DRAFT - CMiC Enterprise

System Administrators Guide – V10

By CMiC

Proprietary Notice

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Contents

Disclaimer

This Guide is not a replacement for the CMiC System Administration Course.

This Guide is a compendium of documents. It contains a mixture of different functions that you may need to utilize. Be aware that there are different area and levels of expertise required to perform these functions. This is a guide only; functions may display, appear or act differently depending on your Configuration, Database and Infrastructure versions, Operating systems and Data.

If any these functions/procedures are utilized CMiC is not responsible for the outcome.

On the more technical items such as migrating databases CMiC strongly suggests that this be contracted to be done by CMiC.

Technical DBA Functions

DBDEFINE.sql

The file **DBDEFINE.sql** contains all the user names, passwords and links required when performing installations or applying patches. If this file is defined incorrectly the patchinstall program will most likely fail.

If security is an issue, this file can be edited to add and remove the passwords before and after each patch install process.

There is one copy of dbdefine.sql in every environment, on each server. The file is found in d:\cm\V10\<env>\jspsql on the each Application Server.

All of the values must be correct for every environment.

The values that change in each environment are daPass, sysPass1, daDB, daLinkName, daRunTimePass, owkfPass, and owkfLinkName. It is important to make sure that these values are correct in each environment.

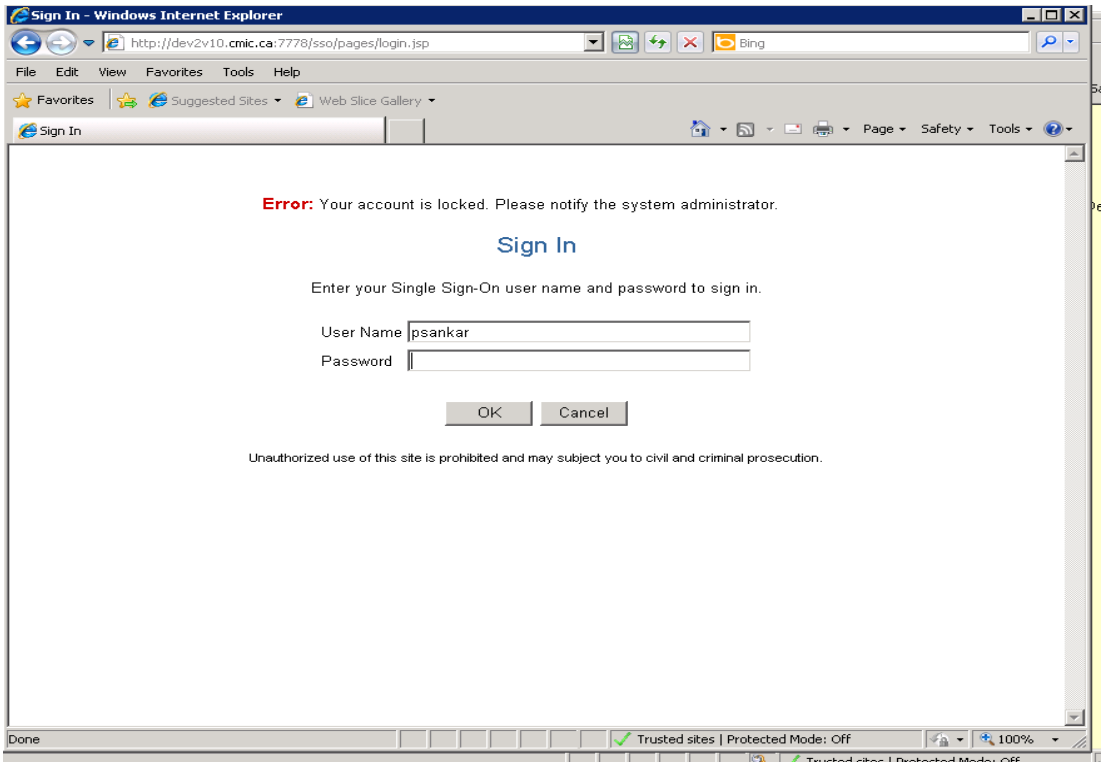
The other entries should always be set to the values shown below in **blue**.

define daSchema	always should be set to **da**
define daPass	da's password in the current environment's database
define JssSchema	always should be set to **js37**
define JssPass	js37's password in the current environment's database
define UIGSchema	always should be set to **uig**
define UIGPass	uig's password in the current environment's database
define sysUser1	always should be set to **sys**
define sysPass1	sys's password in the current environment's database
define daDB	the name of the database used in the current environment
define daLinkSchema	always should be set to **dalink**
define daLinkPass	always should be set to **dalink**
define daLinkName	always should be the same value as daDB
define daLinkTbsp	always should be set to **users**

define daLinkTemp	always should be set to **temp**
define daRunTimeSchema	always should be set to **dar**
define daRunTimePass	dar's password in the current environment's database
define daRunTimeTbsp	always should be set to **users**
define daRunTimeTemp	always should be set to **temp**
define owkfSchema	always should be set to **owf_mgr**
define owkfPass	owf_mgr's password in the current environment's database
define owkfLinkName	always should be the same value as daDB

Unlocking Single Sign-on Accounts

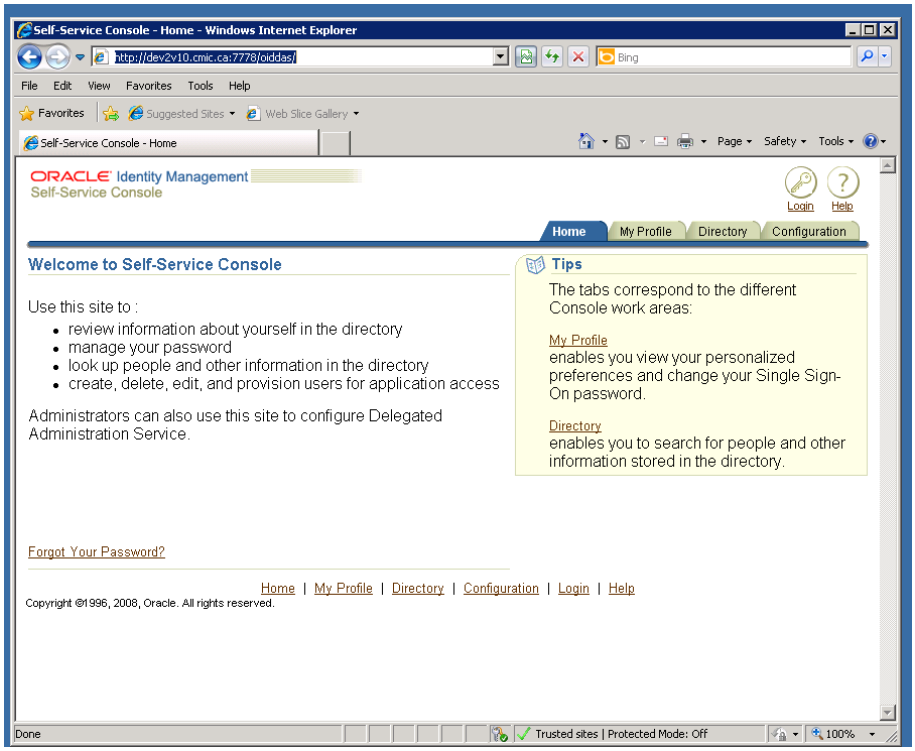
The user will receive a message similar to below:



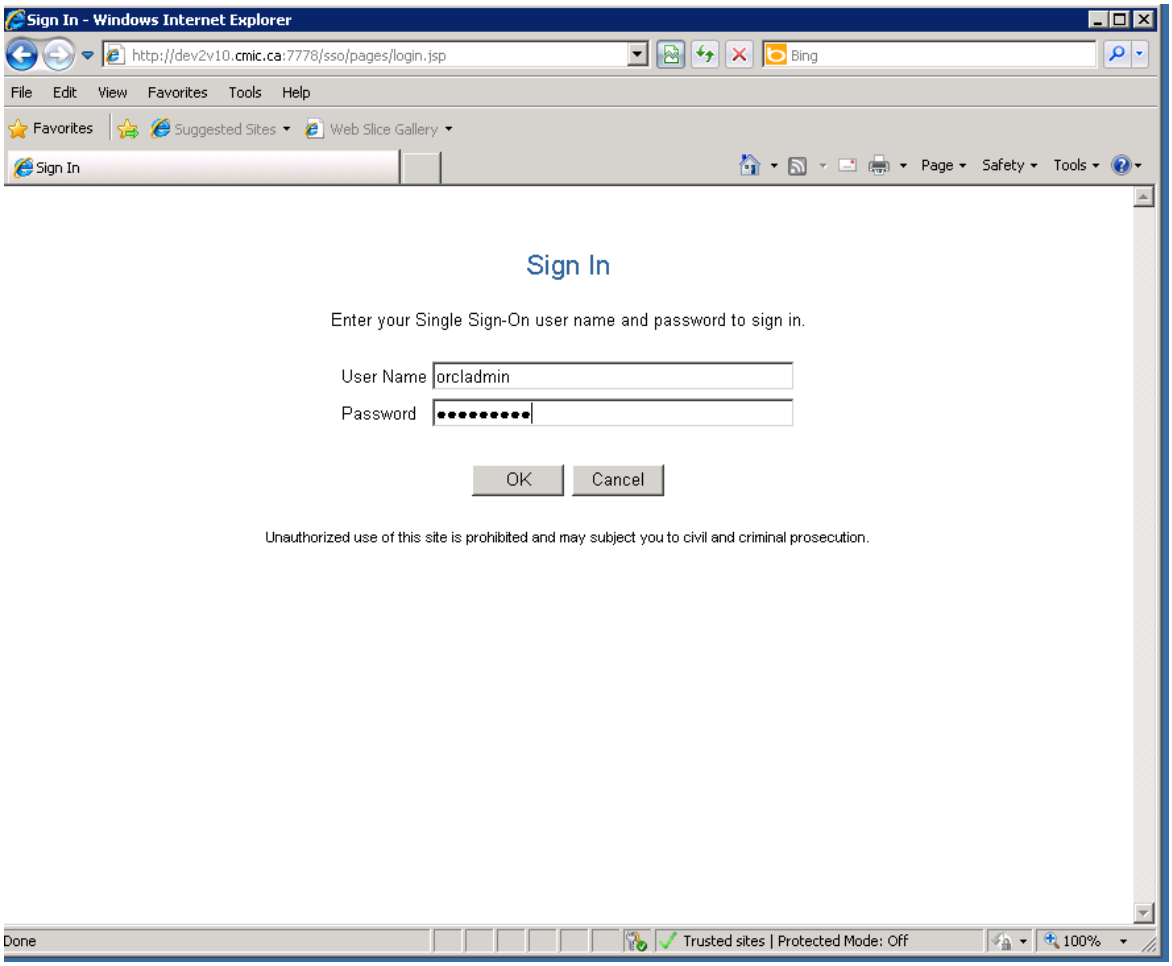
The user will receive a message similar to above:

When then happens you can unlock the account using the following steps:

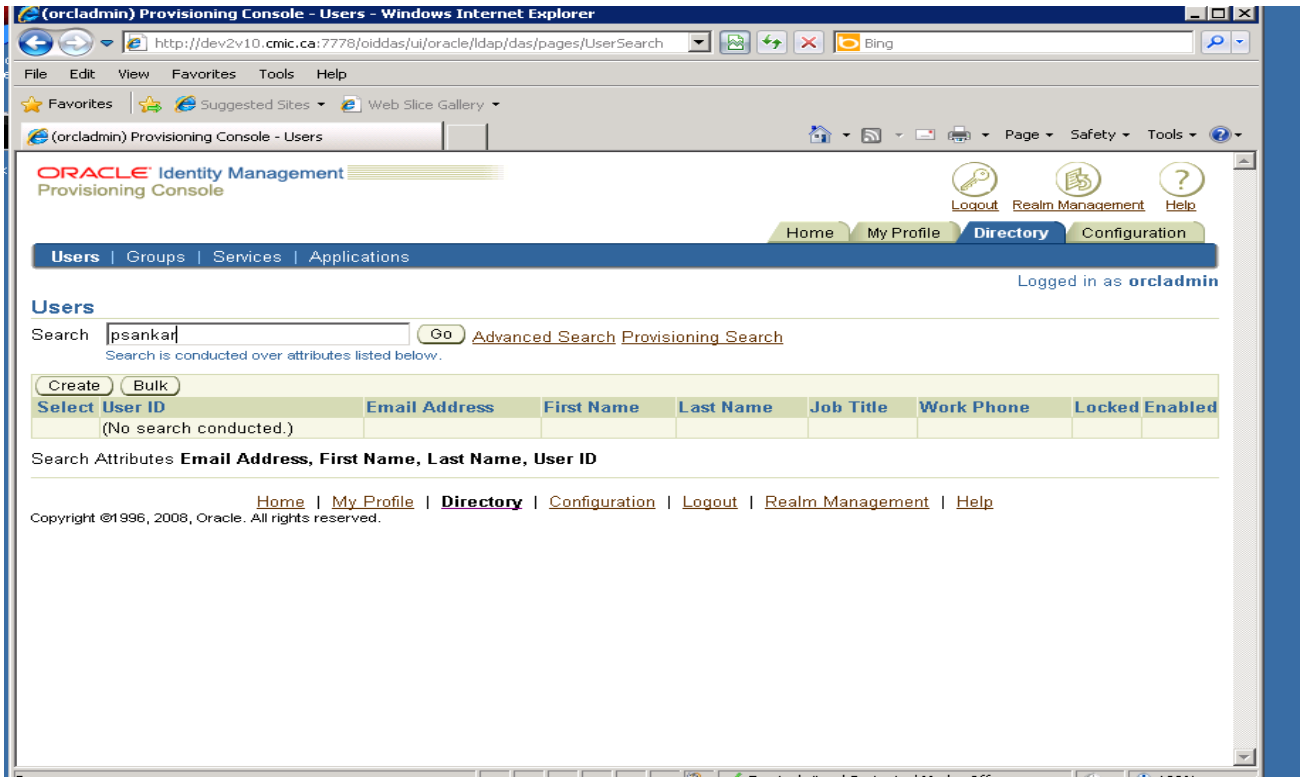
1) Login to OID using the Self Service Console:



