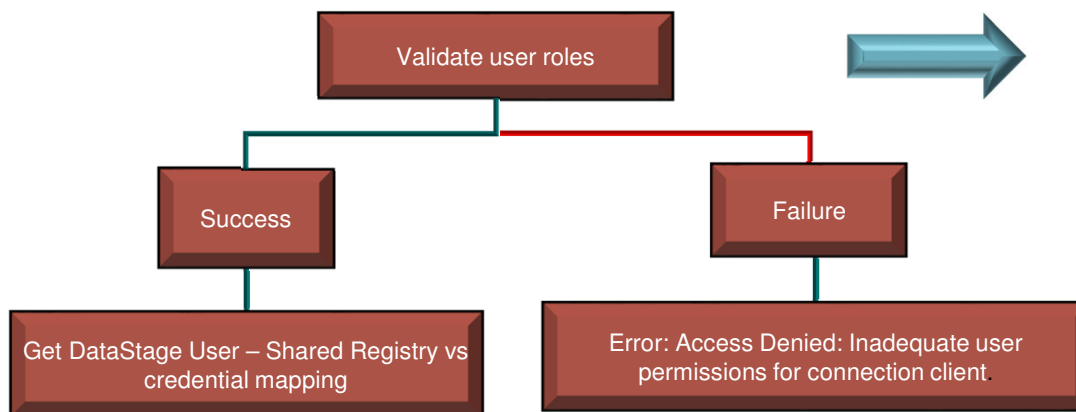
Steps in a DataStage connection (1 of 7)

- User enters login credential
- Connects to services tier
- Authenticates user against active user registry
 - Successful – Validate user roles
 - Failure - Error: Failed to authenticate current user against selected domain



Steps in a DataStage connection (2 of 7)

- Check user record in xmeta to validate user roles
 - Roles are configured in Information Server Web Console
- Validation failure
 - Error: Access Denied: Inadequate user permissions for connection client
- Validation successful
 - Obtain DataStage login credentials



Open User

Role and group changes will not affect the current users until their next login.

User Name: *
dsadm

Password: *
[]

Confirm Password: *
[]

Courtesy Title:
[]

First Name (Given Name): *
[]

Last Name (Family Name): *
Administrator

Instant Messaging ID:
[]

Job Title:
[]

Home Phone Number:
[]

Office Phone Number:
[]

Mobile Phone Number:
[]

Pager Number:
[]

Fax Number:
[]

Email Address:
[]

Roles

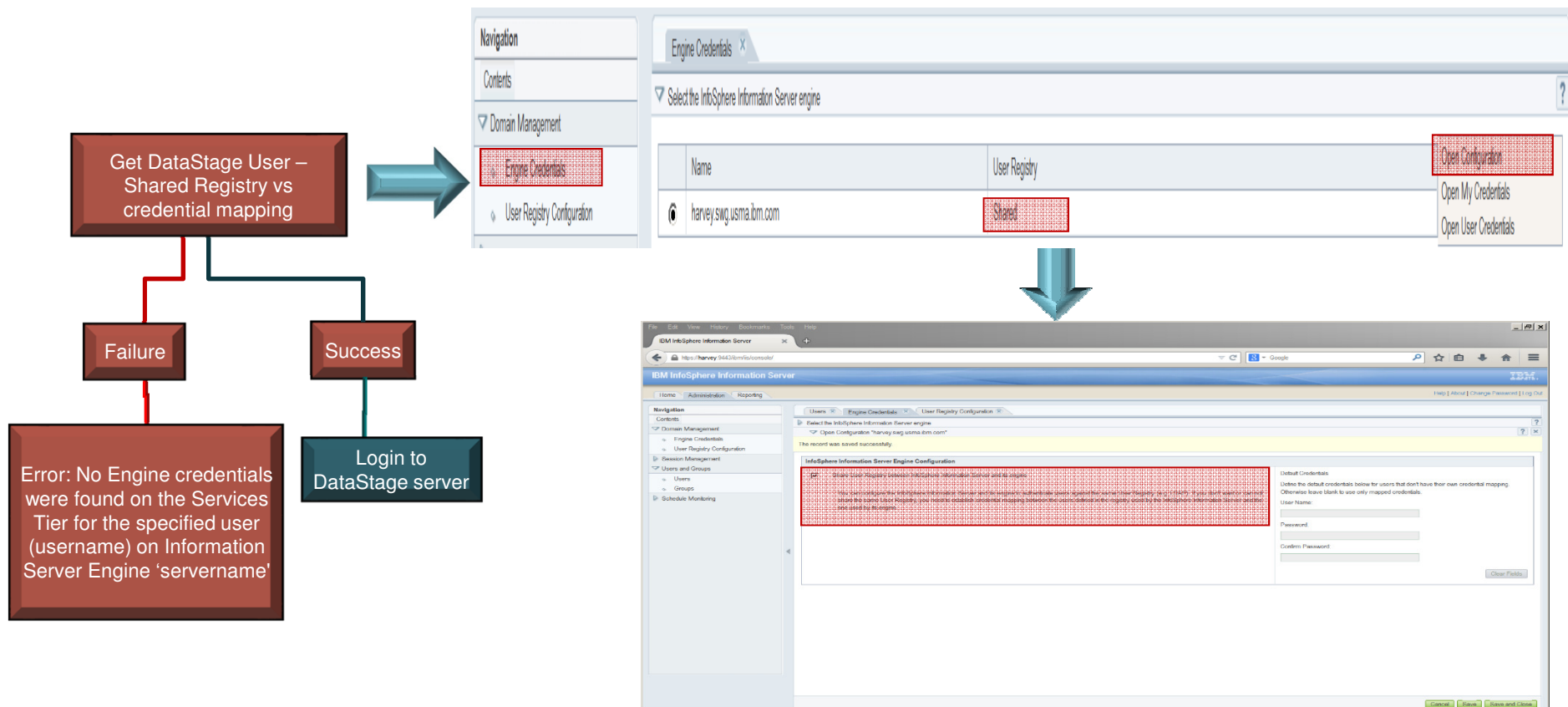
Role	Inherited
<input checked="" type="checkbox"/> Suite	
<input checked="" type="checkbox"/> Common Metadata Administrator	
<input checked="" type="checkbox"/> Common Metadata Importer	
<input checked="" type="checkbox"/> Common Metadata User	
<input checked="" type="checkbox"/> Suite Administrator	
<input checked="" type="checkbox"/> Suite User	

Suite Component

Role	Inherited
<input checked="" type="checkbox"/> Business Glossary Administrator	
<input checked="" type="checkbox"/> Business Glossary Asset Assigner	
<input checked="" type="checkbox"/> Business Glossary Author	
<input checked="" type="checkbox"/> Business Glossary Basic User	
<input checked="" type="checkbox"/> Business Glossary User	
<input checked="" type="checkbox"/> Data Quality Console Administrator	
<input checked="" type="checkbox"/> Data Quality Console Business Steward	
<input checked="" type="checkbox"/> Data Quality Console Review Manager	
<input checked="" type="checkbox"/> Data Quality Console Reviewer	
<input checked="" type="checkbox"/> DataStage and QualityStage Administrator	
<input checked="" type="checkbox"/> DataStage and QualityStage User	