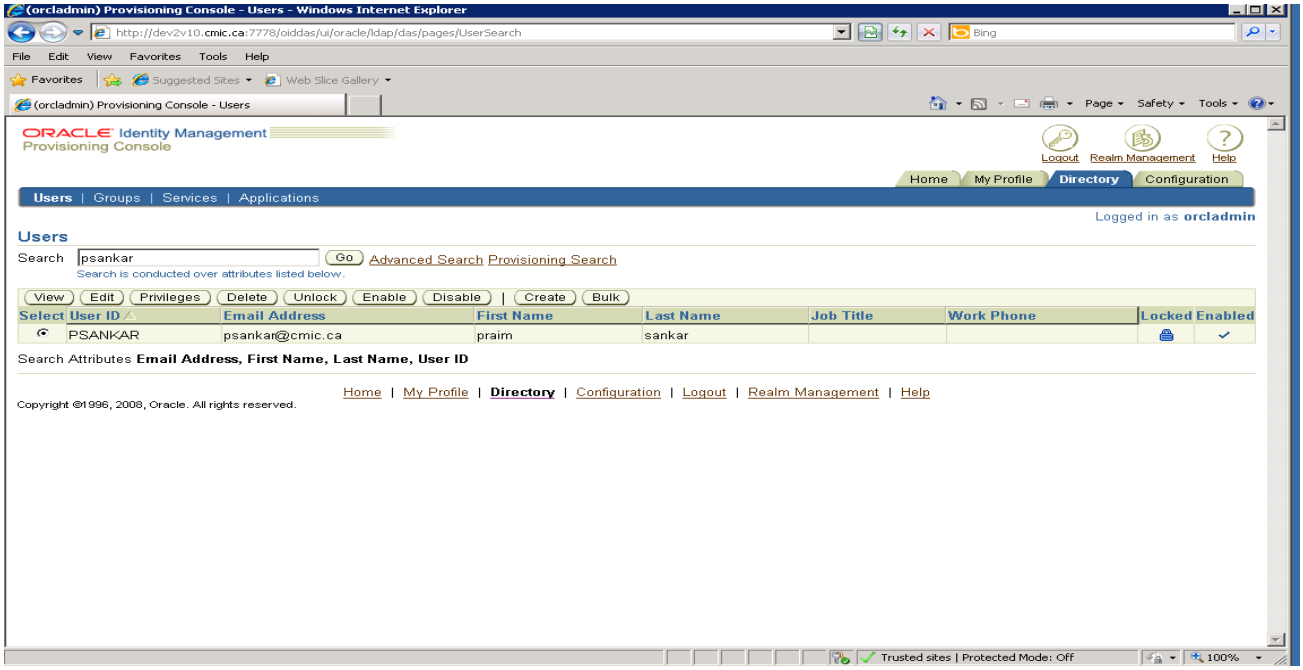
- Select the Login Option on the top of the screen
- Login as the user ‘ORCLADMIN’
- Select the Directory Tab



- Search for the user whose account is locked and click [Go]. Hint: to display all users search for '%'.

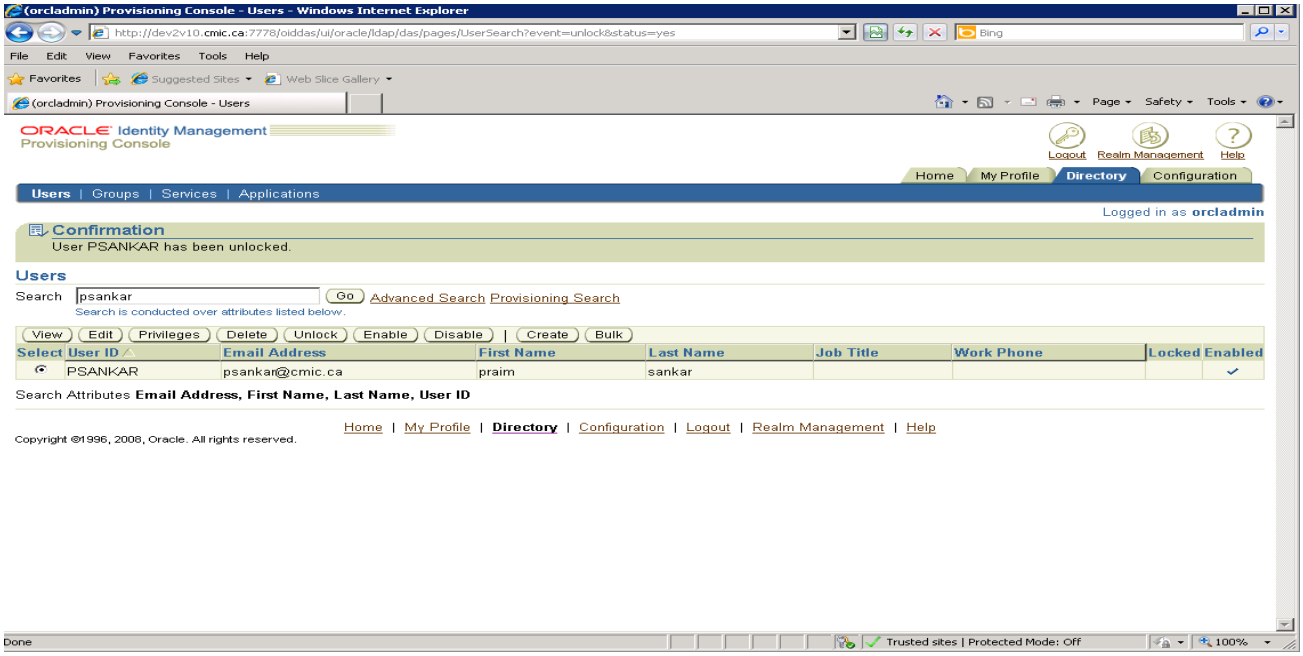


Select the user whose account is locked and click the [**Unlock**] button to unlock the account.



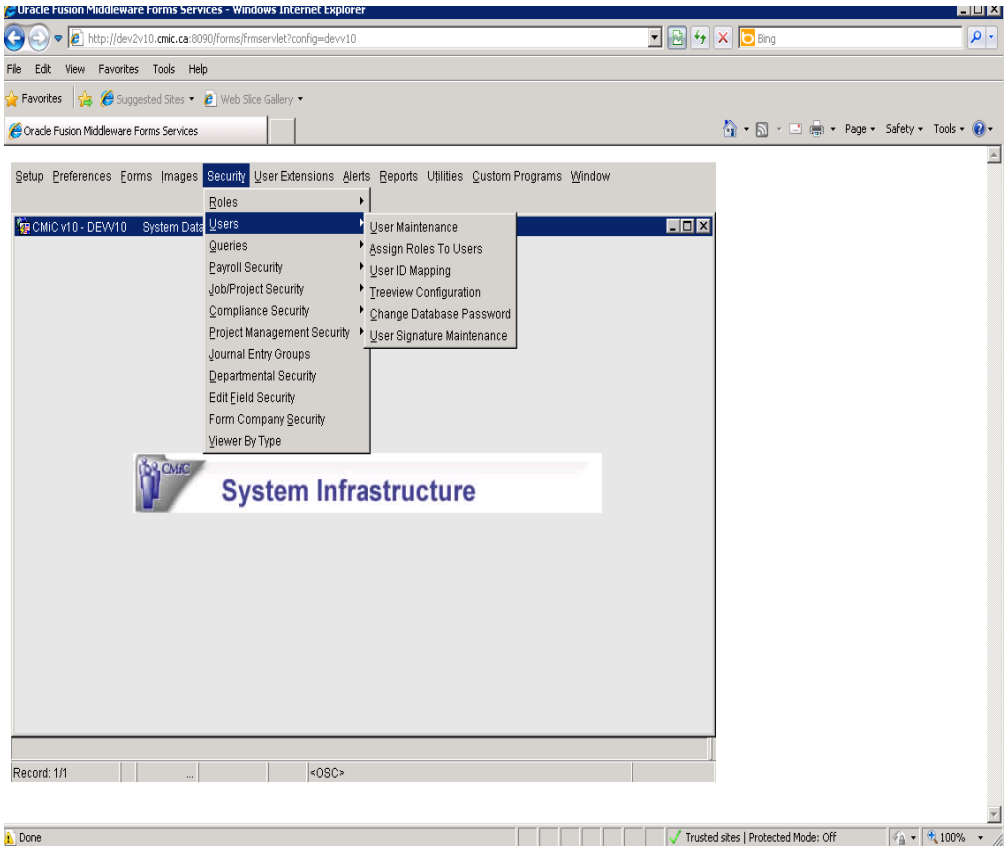
You will be prompted to confirm the action.

After you click [**Yes**] the account will be unlocked, and the user page re-displayed.



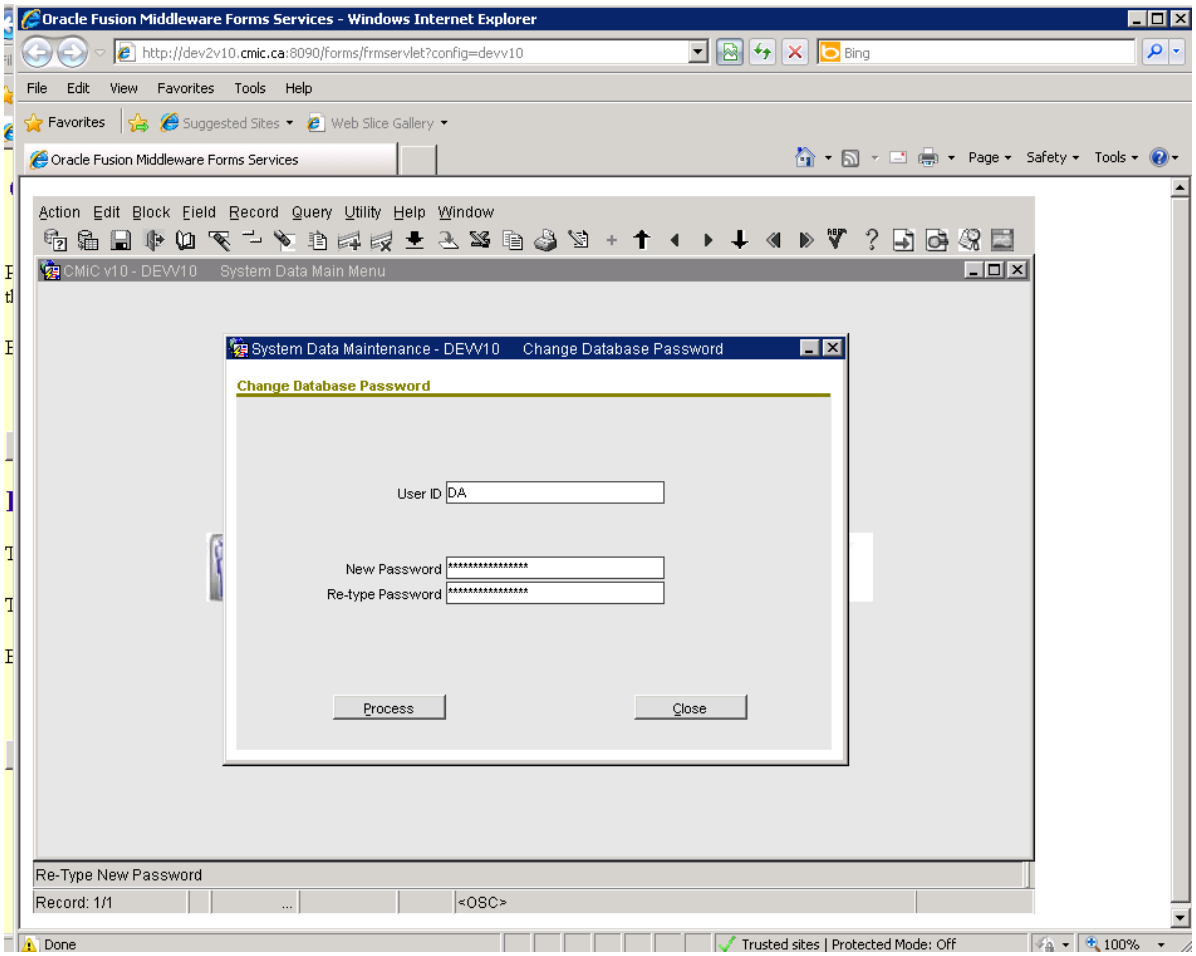
Repeat as necessary.

Changing DA's Database Password



You may wish to have different passwords for 'DA' for each of your environments to do this:

- Use "Change Database Password" to change the database and the RAD at the same time



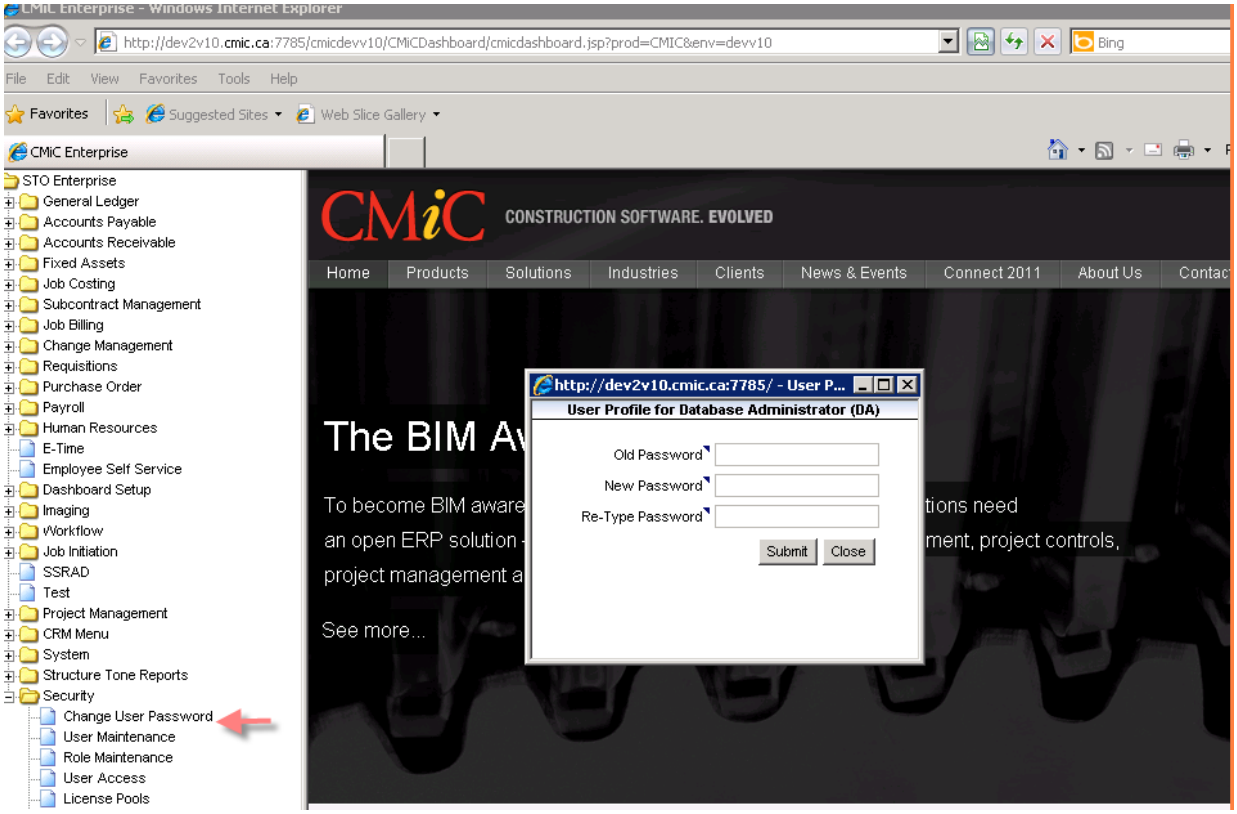
OR

Manually change the password in the database via SQL

Manually change the RAD password for the Environment in Oracle OID to match

- Change DBDEFINE.sql on all servers in the d:\cm\V10\<environment.\jspsql Directory
- Repeat for each environment you

Changing DA's Single Sign-on Password



- Use OID to change the Single Sign-on Password

  Or

  Login as 'DA' and use the "Update Single Sign-on' program from the Security Tree View

Changing DAR's Database Password

- Manually change the password via SQL
- Manually change the password in the RAD to match via Oracle OID
- Change DBDEFINE.sql on all servers in thed:\cm\V10\<environment.\jspsq1
- Change the Password in JAZN
  - **Login to the app server as 'Oracle'**
  - **Start a DOS Prompt and run the Following:**

    set ENVIRONMENT_NAME=prod

    set ORACLE_HOME=D:\oracle\midtier\asinst_midtier

    set OLD_PASSWORD=DAR

    set NEW_PASSWORD=DARDAR

    cd /d %ORACLE_HOME%\j2ee\OC4J_CMIC%ENVIRONMENT_NAME%

%ORACLE_HOME%\jdk\bin\java -jar %ORACLE_HOME%\j2ee\home\jazn.jar -user admin -password welcome -setpasswd jazn.com dar "%OLD_PASSWORD%" "%NEW_PASSWORD%“

- **Repeat this for each application server with a midtierjsp instance**

- Change the Password for Oracle Reports

  Login to the app server as ‘Oracle’

  Change directories to D:\oracle\midtier\midtier\reports\conf

  Edit the file cgicmd.dat and change each environment entry

  E.g. Prod: userid=“dar/dar@prod”

  Note: as of release 2006-202 there will be two entries in cgicmd.dat for each environment, so be sure to change both of them. The first entry is keyed by the environment name, while the second uses the environment name suffixed with “_Server”.

  E.g. Prod: userid=“dar/dar@prod”

  E.g. Prod_Server: userid=“dar/dar@prod”

  Repeat this for each application server

  Restart the Forms component on all servers

Changing the Operating System Password for the Oracle User Account

It is normal for security purposes to change the password for the operating system user oracle on your application servers from time to time.

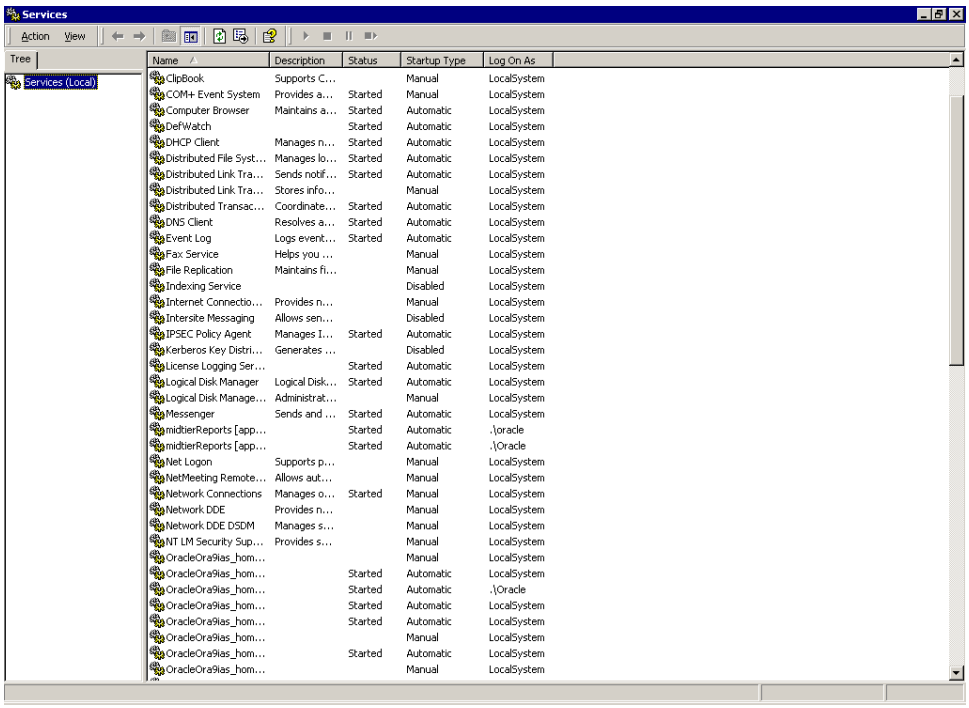
In CMiC Software 2004 and higher all Oracle Application Software is installed on the application server under the operating system account oracle.

When the application server is running a Microsoft Windows operating system, some of the Oracle software is run as a service under the authority of the user oracle. In this scenario, if you change the oracle user’s password, the Oracle Application Server software on that machine will not start up unless you also change the oracle user’s password on each of the services that are run under the authority of the user oracle.

Here is an example on an application server:

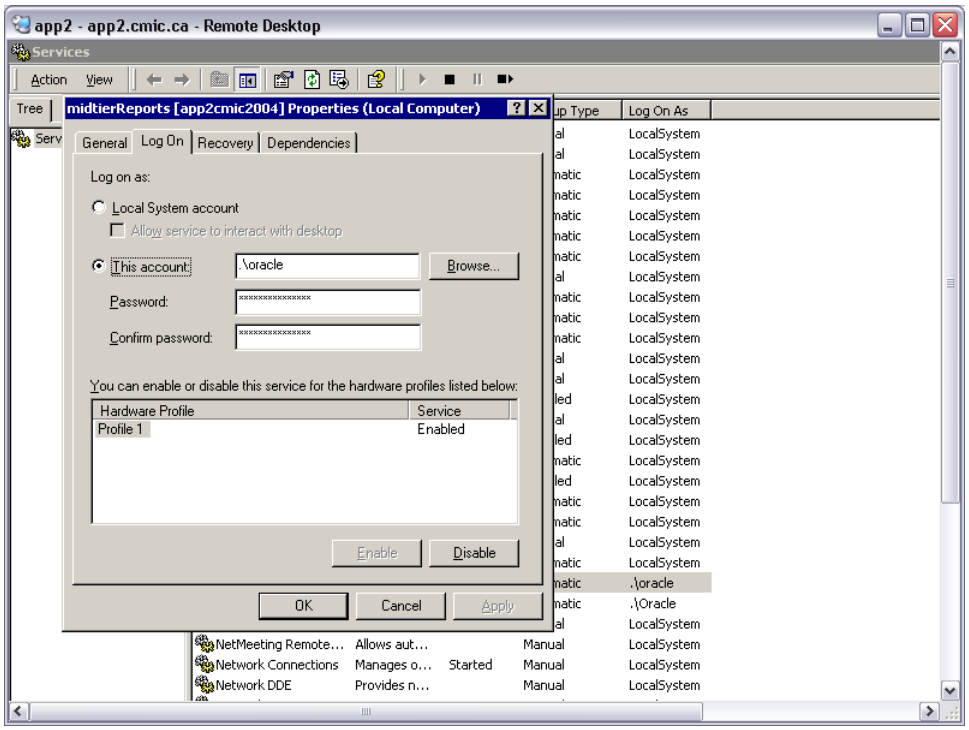
Start Control Panel->Administrative Tools->Services.

Scroll through the list of services and look for any that is run by the user oracle.



In this example there are 3. There may be more on your system.

For each one, highlight the service and display its properties. Go to the Log On tab and change the password, then click ok to save the change.



Repeat this for all services that are run under oracle's authority.

As well CMiC Software uses a scheduled task to start up the Oracle software when the server is booted.

In CMiC Software V10 on any server, this task is called server_start.

These scheduled tasks are run under the authority of the user oracle.

There may also be another scheduled task that reboots the server in preparation for the nightly backup. If you have such a task, it will also be running as the user oracle.

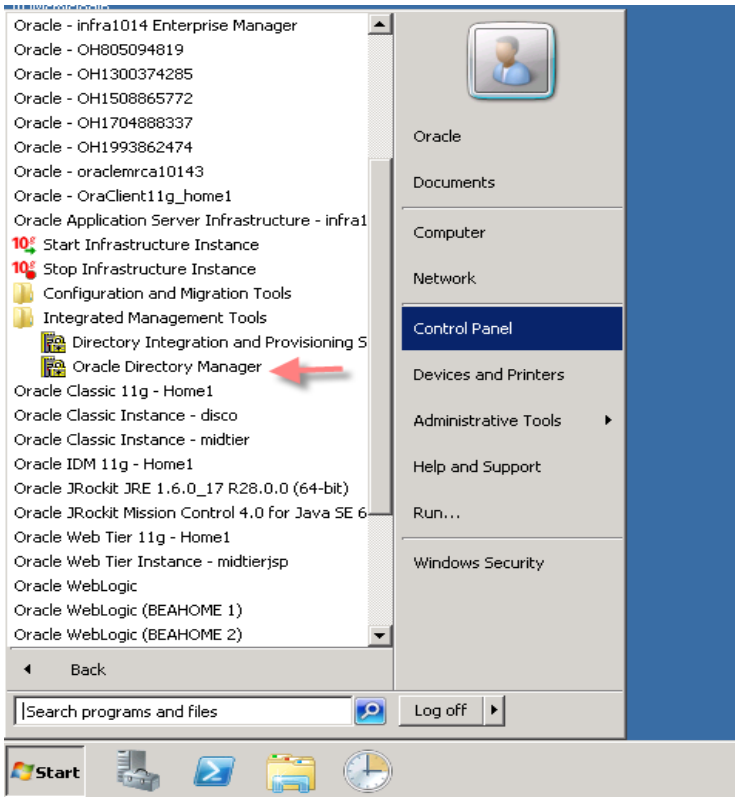
So if you change the oracle user's password, you must also start Control Panel->Scheduled Tasks, and edit the properties of these tasks and change the oracle user's password here.