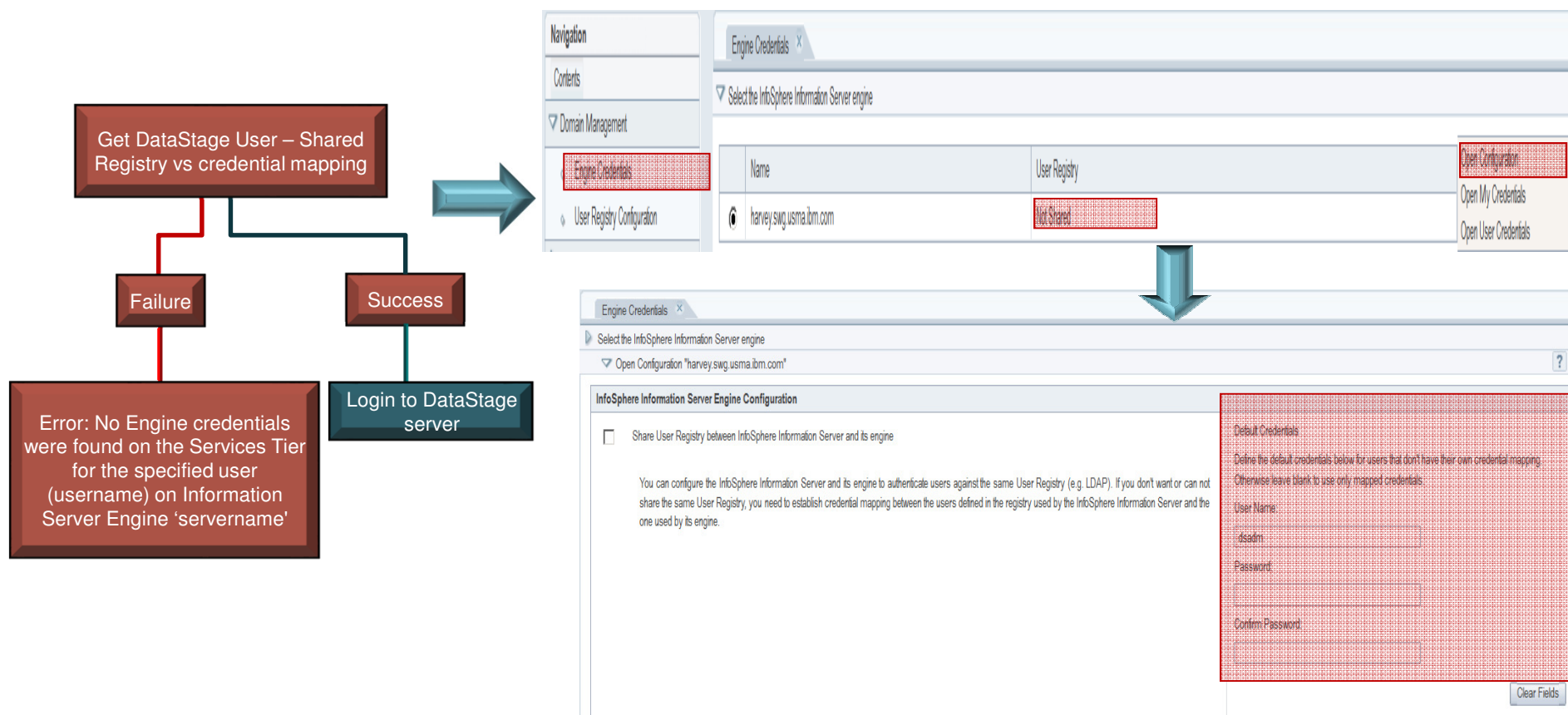
Steps in a DataStage connection (3 of 7)

- Shared registry
- Use same username and password used on DataStage login screen



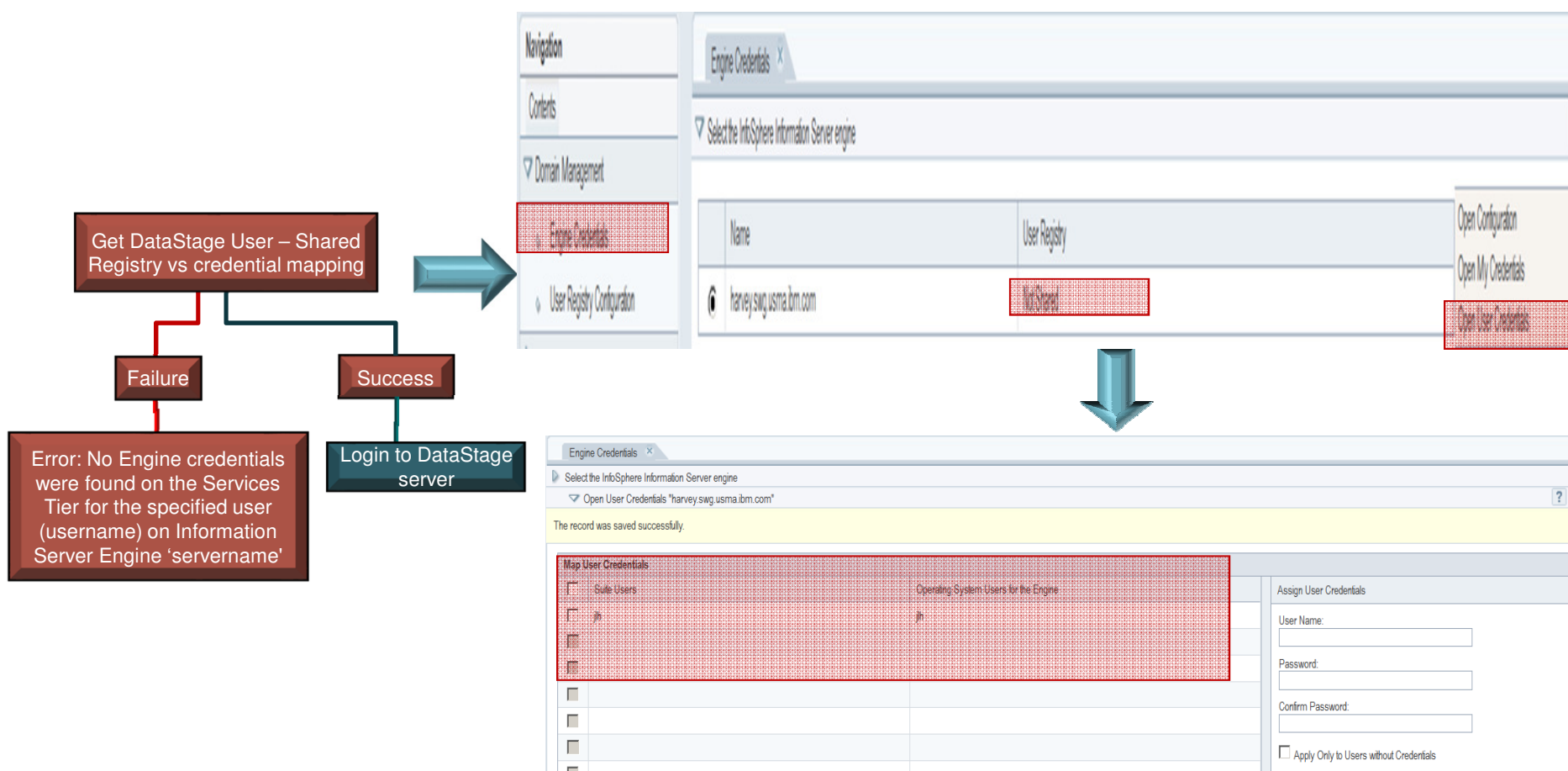
Steps in a DataStage connection (4 of 7)

- Not Shared registry
- Must set up user credentials
 - Username and password for DataStage server connection
- Default credentials for users without an individual credential mapping



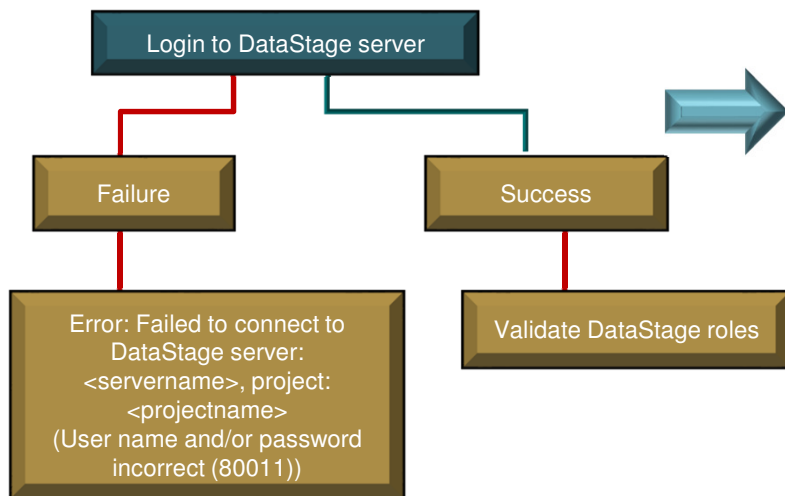
Steps in a DataStage connection (5 of 7)

- Individual user credentials can be set
- Takes precedence over default map



Steps in a DataStage connection (6 of 7)

- Second authentication takes place to DataStage server machine
- Authentication method set in uvconfig file
 - Local OS or PAM