Changing LDAP Expiry and Lockout Times

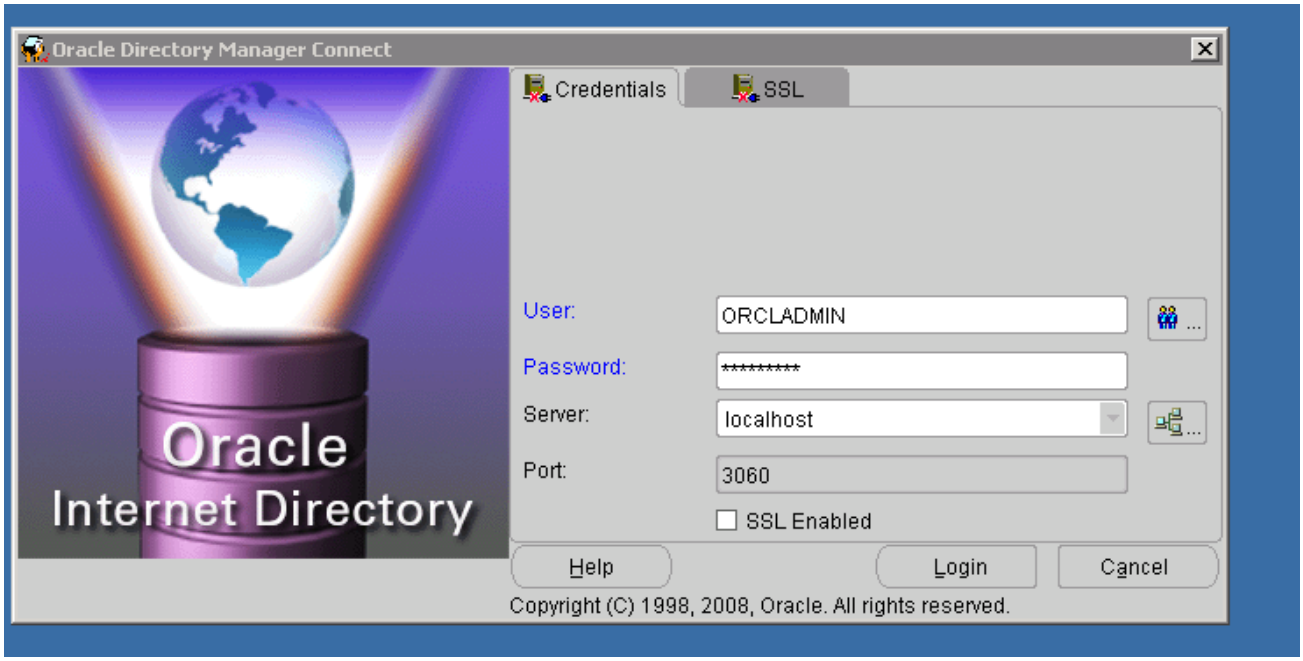
Oracle Single Sign-on (LDAP) counts how many times a user tries to login with a bad password. This count is not per session it is cumulative. Therefore a user may type a bad password once on Monday, then again once on Thursday and again once Friday and on Friday they will get the message that the account is locked. This is confusing to the user as users do not remember that they typed their password wrong on Monday. There are settings that can be changed to alleviate this problem.

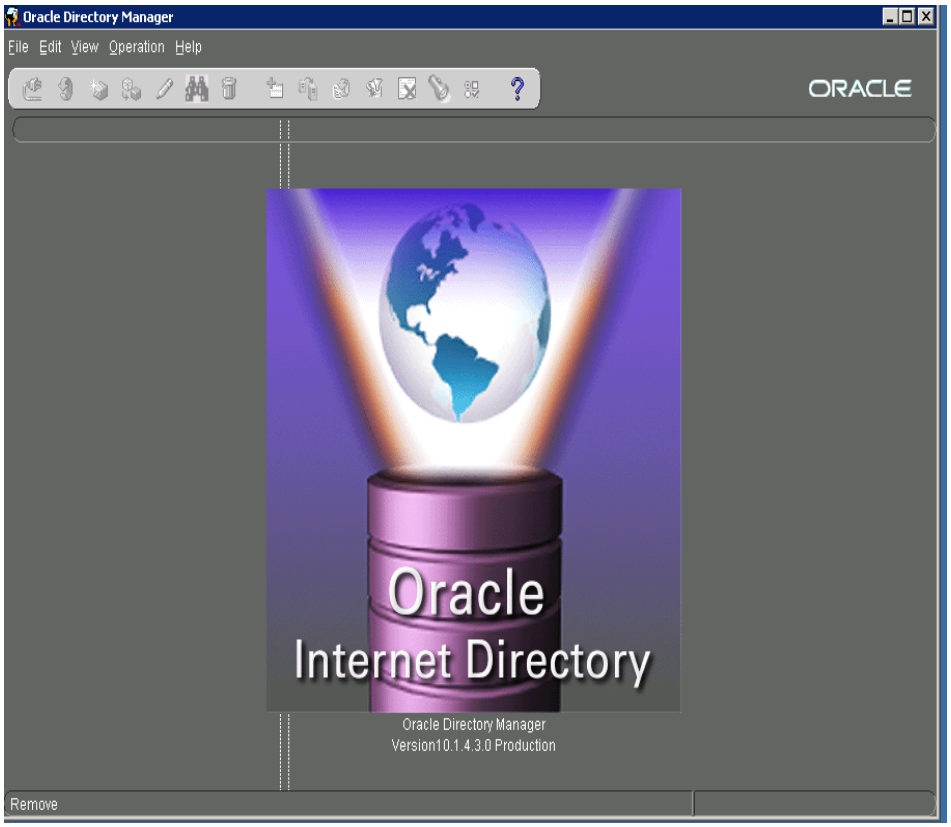
There are also settings that allow the administrator to change the default expiry times set for all LDAP passwords.

- Login to the Infrastructure Server as the user Oracle
- Open the Oracle Directory Manager program – it is found under the Start Menu >ALL Programs>OracleAS Application Server Infrastructure>Integrated Management Tools menu.
- Login as ORACLAMDIN

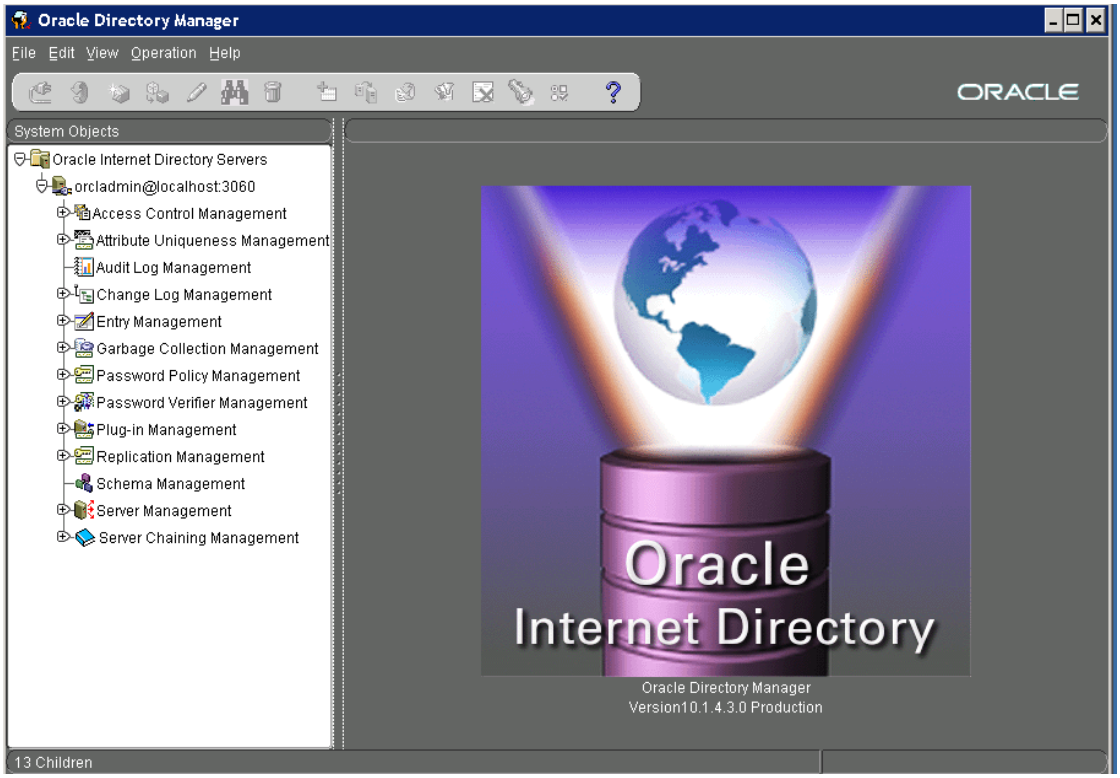


The system will then display a screen similar to below:

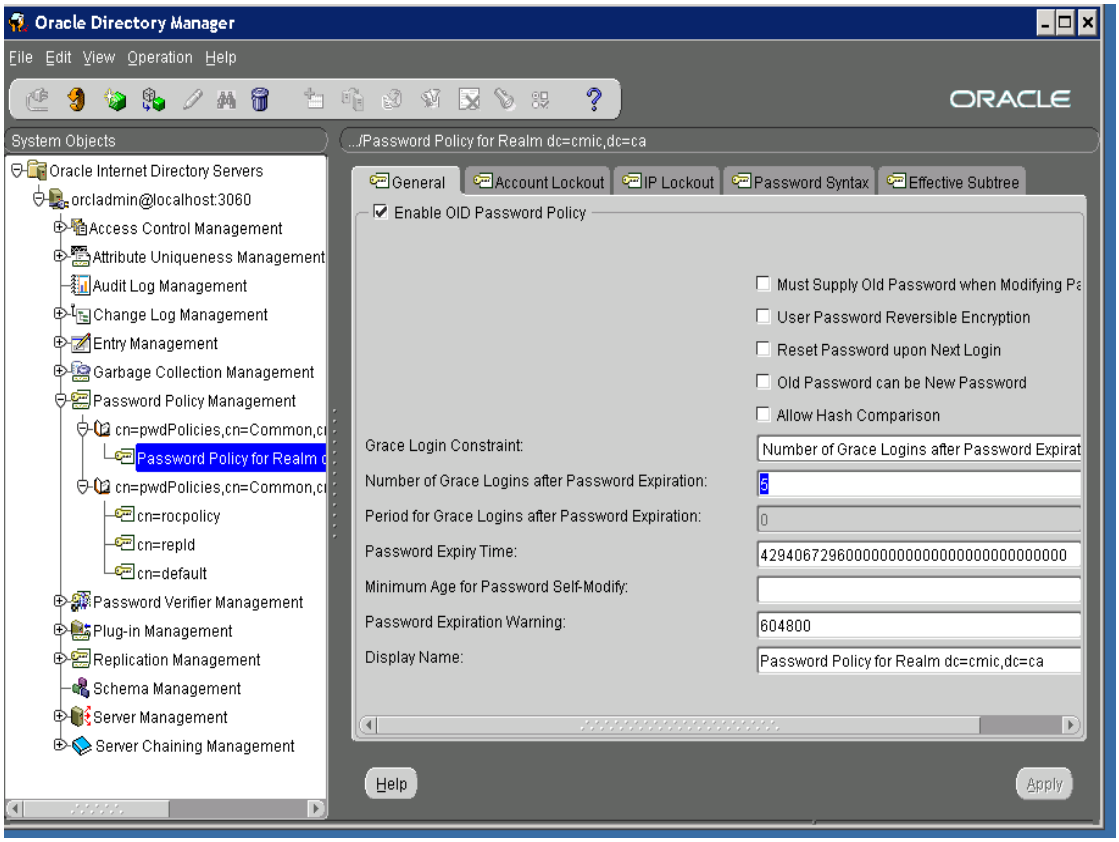




- Using the mouse click on the white line on the left side of the screen and slide the picture over to the right. This will reveal a Treeview.



Open the 'Password Policy Management' node on the tree.



Select 'Password Policy for Realm…'

On the ‘General’ tab you can change the Password Expiration policies.

Number of Grace Logins after Password Expiration

By Default the Number of grace logins after the password has expired is set to null/0. This can be adjusted if you wish.

Password Expiration Warning

Enter the number of seconds before password expiration that the directory server sends the user a warning. If password expiration is enabled, then, by default, the directory server sends the user a warning three days before the password expires. The directory server sends the warning at each logon.

If the user does not modify the password before it expires, then the directory server enforces the modification. This means that the user is locked out until the password is changed by the administrator.

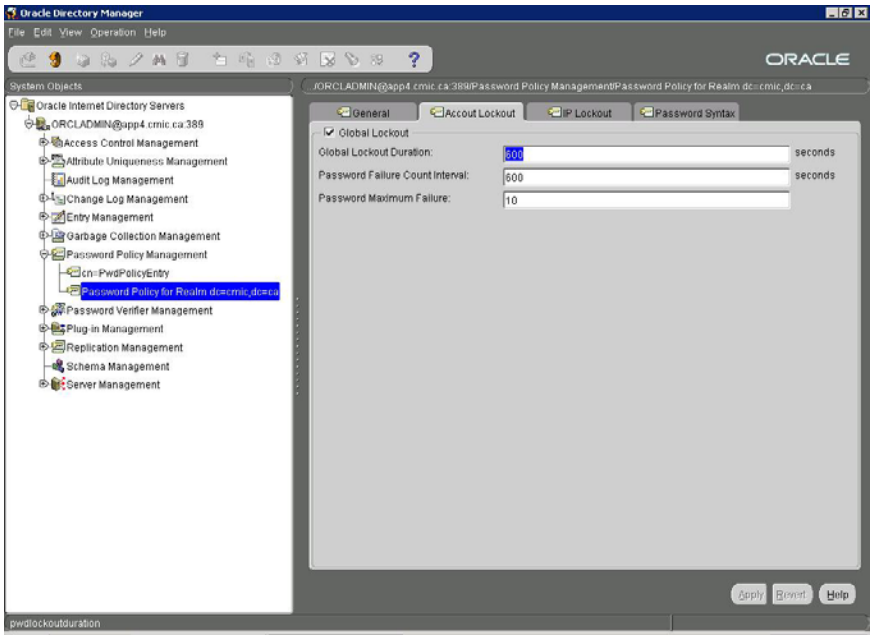
For this feature to work, the client application must support it.

Password Expiry Time

Enter the number of seconds that a given password is valid. If this attribute is not present, or if the value is 0, then the password does not expire. By default, user passwords never expire.

Adjust Lockout parameters

Select the ‘Account Lockout’ tab



The fields that you will be updating are:

Global Lockout Duration:

This field determines (in seconds) how long an account will remain locked. During this time the user will see the standard ‘Your Account is Globally Locked’ locked message.