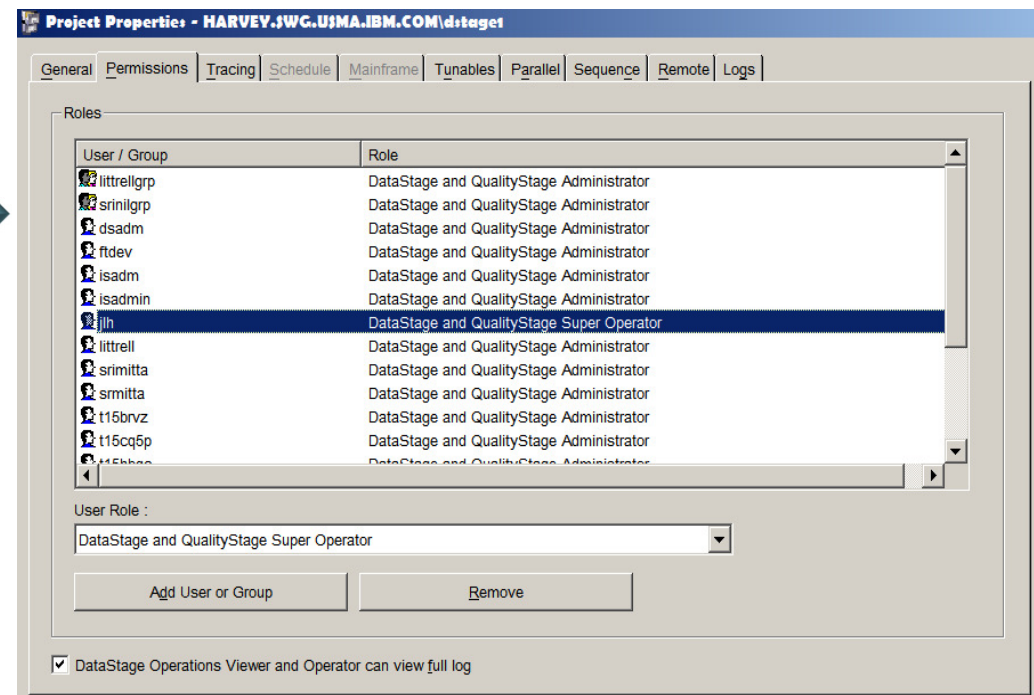
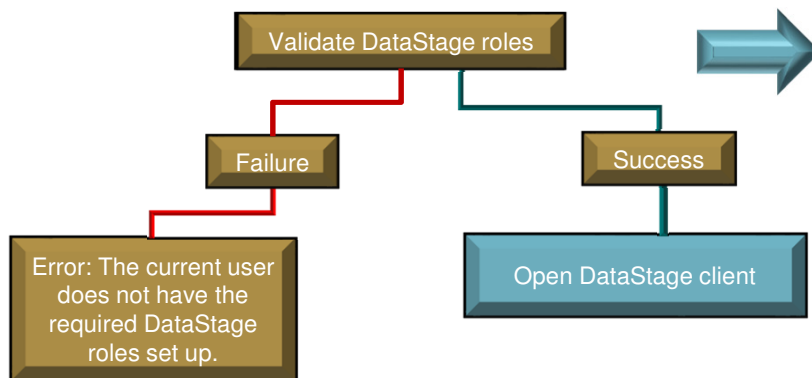
InformationServer/Server/DSEngine/uvconfig

```

# AUTHENTICATION - Specifies the method by which UNIX user
# authentication is done. Currently, the following methods
# are supported:
#
# 0) Standard O/S Authentication (default)
# 1) Pluggable Authentication Module (PAM)
#
# This value should only be changed with a full understanding
# of the implications, as improper setting of this value can
# lead to the environment being unusable.
AUTHENTICATION 0
  
```

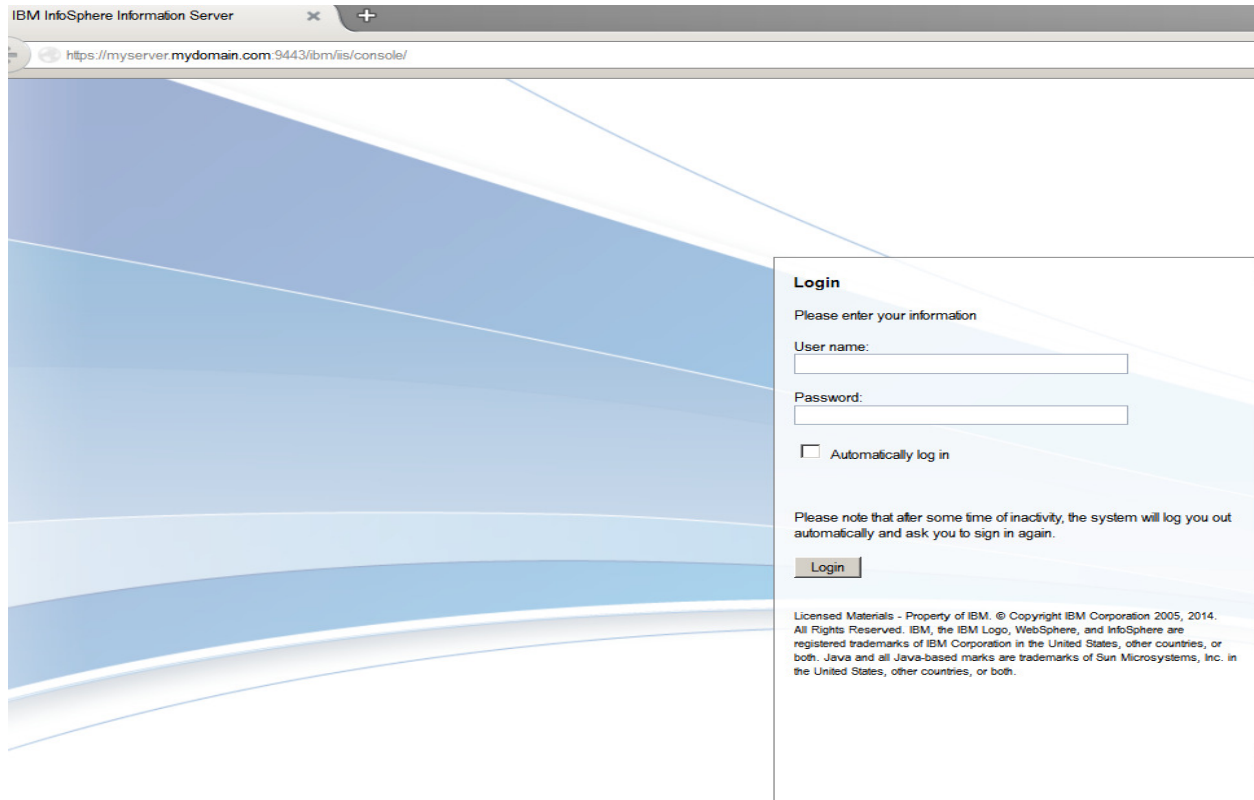
Steps in a DataStage connection (7 of 7)

- Validate DataStage roles
- Set by user or group
- Successful => DataStage client opens
- Unsuccessful => Error: The current user does not have the required DataStage roles set up



Set up DataStage users

- Login to Information Server Web Console, the default URL for v11.3 is:
<https://<hostname>:<port>/ibm/iis/console>
 Ex: <https://myserver.mydomain.com:9443/ibm/iis/console>
- Versions prior to 11.3
<http://myserver.mydomain.com:9080/ibm/iis/console>



IBM InfoSphere Information Server

https://myserver.mydomain.com:9443/ibm/iis/console/

Login

Please enter your information

User name:

Password:

Automatically log in

Please note that after some time of inactivity, the system will log you out automatically and ask you to sign in again.

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Create DataStage user

- Add new DataStage
 - Click “Users” under “Users and Groups”
 - Click “New User”

The screenshot shows the IBM InfoSphere Information Server Administration console. The top navigation bar includes 'Home', 'Administration', 'Information Services Catalog', 'Reporting', and 'Repository Management'. The left navigation pane is expanded to 'Users and Groups', with 'Users' selected. The main content area shows a 'Users' page with a table of existing users and a context menu with a 'New User' button.

Item 1-2 out of 2							Items per Page: 25 50 100	New User
<input type="checkbox"/>	Last Name	First Name	User Name	Courtesy Title	Business Phone	Location		
<input type="checkbox"/>	isadmin	isadmin	isadmin				Open User	
<input type="checkbox"/>	wasadmin	wasadmin	wasadmin				Add Roles to Multiple Users	
							Delete	

Assign user roles

- Enter all mandatory fields (marked with *)
- Check DataStage and QualityStage Administrator role

IBM InfoSphere Information Server

Home Administration Information Services Catalog Reporting Repository Management Help | About | Change Password | Log Out

Navigation

- Contents
- Domain Management
- Session Management
- Users and Groups
 - Users
 - Groups
- Log Management
- Schedule Monitoring

Users

Select Users to Work With

Create New User

User Name: *
dsadm

Password: *
.....

Confirm Password: *
.....