Password Failure Count Interval:

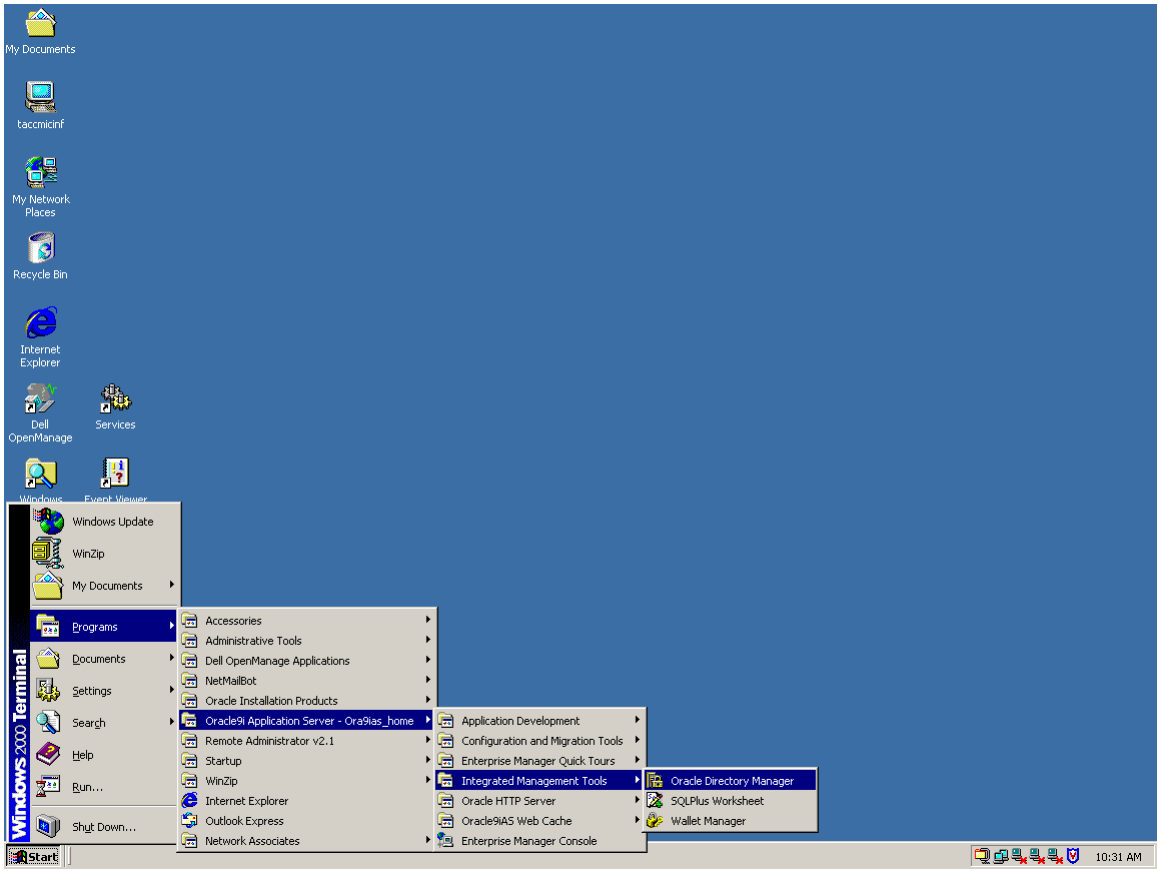
This field determines (in seconds) how long the accumulation of incorrect logins is kept until the system re-sets it to 0.

CMiC Suggests that both these fields be set to the same number 3600 (1 hour). This way, if a user does get locked out, when they can access the system again, the counting is also reset.

Password Maximum Failure:

This field determines the number of times that the user can type an incorrect password before the account will be globally locked. We recommend that you leave this field at the default value of 10.

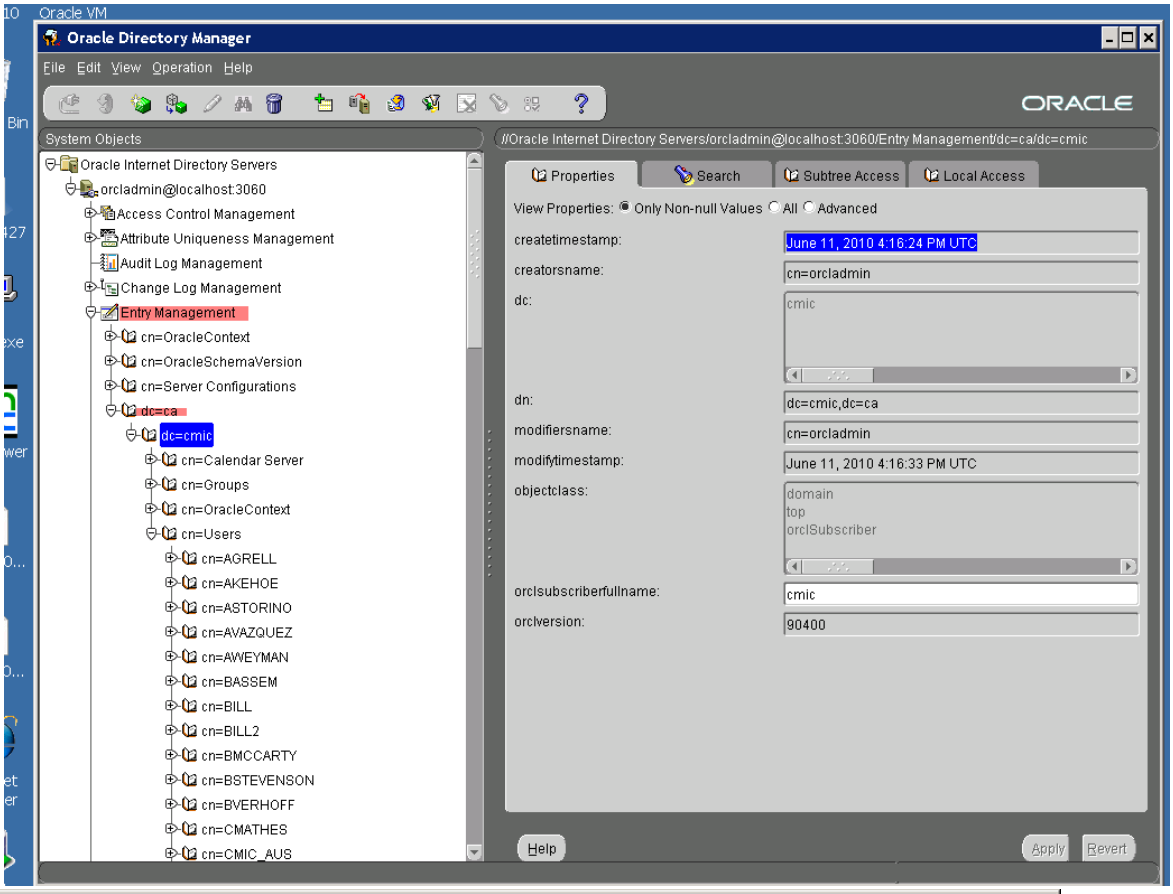
What to do if the orcladmin OID user is globally locked

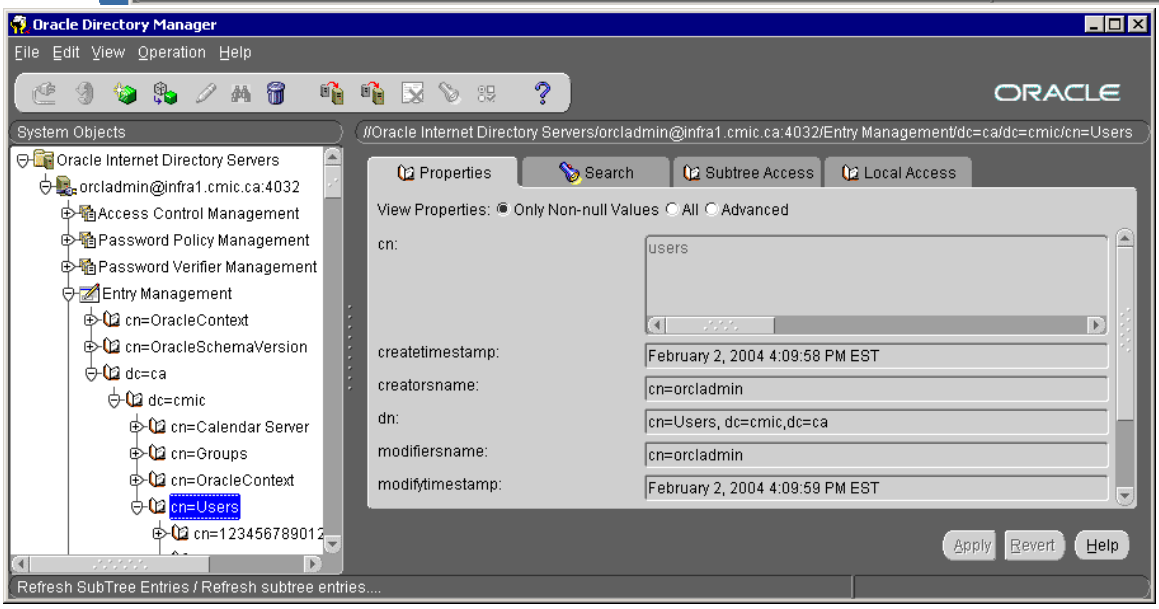


- Login to your infrastructure server as the user who installed V10 (usually oracle)

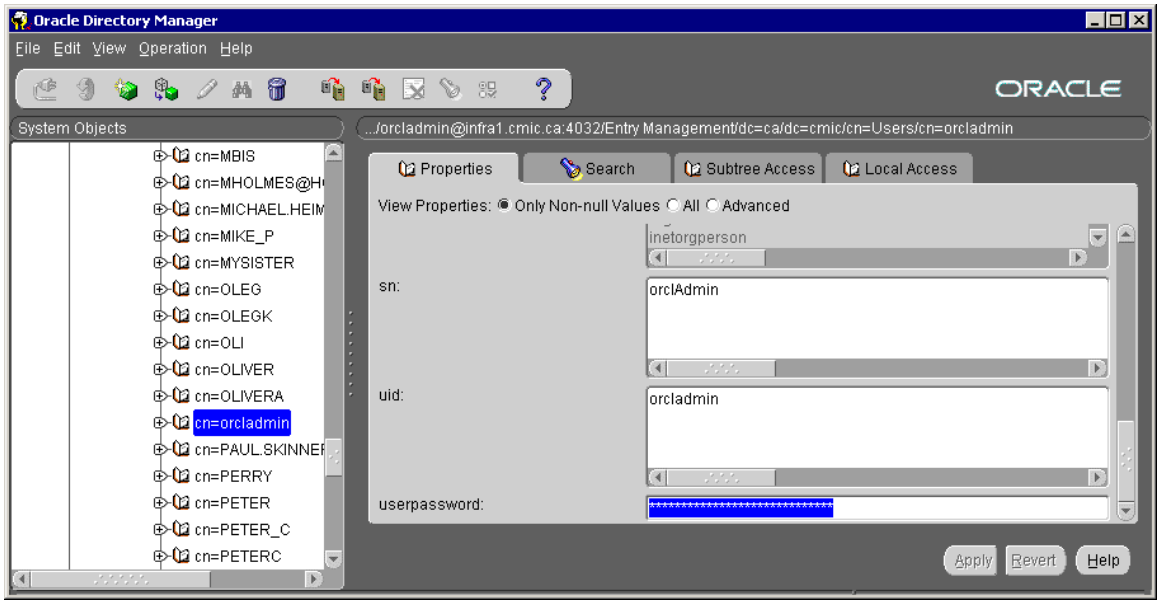
Start Oracle Directory Manager

- Login as orcladmin
- Find Users node for your domain
  - Open Entry Management node
  - Open dc=ca node under Entry Management. The name of the node depends on the domain. If the server name is infra1.cmic.ca , the name of the node would be dc=ca
  - Open dc=cmic under the node from the previous step. The name of the node depends on the domain. If the server name is infra1.cmic.ca, the name of the node would be dc=cmic
  - Open cn=Users node under the node from the previous step





- Find the orcladmin user, select it, and retype the password into the userpassword item



- Click the Apply button

Manually Deploying JSP Applications

Occasionally it may be necessary to manually deploy a JSP file. This procedure should only be done if you have been asked by someone at CMiC to perform this task. Normally all JSP files are deployed during the Patch Installation routine.

Copy the required files to d:\cm\ias\J2EE\<ENV>\ deployment\deploy directory

Open a DOS prompt in D:\cm\ias\j2ee\<ENV>\deployment\bin

At the DOS prompt type in cmic<ENV>_deploy.bat Example: cmicdevv10_deploy.bat

This will deploy the file; the processes/steps involved will be displayed on the screen and will be similar to below:

<cmic-deployement>

<wlst-enging>

</wlst-enging>

<wlst-connection>

Connecting to t3://salesV10wls.cmic.ca:7002 with userid weblogic ...

Successfully connected to Admin Server 'cmicsalesv10_salesV10wls_cmic_ca' that belongs to domain 'cmicsalesv10'.

Warning: An insecure protocol was used to connect to the

</deployment-results>

Disconnected from weblogic server: cmicsalesv10_salesV10wls_cmic_ca

<lock-file>

</lock-file>

</cmic-deployement>

Once the 'Dos Prompt' returns the process is complete.

The deployment logs are at D:\cm\ias\j2ee\<ENV>\deployment\logs\deployment

Re-deploying JSP Applications

Sometimes when deploying JSP's either manually after a patch or within the patch install procedure the deploy fails. If this happens please try the following steps to correct the situation.