Courtesy Title:

First Name (Given Name): *
DataStage

Last Name (Family Name): *
Administrator

Instant Messaging ID:

Job Title:

Home Phone Number:

Office Phone Number:

Mobile Phone Number:

Pager Number:

Fax Number:

Roles

Suite

Role	Inherited
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input checked="" type="checkbox"/>	

Suite Component

Role	Inherited
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input checked="" type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

Groups

Remove Browse

Set credential mapping (1 of 4)

- Map Information Server account to an OS account
- Without credential mapping
 - User unable to access DataStage client tools
 - User unable to run DataStage jobs

IBM InfoSphere Information Server Administration console. The page title is "Users | Engine Credentials". The main content area shows a table with the following data:

Name	User Registry	
harveyswg.usma.ibm.com	Not Shared	Open Configuration Open My Credentials Open User Credentials

Set credential mapping (2 of 4)

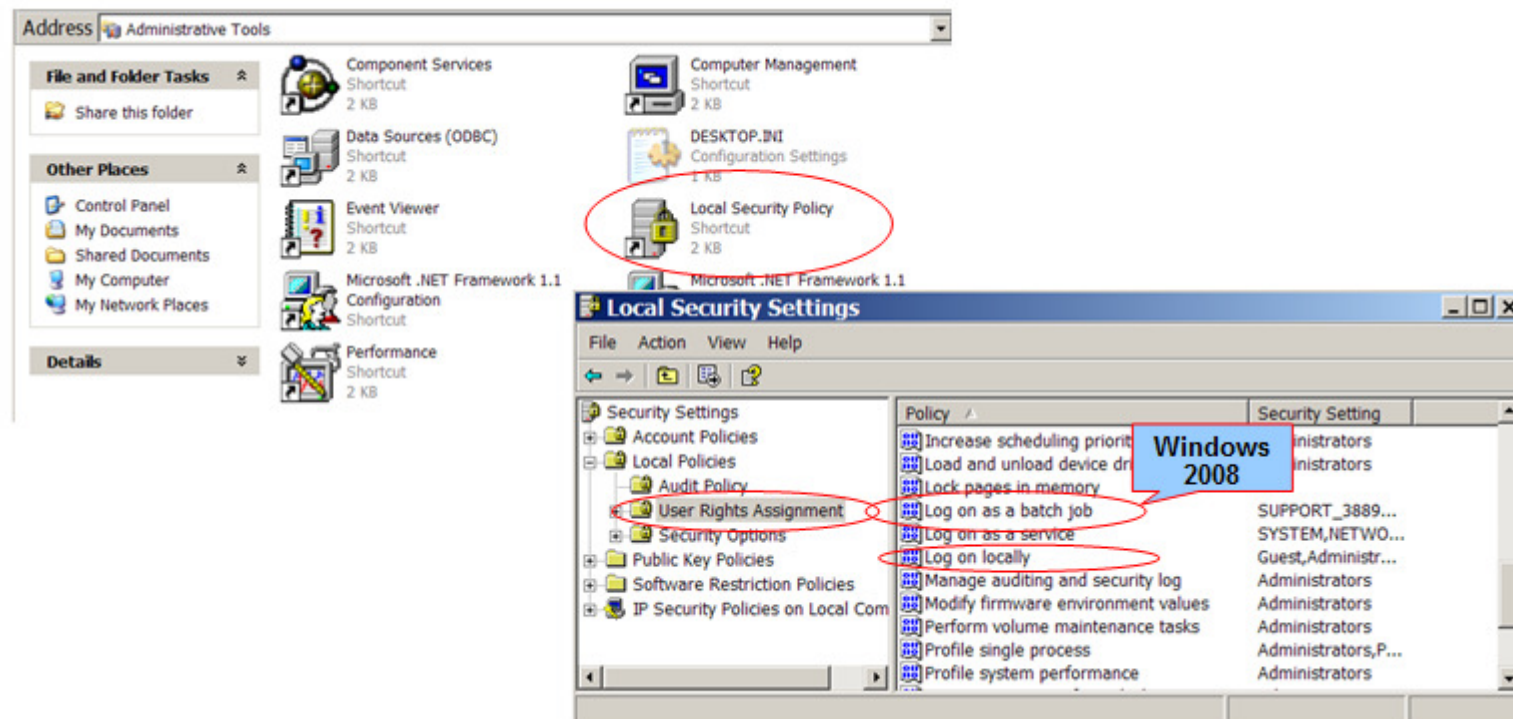
- Map dsadm to DataStage Administrative UNIX® account (typically “dsadm”)

The screenshot shows the IBM InfoSphere Information Server administration console. The 'Map User Credentials' dialog box is open, displaying a list of users. The user 'DataStage Administrator dsadm' is selected, and its name is also listed in the 'Selected Users' pane on the right. A red arrow points to the 'Browse' button at the bottom right of the main window.

<input type="checkbox"/>	Last Name	First Name	User Name	Courtesy Title	Business Phone	Local
<input checked="" type="checkbox"/>	DataStage	Administrator	dsadm			
<input type="checkbox"/>	dsdev	dw	dsdev	TEST		
<input type="checkbox"/>	ell	cdw	dwellid	cdw ell id		
<input type="checkbox"/>	test	t	tdev			
<input type="checkbox"/>	isadm	isadm	isadm			
<input type="checkbox"/>	IIS	Administrator	isadmin			
<input type="checkbox"/>	H	Julia	jih			
<input type="checkbox"/>	litrell_Dec18_2014	litrell_first	litrell			

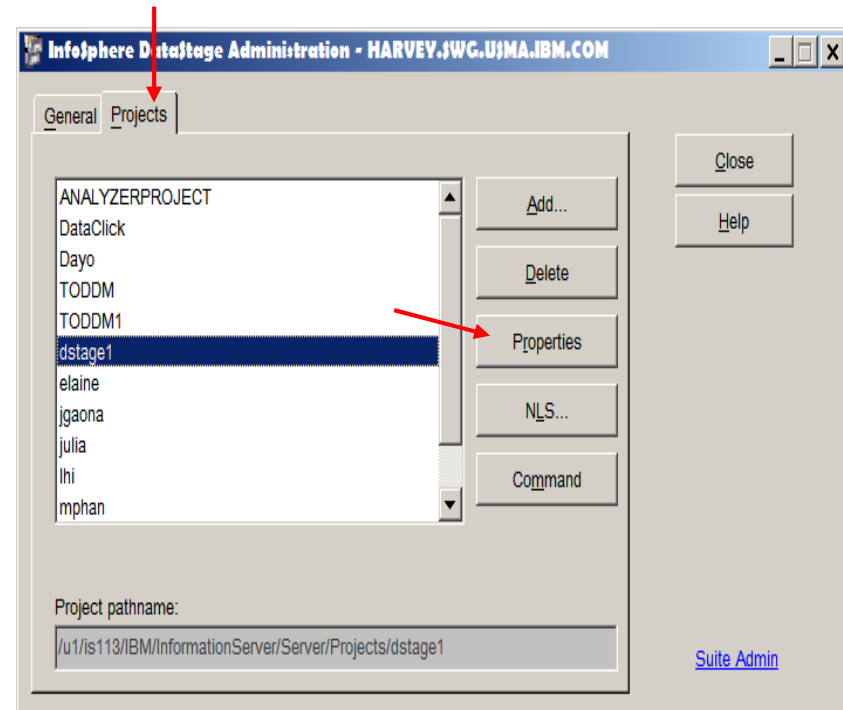
Set credential mapping (4 of 4)

- Mapped operating system user UNIX/Linux
 - Must be member of DataStage Administrator's primary group
- Mapped operating system user Window
 - Must have "Log on locally"
 - Windows® 2008 or higher must also have "Log on as a batch job"



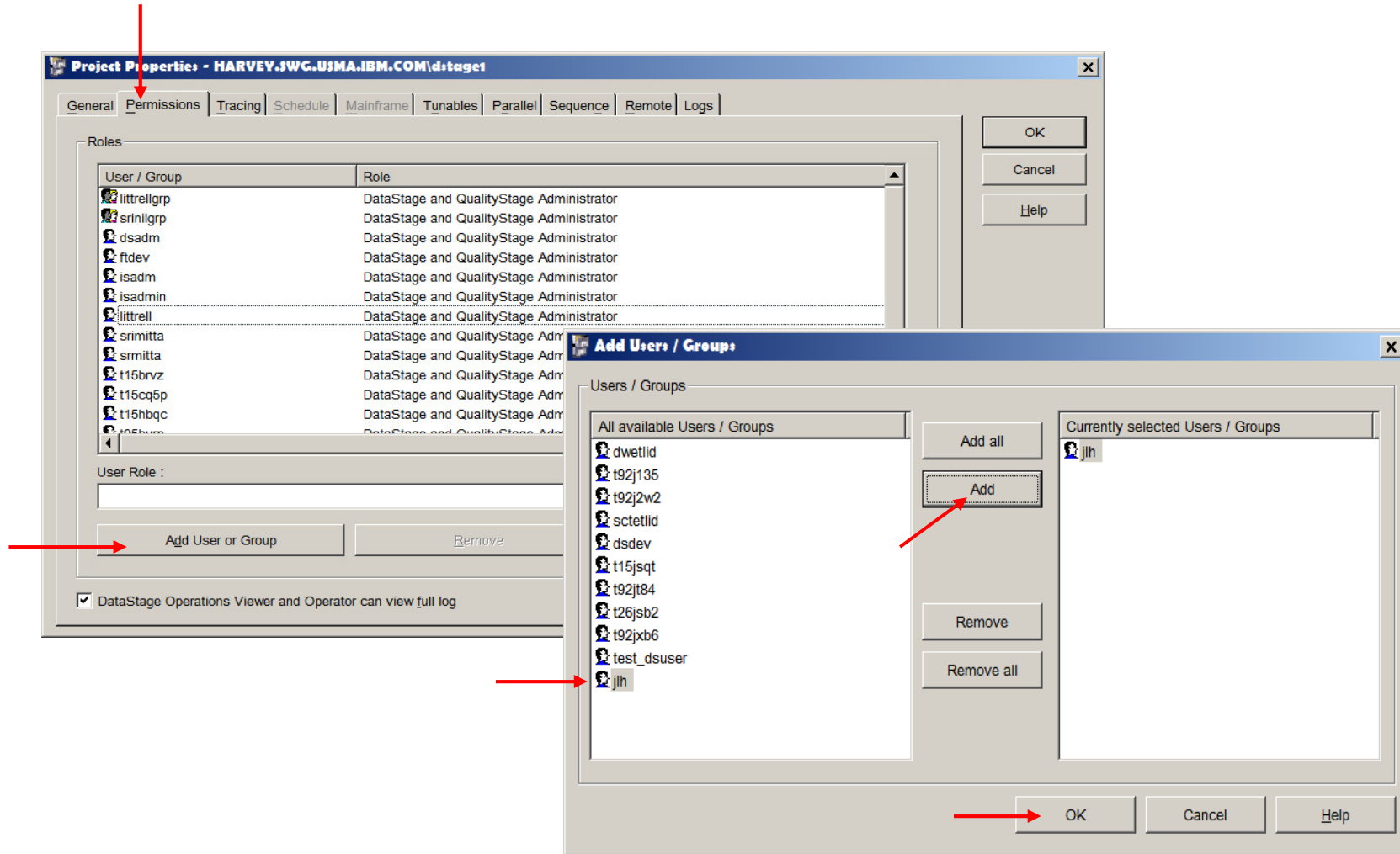
Assign DataStage roles (1 of 3)

- Login to DataStage Administrator
- Assign DataStage role for user



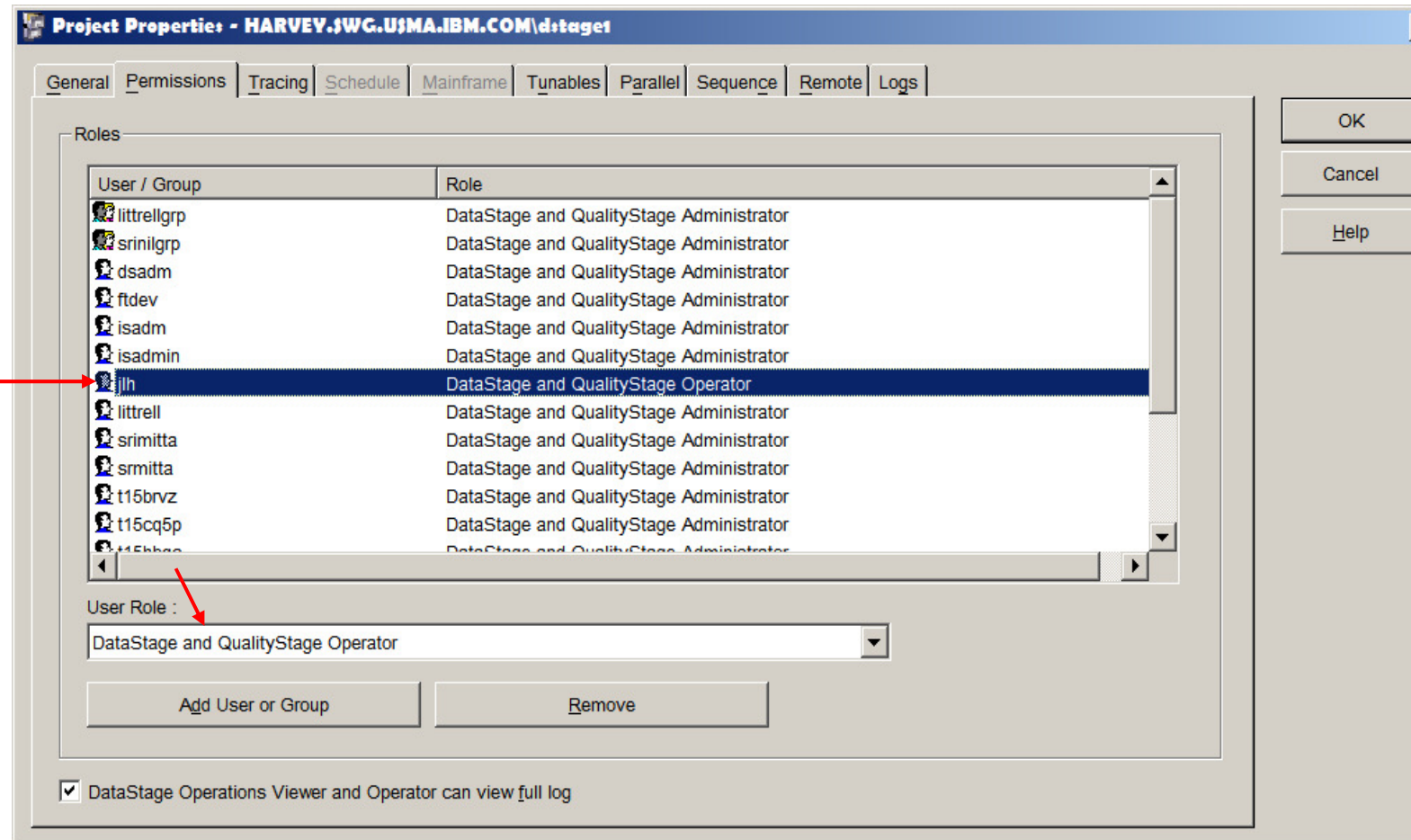
Assign DataStage roles (2 of 3)

- Add user from internal registry to list of DataStage users



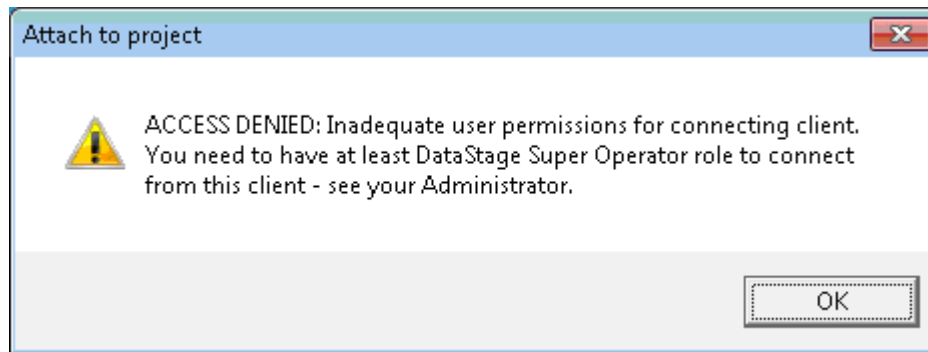
Assign DataStage roles (3 of 3)

- Choose DataStage role from drop down list

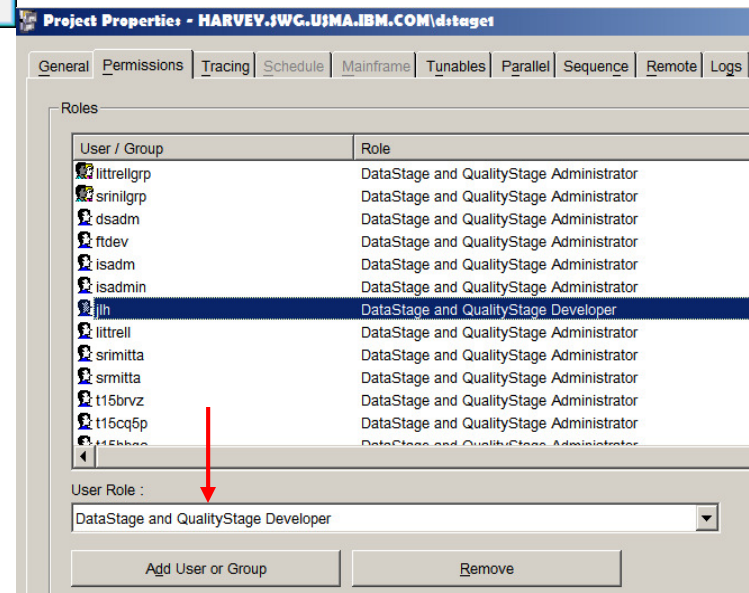


Common Issues (1 of 6)

- User does not have high enough role to login to DataStage Designer



- To correct the issue, change user's role to: Super Operator, Developer or Production Manager



Common issues (2 of 6)

- User does not have suite role defined

The screenshot shows a DataStage error dialog box in the foreground. The dialog has a yellow warning icon and contains the following text:

Failed to authenticate the current user against the selected Services Tier
 User [dsuser1] does not have the Suite User role.
 If you wish to generate an error report for this problem, click [here](#)

Buttons for 'More' and 'Close' are visible at the bottom of the dialog.