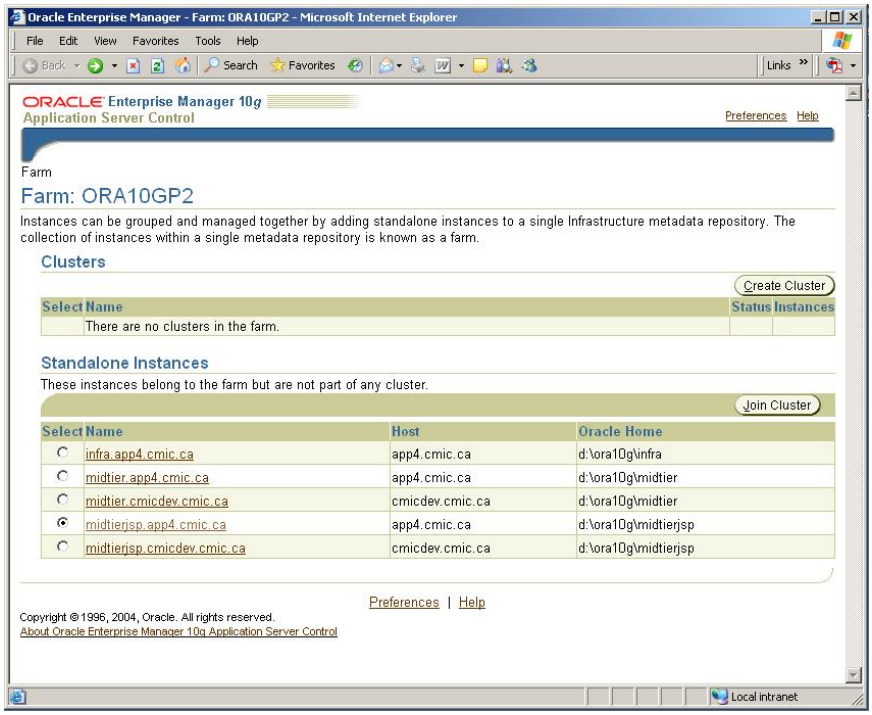
When files are deployed using the cmic<ENV>_deploy.bat file located in the d:\cm\ias\J2EE\<ENV>\ deployment\deploy directory either manually or during via patchinstall the files are removed from the d:\cm\ias\J2EE\<ENV>\ deployment\deploy directory if the deployment was successful. So under normal circumstances this directory should always be empty.

Any files that did not deploy successfully will be still sitting in: d:\cm\ias\J2EE\<ENV>\ deployment\deploy directory.

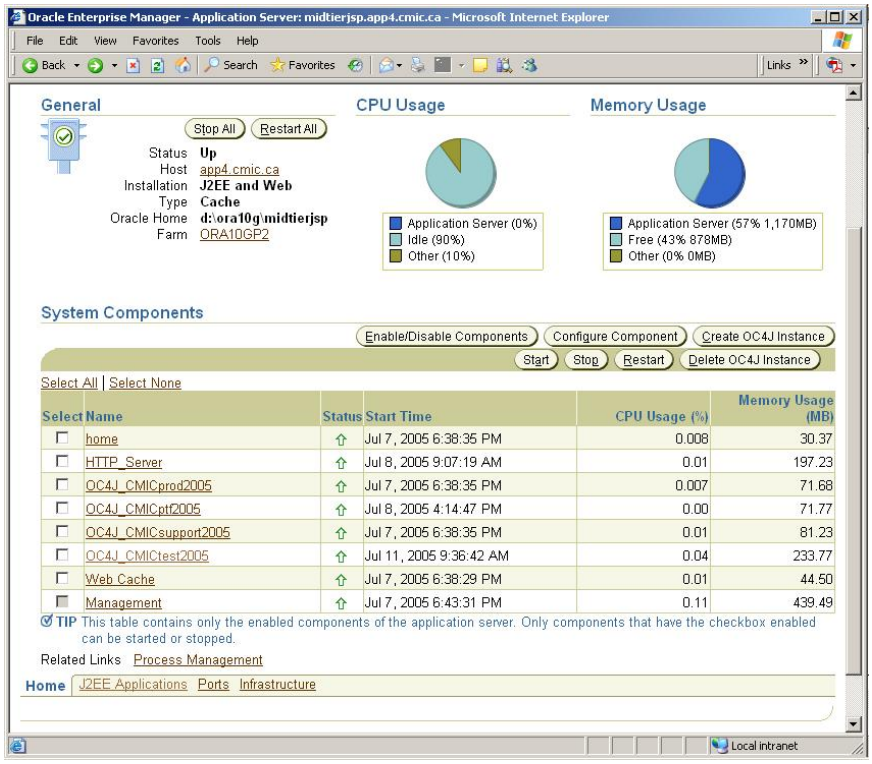
Make a list of the file names then follow the instructions below:

1) Login into Enterprise Manager as the user ias_admin

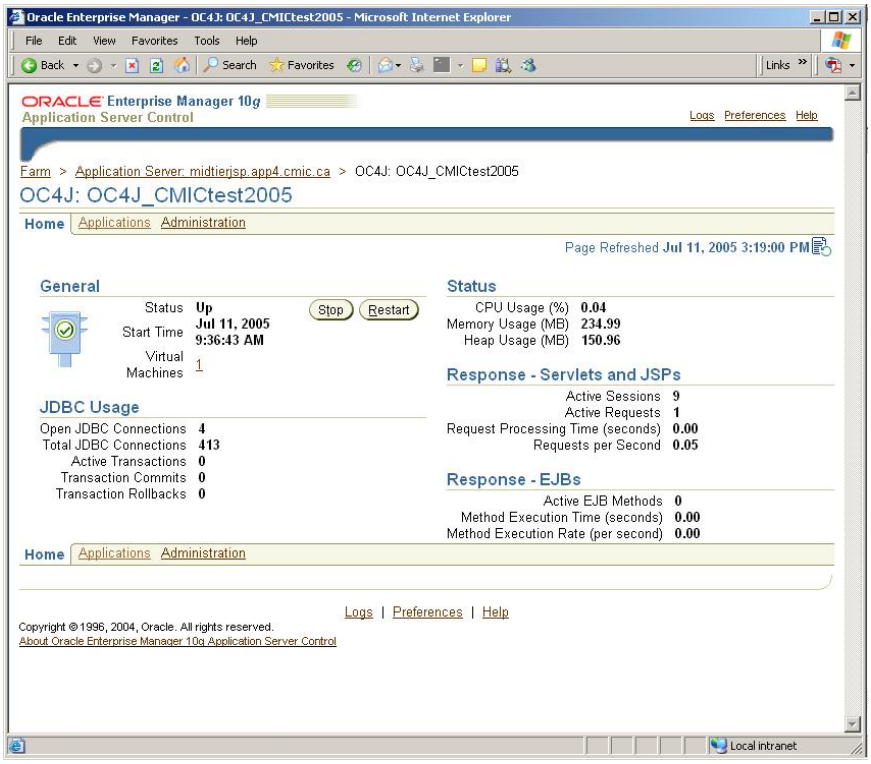
2) Select the midtierjsp instance by clicking on the Name link.



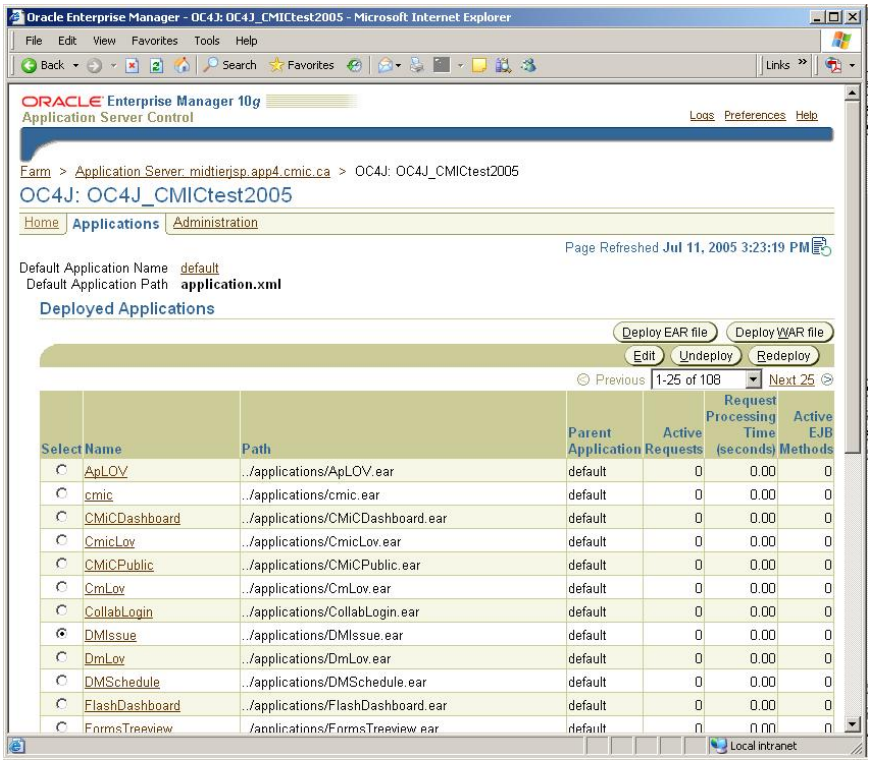
3) Select the OC4J environment where the JSP(‘s) did not deploy correctly by clicking on the Name link of the OC4J Server.



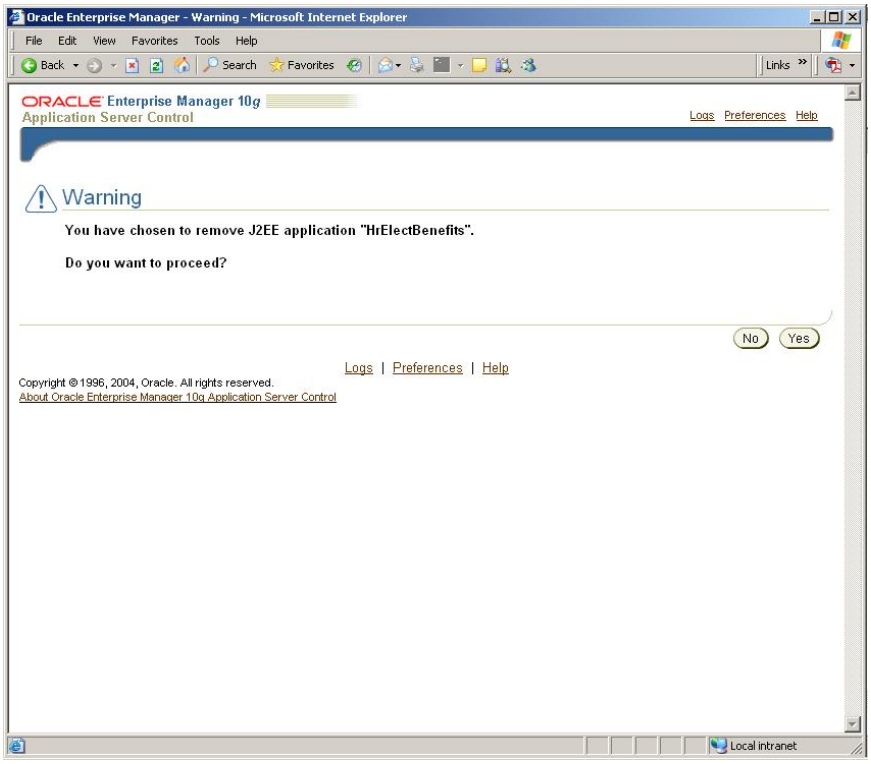
4) Select Applications option from the HOME line.



5) Scroll through the list of all deployed applications until you find one of the files that did not deploy correctly. Select the file by marking the select field then press the [**Undeploy**] button.

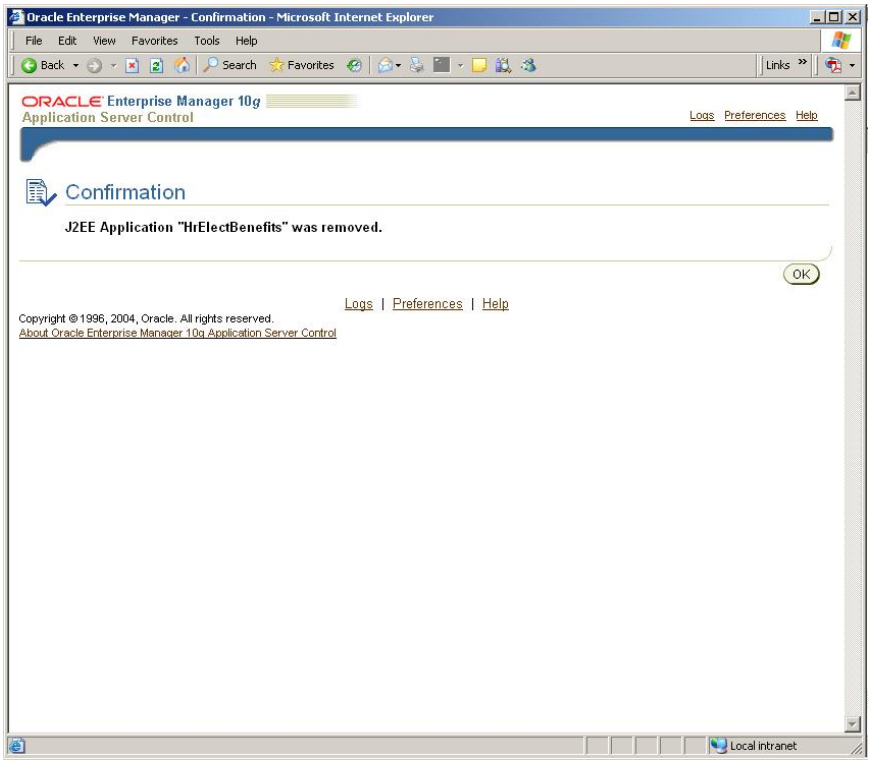


6) The system will ask you to confirm the action – Verify the application name and if correct press [**Yes**]



The system will start to undeploy the file. This may take a little time – be patient!