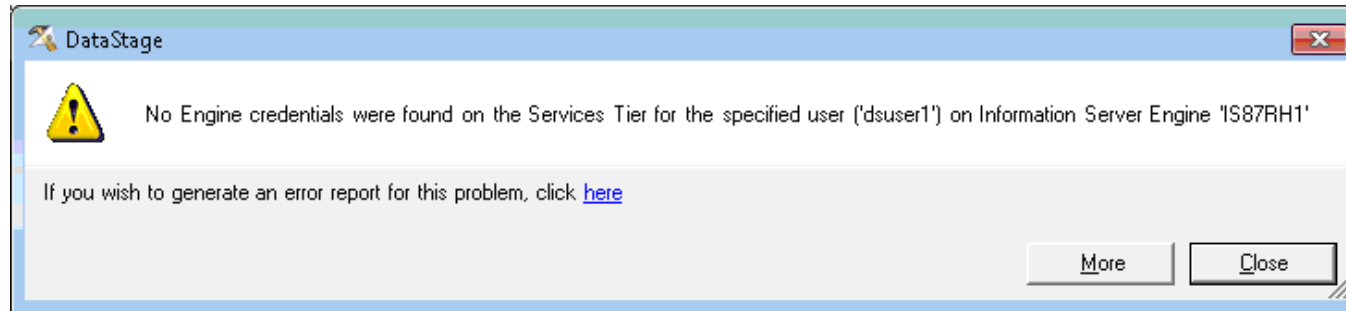
In the background, the DataStage user management interface is visible. The 'Roles' section is expanded, showing a list of roles. A red arrow points to the 'Suite User' role, which is currently unchecked. The 'Suite User' role is listed under the 'Suite' category.

Role	Inherited
<input type="checkbox"/> Suite	<input type="checkbox"/>
<input type="checkbox"/> Role	<input type="checkbox"/>
<input type="checkbox"/> Common Metadata Administrator	<input type="checkbox"/>
<input type="checkbox"/> Common Metadata Importer	<input type="checkbox"/>
<input type="checkbox"/> Common Metadata User	<input type="checkbox"/>
<input type="checkbox"/> Suite Administrator	<input type="checkbox"/>
<input type="checkbox"/> Suite User	<input type="checkbox"/>
<input type="checkbox"/> Suite Component	<input type="checkbox"/>
<input type="checkbox"/> Role	<input type="checkbox"/>
<input type="checkbox"/> Business Glossary Administrator	<input type="checkbox"/>
<input type="checkbox"/> Business Glossary Asset Assigner	<input type="checkbox"/>
<input type="checkbox"/> Business Glossary Author	<input type="checkbox"/>
<input type="checkbox"/> Business Glossary Basic User	<input type="checkbox"/>
<input type="checkbox"/> Business Glossary User	<input type="checkbox"/>
<input type="checkbox"/> DataStage and QualityStage Administrator	<input type="checkbox"/>
<input checked="" type="checkbox"/> DataStage and QualityStage User	<input type="checkbox"/>

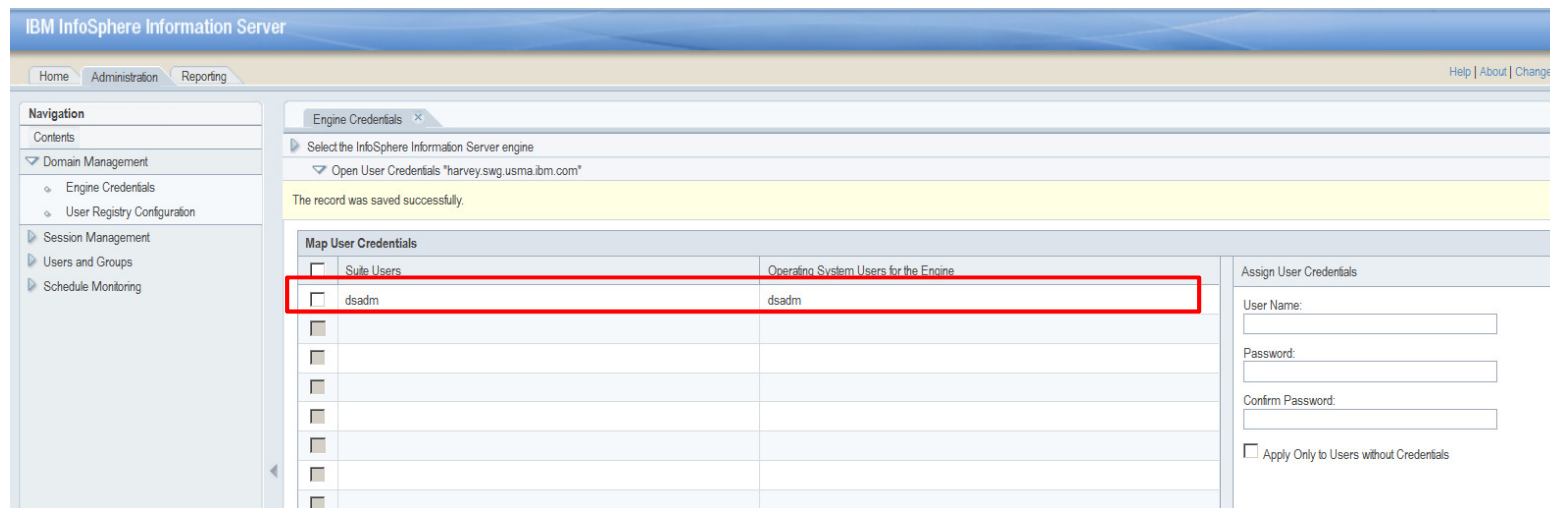
- To correct the issue, add 'Suite User' role for user

Common issues (3 of 6)

- User does not have DataStage Engine credentials mapped

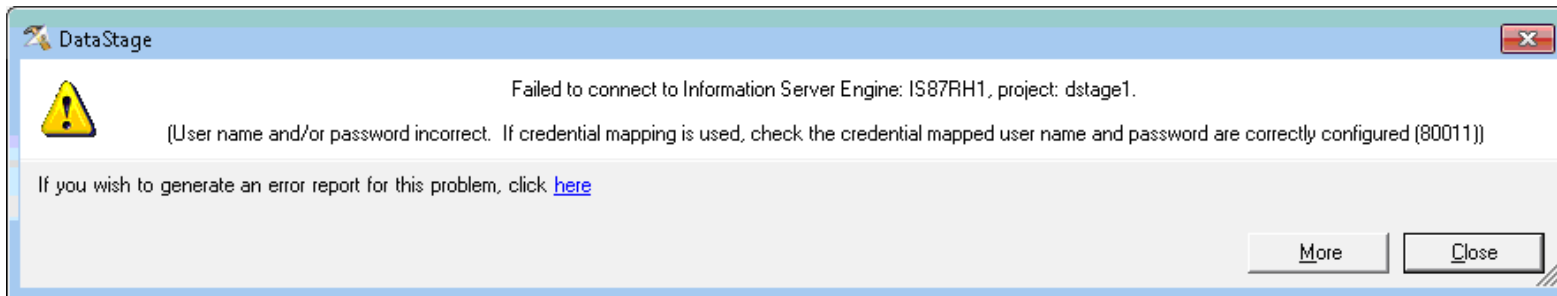


- To correct the issue
 - Map Internal Registry user to DataStage Engine's OS account (slides 15-17)

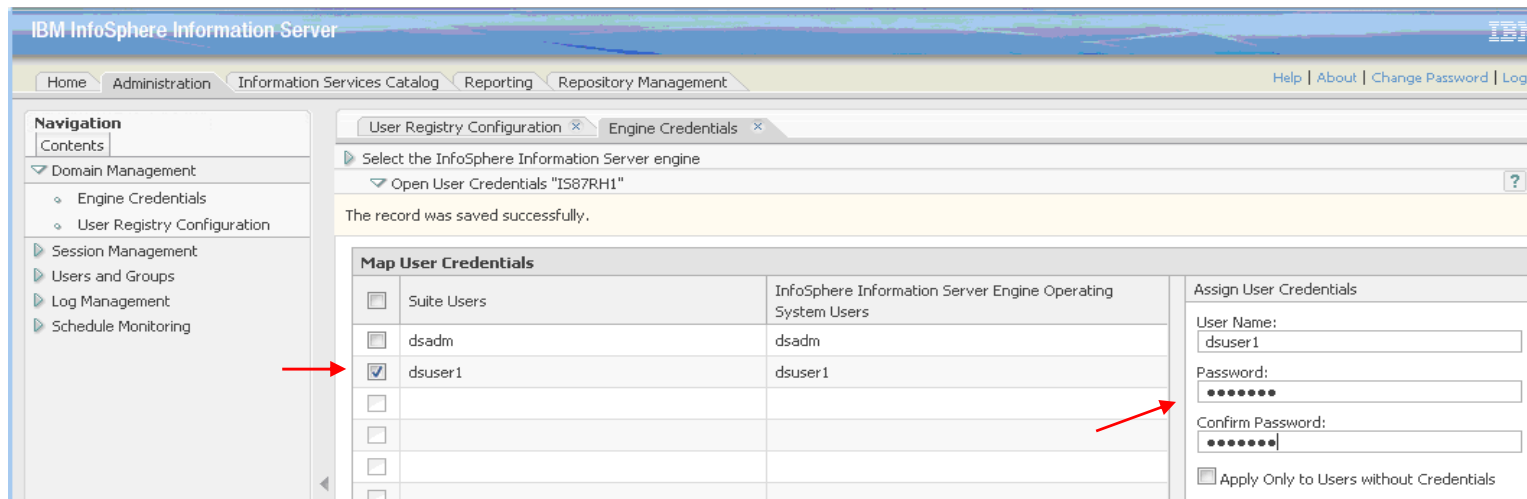


Common issues (5 of 6)

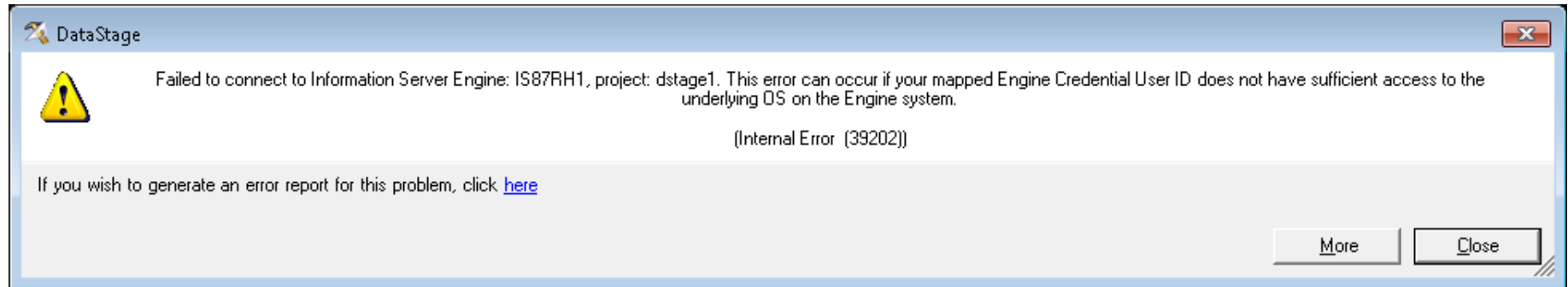
- Provided DataStage Engine OS password is not valid or expired – Error 80011



- To correct the issue
 - Specify correct password



Common issues (6 of 6)



- DataStage user does not belong to DataStage Administrator's primary group

- Fix: Add DataStage user to DataStage Administrator's primary group

```
$ id dsadm
```

```
uid=206(dsadm) gid=205(dstage) groups=1(staff),14(mqm)
```

```
$ ls -ld DSEngine
```

```
drwxrwxr-x 44 dsadm dstage 16384 Apr 19 18:02 DSEngine
```

- **Incorrect:**

```
$ id bhnc
```

```
uid=258(bhnc) gid=1(staff)
```

- **Correct:**

```
$ id bhnc
```

```
uid=258(bhnc) gid=1(staff) groups=205(dstage)
```

Tracing client logins – UNIX/Linux

- truss or strace against the dsrpcd process:
 - Get process ID (pid) of the dsrpcd process:
ps -ef |grep dsrpcd
 - Attach the truss or strace to the running process
You must be root or the owner of dsrpcd
AIX: truss -fae -o /tmp/trace.out -p (processId) 2>&1
Linux: strace -fae -o /tmp/trace.out -p (processId) 2>&1

- Trace dsrpcd, refer to the IBM Education Assistant module:
PDF:

http://www.ibm.com/support/knowledgecenter/im_ia/com.ibm.ia.datastage/datastage/8.1/ProblemDetermination/IEA_IPS_dsrpcd.pdf?dmuid=20110808162150967585

Demo:

http://www.ibm.com/support/knowledgecenter/im_ia/com.ibm.ia.datastage/datastage/8.1/ProblemDetermination/IEA_IPS_dsrpcd/player.html?dmuid=20110808162148546009

Causes for 'could not connect to the server' (1 of 2)

- Invalid server name or port
 - Verify server name in datastage login screen
ping <DataStage Server>
 - Verify port number is correct (for v11.3)
 - View the registered-servers.xml file under
/InformationServer/ASBNode/eclipse/plugins/com.ibm.iis.client/ registered-servers.xml
 - Find “<asb-server”
<asb-server name=“myServer.newco.com”
host-name=“myServer.newco.com”
port=“**9443**”
is-primary-server="true" />
 - For versions prior to 11.3, view registered-servers.xml file
InformationServer/ASBNode/eclipse/plugins/com.ibm.isf.client_configuration_<is_version>/
registered-servers.xml
 - Find “<asb-server”
<asb-server name=" myServer.newco.com”
host-name=" myServer.newco.com”
port=“**9080**”
is-primary-server="true" />
- Client has invalid entry in hosts file for DataStage server
 - Check Windows\System32\drivers\etc\hosts
ds_ip_address host_short_name host_long_name

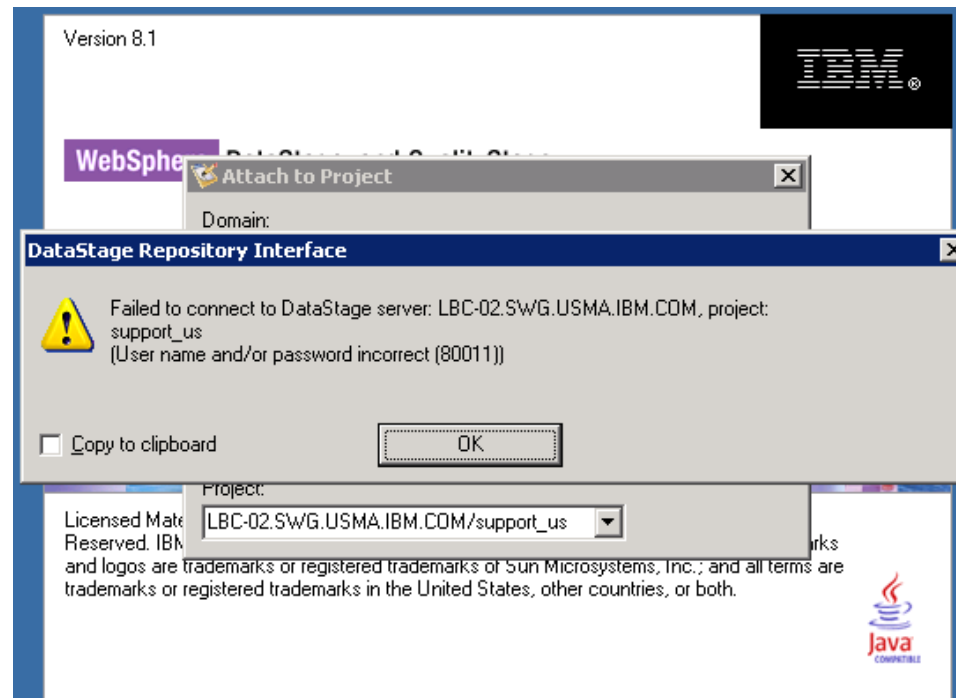
Causes for 'could not connect to the server' (2 of 2)

- Server listening port may be blocked by firewall
 - telnet <DataStage server> <port number>
 - Linux®
 - nc -v -z <host> <port>
 - Check with network administrator to see if port 9443 is blocked
- WebSphere not running
 - Windows
 - Check IBM WebSphere® Application Server status => Started
 - UNIX® or Linux
 - ps -ef | grep java
 - root 25468 1 0 May 02 ? 33:33 /u1/IBM/WebSphere/AppServer/java/bin/java ...