When the process is complete the system will return a screen saying all was completed.



7) Press **[OK]** to return to the list of applications

Repeat steps 5 thru 7 for each file that did not deploy in the environment.

Exit Enterprise Manager.

8) Login to the server on which the JSP's did not deploy correctly as the user Oracle.

9) Open a DOS prompt in the d:\cm\ias\oc4j\<Environment>\deploy directory

10) Type in **Deploy_<Environment>**

This will deploy all files still sitting in the d:\cm\ias\oc4j\<Environment>\deploy\new directory.

When the deployment has completed successfully the DOS window will say that all was successful. Double check the D:\cm\ias\oc4j\<Environment>\deploy\new directory is empty.

If the DOS window indicates that there is still an error, please create an Issue and include the text from the Deployment DOS window.

Error Opening JDBC Connection

Any time you get an error message with a java stack trace while running CMiC Software check for the words "Error opening JDBC connection". That is the most frequent error that people encounter. It means that the application server cannot connect to the database server.

In most cases you should be able to resolve that problem easily and quickly, without contacting CMiC support.

The three main reasons why this error occurs are:

1) The database is not up (90% of the cases)
2) The database listener is not up
3) There is a network error between the app server and the database server.

You can solve the problem in 90% of the cases just by starting the database.

Nothing needs to be rebooted.

You should NEVER reboot the app servers to solve this problem except as a very last resort.

Make sure the database IS up

First you should test whether the database is up by attempting to log in via sql*plus from a client workstation.

If you get an oracle error message that "Oracle is not available" you should attempt to bring it up. You can do this by logging in to sql*plus as the user sys and issuing the startup command.

SQL>startup

You may be able to do that from a client workstation. Otherwise you'll have to log in to the database server and run sql*plus from there.

In 90% of the cases the problem is now solved.

Verify the database listener is up

If however, you are unable to start the database, you should contact CMiC Support for assistance at this point.

It's pretty unlikely that you'll still have a problem if you did start the database successfully. If the application server still gives the "Error opening JDBC connection" message, you'll need to continue with the following steps:

First check the database listener. Start a DOS prompt on a client workstation. Issue the command tnsping <database name>. For example, if the database in question is PROD, you would type:

C:\>tnsping PROD

If tnsping connects, it will respond with a message “OK”. If so, the database listener is ok.

If tnsping responds with an error message, you need to log on to the database server and start the listener.

If the database server is running Windows, go to Control Panel->Services and find the listener service associated with the database in question. Start (or restart) it.

If the database server is running Linux or UNIX, log in as oracle and give this command:

lsnrctl start

When it finishes give this command:

lsnrctl status

If lsnrctl status gives an error message (on Linux/Unix) of if the listener service (on Windows) cannot be started, contact CMiC Support.

If you are successful in starting the listener, try running tnsping again from the client workstation. If tnsping connects, then you're probably ok to run the programs.

Verify the Network Connection

If the database AND the listener are both up, but the app server still gives "Error opening JDBC connection" then you probably have a network problem. Log in directly to the app server console as the user oracle. Try tnsping and sql*plus. If neither of them can connect to the database, but you CAN connect to the database using sql*plus from a client workstation, it's probably a network error.

Investigate the network problem. If you can’t fix it, contact CMiC Support for help.

Managing Report Servers in CMiC V10

CMiC Software version V10 uses Oracle Application Server 11g Release 2. (AS11G)

An Oracle process called OPMN manages all report servers.

The Oracle installation automatically creates a Windows Service for each report server. Because OPMN manages all the report servers, we set the startup property for each service to Manual when we install CMiC Software.

You should **NOT** try to start report servers from the Windows services applet.

You can manage the report server directly from the application server where it is running.

Here are the steps to follow:

Login to the application server as the user oracle

Run the following commands from dos a prompt:

cmd> cd D:\oracle\midtier\asinst_midtier\bin

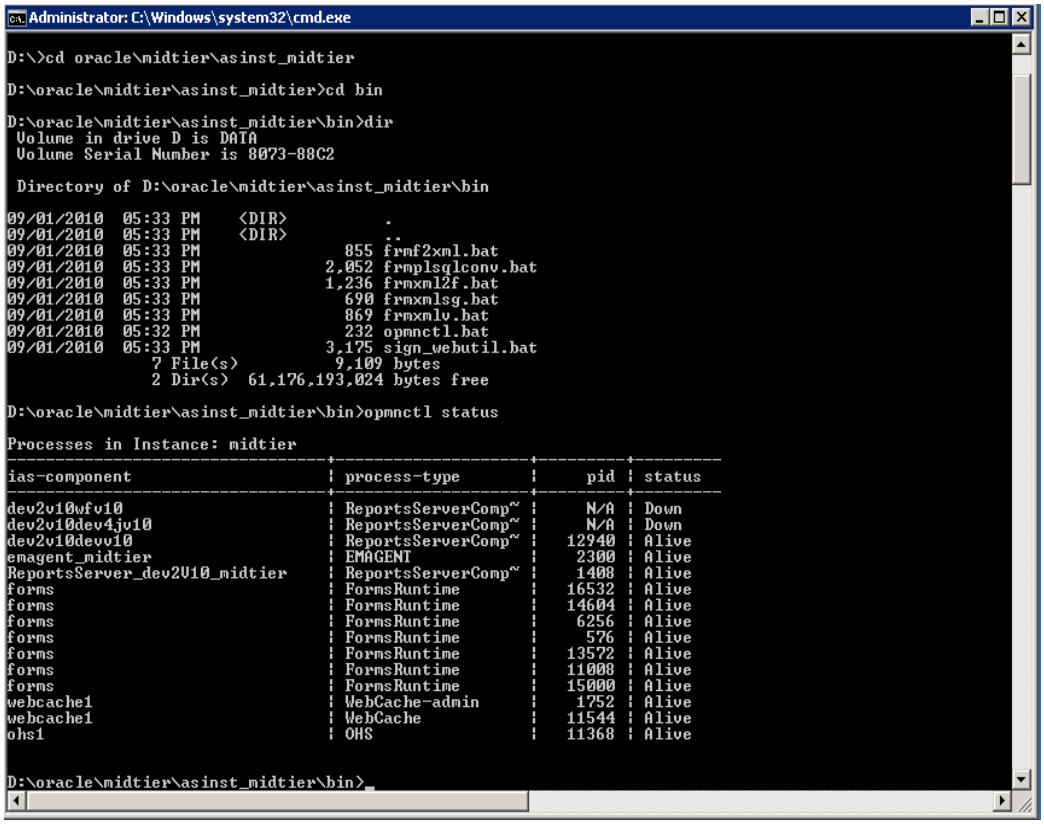
cmd>opmnctl status

Run the following commands from dos a prompt:

cmd>cd D:\oracle\midtier\asinst_midtier\bin

cmd>opmnctl status

The output will look similar to this:



You can stop a report server with the “stopproc” command.

For example, to stop the “dev2v10devv10” report server the command is:

cmd>opmnctl stopproc ias-component= dev2v10devv10

You can start a report server with the “startproc” command.

For example, to start the “dev2v10devv10” report server the command is:

cmd>opmnctl startproc ias-component= dev2v10devv10

If the opmnctl status command shows that the report server is down, use the startproc command to start it up. If opmnctl status shows that it is up, but you are having problems with it, you can try shutting it down with stopproc and then starting it back up with startproc to see if the problem goes away.

Administering Oracle and CMiC Workflow

Loading Workflows into a Database

The tool for loading workflow definitions into and extracting workflow definitions from a database is Oracle Workflow Builder. When you extract a workflow definition from a database you create a .wft file.

If you need to load a workflow definition file into the database you can also use the Oracle wfload utility.

Wfload_cmic.bat is a program created by CMIC.
You will find it in the D:\oracle\midtier\midtier\bin\ directory.

The syntax is
Wfload_cmic.bat owf_mgr/<owf_password>@<db> <wft_file>

For example, if the file you want to load is named sample.wft and the database is TEST and the password for the owf_mgr user in the TEST database is owf_mgr, you would start a DOS prompt on the application server and run this command:

DOS>D:\oracle\midtier\midtier\bin\wfload_cmic.bat owf_mgr/owf_mgr@TEST sample.wft

Please note that if the file name contains spaces you should enclose it in double quotes. So, for example, to load a workflow definition file called Department 10 Workflow.wft you would use:

DOS> D:\oracle\midtier\midtier\bin\wfload_cmic.bat owf_mgr/owf_mgr@ "Department 10 Workflow.wft"

Utility Scripts for Maintaining Oracle Workflow

The following scripts are all found in the JSPSQL folder on the application server(s). They should be run via sql*plus as user OWF_MGR not DA.

The first two scripts are useful to clean out existing workflows, especially when you load new definitions of existing workflows.

The third script is useful to make sure that all users in your LDAP (Oracle OID) are also available for using Oracle Workfow (i.e. for sending/receiving notifications).

owkf_purge_items.sql

Run this script as user OWF_MGR to delete all completed instances of workflow items. It will not delete instances that finished on the current day. This script should be run before running owkf_purge_activities.sql.

owkf_purge_activities.sql

Run this script as user OWF_MGR to delete obsolete revisions of workflow activity definitions. This is only useful if a lot of changes have been made to your workflow definitions. Every time you save a workflow into the database another revision is created. All workflows launched will use the latest revision but older workflows may still be using older revisions. Revisions still in use by a workflow item instance will not be deleted by this script, which is why owkf_purge_items.sql should be run first.

owkf_synch_all.sql

Run this script as user OWF_MGR to create workflow users for all LDAP users who are not already workflow users.

Restarting Application Server Components

CMiC Software uses Oracle Application Server software on the middle tier. For version 2004.2, CMiC Software runs on Oracle Application Server 10g Release 1. For version 2006, CMiC Software runs on Oracle Application Server 10g Release 2.

CMiC Software uses 3 “installation types” of Oracle Application Server software.

One is called Infrastructure.

One is called BI_Forms.

One is called J2EE.

Each of these is a separate installation, installed into what Oracle calls a separate “Oracle Home”. Each installation also has a name. We call the three installations “infra”, “midtier”, and “midtierjsp”.

A table makes it easier to understand:

In version 2006 it looks like this:

Installation Type	Name	Root Directory
Infrastructure	Infra	d:\oracle\infra
BI_Forms	midtier	d:\oracle\midtier
J2EE	midtierjsp	d:\oracle\midtierjsp

You always will only have one infrastructure installation for one CMiC Software system. If you have more than one server, then you will most likely have more than one midtier and midtierjsp installation in that system.

Each installation type on a given server is called an instance. The instance name is <name>.<server>. So, for example, on server myserver.mycompany.com you might have both an infra installation and a midtier installation. These two instances would be named infra.myserver.mycompany.com and midtier.myserver.mycompany.com.

All the instances in one system are called a farm. The farm is managed by a single infrastructure instance. That is why there is never more than one infrastructure installation in one CMiC system.

Note: an installation is a set of files on the disk while an instance is the set of processes running in memory when the Oracle software is running. The terms installation and instance are often used interchangeably to refer to the same thing.

Each installation/instance contains multiple components. The components are unique to the installation type. For example, all installations (infra, midtier, and midtierjsp) have their own http server components, but report server components only exist in a midtier installation.

You can manage the components via command line.

Most of the time your actions will be limited to starting a service that is down, or stopping and then starting it if it is hanging.

Purpose of the Support Environment

CMiC Software always installs with an environment called Support. This environment is reserved for use by the CMiC Support department, to analyze problems on your system.

If you report a problem on your production system, the CMiC Support Department will attempt to replicate the problem in-house on their own systems. If they are unable to do so, they may need to attempt to replicate the problem on your system. In this case they need access to your production environment to do some testing. That is where the Support environment comes in.

The Support environment has its own set of directories and its own OC4J server to run CMiC programs on the application server. However, it is configured to point to your production database. This lets the Support Department put debugging versions of CMiC Software programs into the Support environment and run them. When they do that, it does not affect the users who are running in the production environment, because the production programs are not affected. But it does let the CMiC Support personnel run the debugging programs against the production database (where the problem is occurring) to find out what is causing the problem and get you a resolution to your problem.

Miscellaneous DBA/System Configuration Information

Creating PM Documents and Uploading Attachments

In the CMiC Project Management application users have the ability to create documents and upload attachments.

A document is a database record referring to a physical file. The actual file might be an MS Word document, an Adobe PDF file, or any other type of computer file.

After you create a new document, you can upload the actual file as an attachment. Other users can then download and review the file if they have the appropriate permissions. And with the correct permissions, you or another user can upload new revisions of the file – each revision is stored separately.

The Upload Process

The user uploads a file using a web browser's standard file upload capabilities. The upload is done using the http(s) protocol.

The uploaded file is initially copied to a temporary directory on the CMiC application server. From there, a process on the application server is invoked to copy the file to its permanent storage location, and the temporary copy is erased.

Once an attachment is uploaded to the application server, all attachment reads and writes are done by the application server itself. For instance, when the end user requests an attachment, the file server locates the attachment and downloads the file to the end user's browser, again using http(s) protocol. Permissions that control which attachments a given end user can read are defined inside CMiC Software.

The permanent storage location for attachments is specified inside CMiC Software as the "document root location". Each environment (PROD, TEST, etc.) has its own document root location.

All Project Management uploaded attachments are stored in sub-directories beneath the "document root". The attachment path for each attachment is stored with the document record in the database.