Name	Description	Status	Startup Type	Log On As
IBM WebSphere Application Server V6 - rmanikon-2Node01		Started	Automatic	Local System
HID Input Service	Enables ge...	Started	Automatic	Local System
HTTP SSL	This servic...		Manual	Local System
IBM Content Delivery Service	Enables wi...		Manual	Local System
IBM InfoSphere Business Info...	IBM InfoSp...		Automatic	Local System
IBM Standard Asset Manager ...		Started	Automatic	Local System
IBM WebSphere Application S...	Controls th...	Started	Automatic	Local System
IMAPI CD-Burning COM Service	Manages C...		Manual	Local System
Indexing Service	Indexes co...		Manual	Local System
InstallDriver Table Manager	Provides s...		Manual	Local System
IPSEC Services	Manages I...	Started	Automatic	Local System

What is error 80011?

- Failed to connect to DataStage server: <servername>, project: <projectname> (User name and/or password incorrect (80011)).
- This error indicates that the login to the DataStage server failed
- Many things can cause this error to occur
- Does not necessarily mean the password is incorrect



What can cause an 80011 error?

- On all operating systems:
 - Username or password, or both are incorrect
 - User ID has expired or is locked
 - User mapping has the incorrect user name or password
- On Windows®
 - The user may not have the correct user rights assigned
- On UNIX®/Linux®:
 - dsrpcd daemon is not running as the root user
 - PAM not configured properly on the DataStage server
 - DataStage is not configured properly to use PAM
 - Required libraries missing or incorrect

Problem with the user's login

- DataStage is setup to use Local OS Authentication
- Check if the Information Server Registry is shared or not shared
- Check if username and password is incorrect
- Check if user needs to change their password on first login
- Check if user ID has expired or is locked on the DataStage server
- Check that user can login to the DataStage server machine with same username and password

On UNIX and Linux:

- DataStage set to use PAM authentication also requires user to be able to login

User mapping has incorrect username or password (1 of 2)

- Information Server User Registry set to “Not Shared”
- Check if user has an individual user credentials assigned

The screenshot shows the 'DataStage Credentials' page in the Administration console. The navigation pane on the left has 'DataStage Credentials' selected. The main content area shows a table with the following data:

Name	User Registry	
lbc-02.swg.usma.ibm.com	Not Shared	Open Configuration Open My Credentials Open User Credentials

The 'Map User Credentials' dialog box is shown. It contains a table with the following data:

		DataStage and QualityStage Operating System Users
<input type="checkbox"/>	Suite Users	
<input type="checkbox"/>	uid=ldbokaw,ou=people,dc=ipssupport,dc=ibm,dc=com	dsadm
<input type="checkbox"/>	uid=ldbokaw,ou=people,dc=ipssupport,dc=ibm,DC=com	dsadm
<input checked="" type="checkbox"/>	uid=ldpowers,ou=people,dc=ipssupport,dc=ibm,DC=com	test

On the right side of the dialog, the 'Assign User Credentials' section is highlighted, containing the following fields:

- User Name:
- Password:
- Confirm Password:
- Apply Only to Users without Credentials

Buttons at the bottom include 'Remove', 'Browse', and 'Apply'.

User mapping has incorrect username or password (2 of 2)

- Check default user credentials

The screenshot shows the 'DataStage Credentials' page in the IBM Information Server Administration console. A table lists servers, with the first one selected. The 'Open Configuration' link in the right-hand column is circled in red.

Name	User Registry	Open Configuration
lbc-02.swg.usma.ibm.com	Not Shared	Open Configuration Open My Credentials Open User Credentials

The screenshot shows the 'Open Configuration' dialog for the server 'lbc-02.swg.usma.ibm.com'. The 'Server Configuration' section is visible, with the 'Default DataStage and QualityStage Credentials' area circled in red. This area contains fields for 'User Name' (dsadm), 'Password', and 'Confirm Password'.

Share User Registry between IBM Information Server and DataStage Server

You can configure the IBM Information Server and a DataStage Server to authenticate users against the same User Registry (e.g. LDAP). If you don't want or can not share the same User Registry, you need to establish credential mapping between the users defined in the registry used by the IBM Information Server and the one used by the DataStage Server.

Default DataStage and QualityStage Credentials
Define the default credentials below for users that don't have their own credential mapping. Otherwise leave blank to use only mapped credentials.

User Name: dsadm

Password:

Confirm Password:

Clear Fields

Incorrect user rights assignment - Windows

- All users must have the “Allow Log on locally”
 - Windows 2008 and later must also have “Log on as a batch job”
 - Make sure user/group is not in Deny Logon locally and Deny Logon as batch

The screenshot shows the Windows Administrative Tools folder with 'Local Security Policy' circled in red. The 'Local Security Settings' window is open, showing the 'User Rights Assignment' policy. Two policies are circled in red: 'Log on as a batch job' and 'Log on locally'. A blue callout box labeled 'Windows 2008' points to the 'Log on as a batch job' policy.

Policy	Security Setting
Increase scheduling priority	Administrators
Load and unload device drivers	Administrators
Lock pages in memory	
Log on as a batch job	SUPPORT_3889...
Log on as a service	SYSTEM,NETWO...
Log on locally	Guest,Administr...
Manage auditing and security log	Administrators
Modify firmware environment values	Administrators
Perform volume maintenance tasks	Administrators
Profile single process	Administrators,P...
Profile system performance	Administrators

dsrpcd daemon not running as root user – UNIX/Linux (1 of 3)

- Client connections are done through the dsrpcd daemon process
- If Impersonation Mode is turned on, the daemon must be running as root
- Run “ps -ef|grep dsrpcd” to check who owns the dsrpcd process

```
$ ps -ef |grep dsrpcd  
dsadm 25056 1 0 Sep10 ? 00:00:00 /opt/IS810/IBM/InformationServer/Server/DSEngine/bin/dsrpcd
```

- If it is running as any other user, check Impersonation Mode

```
$ cd $DSHOME
```

```
$ ./dsenv
```

```
$ bin/smat -t | grep -i impersonation
```

```
= 1
```

- If IMPERSONATION = 1 and the dsrpd is not running as root, check permission in \$DSHOME/bin

dsrpcd daemon not running as root user – UNIX/Linux (2 of 3)

- Change directories to the \$DSHOME/bin directory

- Check the permissions

```
$ ls -l |grep rws
```

```
-rws-x--x 1 root dsadm 54912 Sep 4 2008 DBsetup  
-rwsr-x--x 1 root dsadm 1318396 Sep 4 2008 dsdlockd  
-rwsr-x--x 1 root dsadm 1287944 Sep 4 2008 dslictool  
-rws--x--x 1 root dsadm 6952 Sep 4 2008 dstskup  
-rwsr-x--x 1 root dsadm 1299916 Sep 4 2008 list_readu  
-rwsr-x--x 1 root 1290580 Sep 9 15:02 load_NLS_shm  
-rwsr-x--x 1 root dsadm 44452 Sep 4 2008 uv
```

- Fix permissions and stop and restart DataStage

dsrpcd daemon not running as root user – UNIX/Linux (3 of 3)

- Impersonation Mode off
- Permissions need to be set correctly
 - Platform specific
- Review IEA module on running Information Server DataStage engine as non-root
<http://www.ibm.com/support/docview.wss?uid=swg27024947>

Impersonation mode off – AIX only

- Cannot use PAM authentication for the DataStage engine
 - AIX requires the pam_aix library to be accessed by a process running as root
- See tech note:
<https://www.ibm.com/support/docview.wss?uid=swg21516230>

PAM not configured properly on DataStage Server – UNIX/Linux

- DataStage authenticates against the local operating system by default
- DataStage can be configured to authenticate using PAM
- DataStage Server must be configured to use PAM
- Be sure LDAP users can login to the DataStage server
- Check if there is a username in `/etc/passwd` with the same username
- Test with a user that is not in `/etc/passwd`

DataStage not configured properly for PAM – UNIX/Linux

- DataStage needs to be configured to use PAM authentication
- Check uvconfig AUTHENTICATION setting

```
$ cd $DSHOME
$. ./dsenv
$ bin/smat -t | grep -i authentication
AUTHENTICATION = 1
```
- Check that the dsepam file/entries created
- Review DataStage and PAM configuration at:
 - http://www.ibm.com/support/knowledgecenter/SSZJPZ_11.3.0/com.ibm.swg.im.iis.found.admin.common.doc/topics/ws_isinst_config_pam.html?lang=en
- If you are on AIX®, also see tech note 1398309
 - <http://www.ibm.com/support/docview.wss?uid=swg21398309>

Required PAM libraries missing or incorrect – UNIX/Linux

- Check that the path for PAM libraries for the dsepam entries are correct
- Be sure that PAM and DataStage libraries have the same bitness (32bit versus 64 bit)

Example:

```
$ file $DSHOME/bin/uvsh
```

```
/u2/IS810/IBM/InformationServer/Server/DSEngine/bin/uvsh: 64-bit XCOFF executable or  
object module not stripped
```

```
$ file /usr/lib/security/64/pam_aix
```

```
/usr/lib/security/64/pam_aix: 64-bit XCOFF executable or object module not stripped
```

Thank you for joining.

Are there any questions?