Each attachment, and each revision of an attachment, is stored in a separate sub-directory beneath the document root location. There is only one attachment file in any sub-directory. This avoids any file name collisions at the operating system level. Thus, if you upload 4 revisions of the same file, each revision is stored in a unique sub-directory.

Attachment Storage Options

As described above, the document root location determines where attachments are stored for any given environment.

The document root location can be a path on a local drive on the application server. This makes sense if you only have one application server.

It can also be on a shared network drive using the operating system's ability to share files across a network. So, for example, the document root location might point to a directory on a file server. This location can be specified by drive letter or by UNC name. Regardless of which method is used, the value should be identical for all servers. If this is not possible, you can set up machine-specific physical paths. This would be useful, for instance, if your Forms server is running Windows while your JSP server is running Linux. You can set up the document root location uniquely by server, thus allowing each machine to reference the location according to its own operating system conventions.

If you use a SAN device as your shared drive you might want to install a SAN card in each CMiC application server. This should give you the best performance because all servers can directly access the SAN, but of course it is also more expensive.

Alternatively you might set up a single file server with a SAN card, and send all requests for attachments through it. In this case each application server would use a UNC path to access the attachments. The UNC path would point to the file server. The file server would retrieve the data from the SAN and ship it across the network to the application server that requested it. This is less expensive, but it is also slower, and it means that if the file server goes down none of the application servers will have access to any of the attachments.

Defining Drill-Downs on the CMiC Dashboard

There are two ways to define drill-down relationships – depending on the complexity of the underlying views. If the target catalog objects are based on tables or views that are not the result of a large number of other views the filtering of drill-down information can be done without the use of context variables and any view can be used. If the target catalog objects are based on a long sequence of views that may result in a large number of objects being filtered at the end of this sequence, it is better to write the views so that the lowest level view filters using context variables. This allows the view to filter out unnecessary data as early as possible.

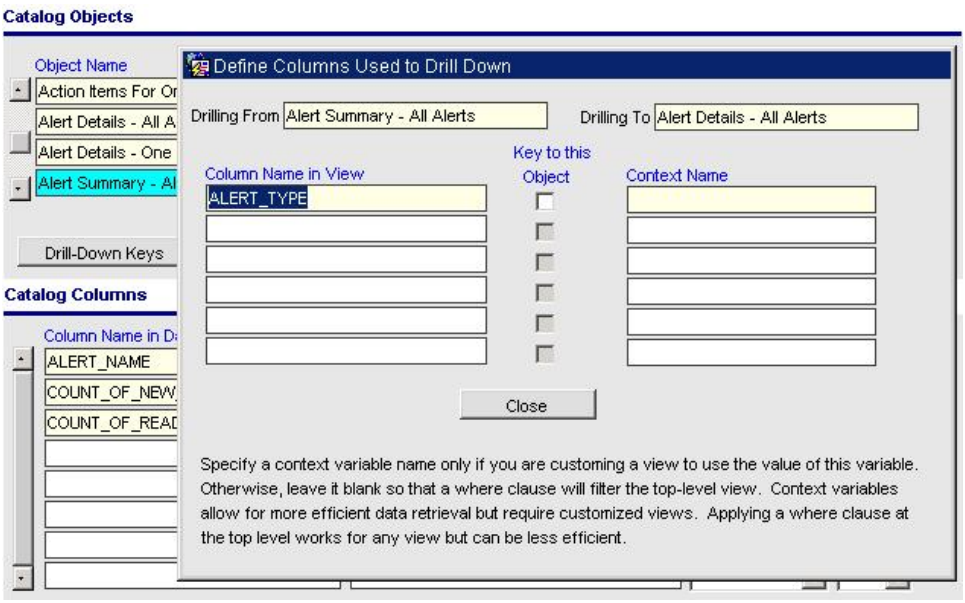
Regardless of the approach you use there are two important caveats.

1) Catalog objects that are used as targets of drill-downs must contain only the columns that you want to see. There is, at present, no way for the person designing a page to select which columns of drill-down objects should appear in the displayed table.

2) The type of the columns used to filter data must be varchar2.

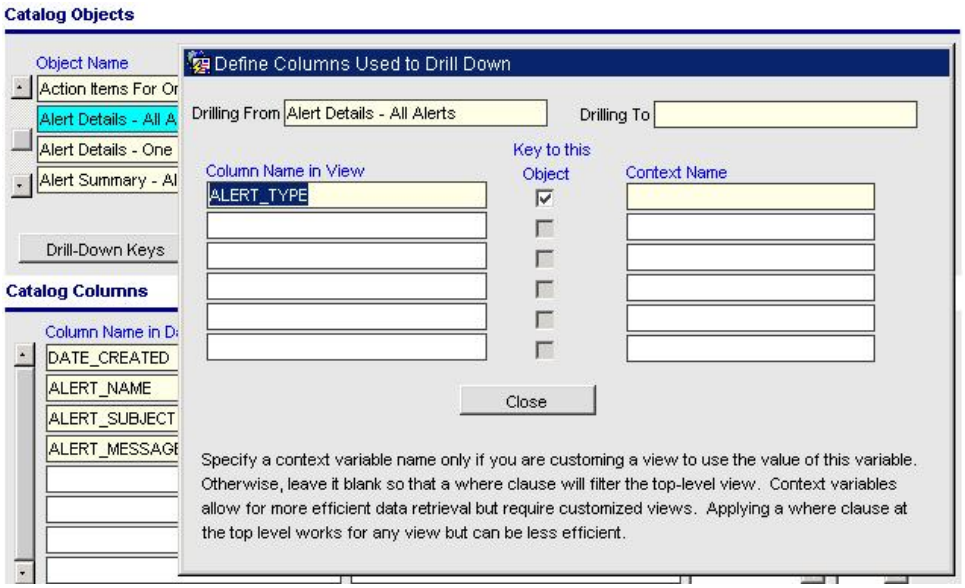
Case 1 – No Context Variables

A simple example of case 1 is the drill-down from alert summaries to alert details. The following is the situation viewed from the summary display object.



When this display object is selected and the "Drill-Down Keys" button is clicked the popup window shows the setup for drilling down to another level. The column name on the left contains the value that must be passed down to the "Alert Details – All Alerts" object to filter out all but the alert type in the row that was selected in the summary table. The summary record is not filtered, so the "Key to this object" checkbox is left unchecked.

The following is the setup for the detail display object.

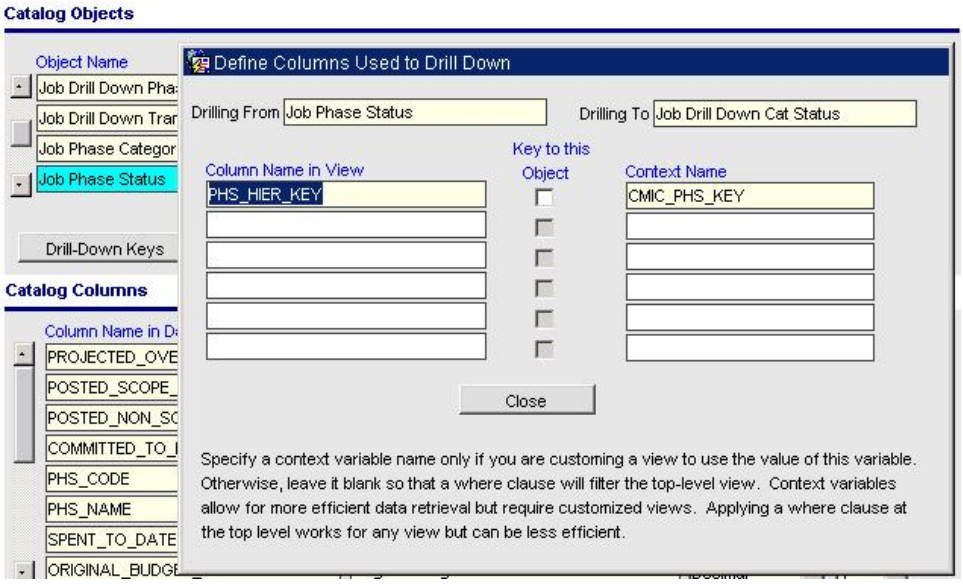


Since this is the destination, the column name on the left is the column that will be used in the where clause that will be added to the query that retrieves the data for this object. The value in this column will be compared to the value passed down from the summary object. In this case, the box is checked to indicate that the column is to be used in a where clause to filter the records from this object.

If there had been another level of drill-down, an additional column would be added on the left but with the box unchecked. The values of both of the columns (with boxes checked and unchecked) would be passed down to the third level, where there would be checks next to both corresponding columns.

Case 2 – Using Context Variables

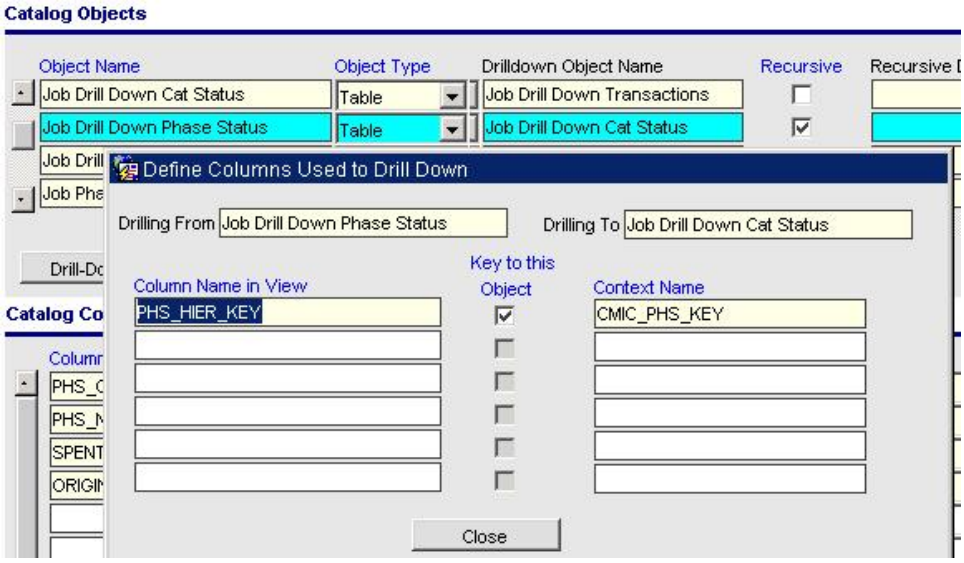
An example of the use of context variables is the job status hierarchy. The top of this hierarchy is the "Job Phase Status" object.



The column name on the left is used in the same way as in case 1. It identifies the source(s) of the value(s) to be passed when drilling down.

In this case there is a value in the "Context Name" column. This is the name of a context variable that will be used within the views used to retrieve data for the drill-down object. At this level it is used to tell the program processing the drill-down where to store the value passed down from the upper object.

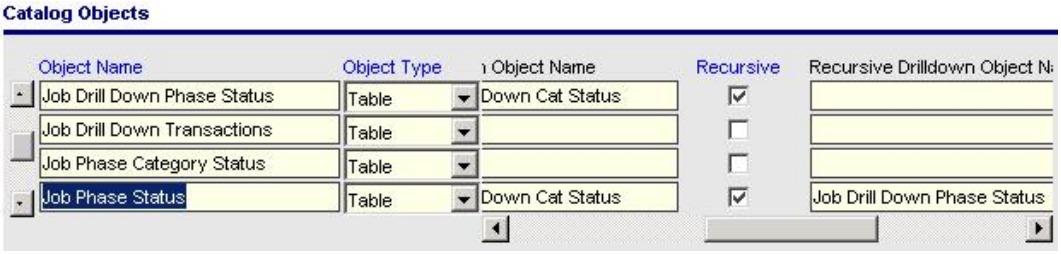
The next level ("Job Drill Down Phase Status") illustrates both the use of a context variable and recursive drilling.



This object may drill down to another phase level or it may drill down to a category. The recursive flag is used to tell the back-end processor to look for both possibilities. If there is another level of phases the target object is the same as the source. Otherwise it is "Job Drill Down Cat Status". Because we are using the hierarchy column as the key, the source and target keys are the same column. However, the values in this column at the lower level are longer. The views are designed to filter using LIKE on a prefix of the column rather than '='.

Note that in order to use recursive drill-downs you must define views that know which level each record is at in the hierarchy, and understand the mapping of columns used to link one level to the next. This generally means that you need a hierarchy column, although you may be able to achieve it by other means – such as a level value in conjunction with mapping CTRL columns to key columns.

Let us now return to look at the definition of "Job Phase Status".



Note that it is also defined as being recursive. However, this object cannot be the target of a drill-down because it contains many more columns than will fit on the page at one time. Hence, we override the Recursive Drilldown Object Name to specify that recursive actually means "Job Drill Down Phase Status".

Guidelines for Creating Views for CMiC Dashboard

When you create your own views for use inside CMiC Dashboard, please remember that the onus is on you to ensure that the results are accurate and that the view performs acceptably. CMiC cannot be responsible for either the results (data) or the performance (speed) of any Dashboard views not created by CMiC.

As well, any view you create must compile cleanly in sqlplus, i.e. it must be valid. The view must be syntactically correct when used "as is" in sqlplus, without the use of scan variables.

Double-quotation marks (") are prohibited anywhere in the creation of, or use of, a dashboard view.

SYS_CONTEXT

Any view called by the dashboard has automatically available to it the following "sys_context" values.

- Values related to security

  sys_context('CMIC_DASHBOARD','cmic_porsec_user')

  sys_context('CMIC_DASHBOARD','cmic_sec_user')

- Values related to the "project" (job) in the drop-down list of the operator:

  (a) values related to the specific "project" (job)

  sys_context('CMIC_DASHBOARD','cmic_job_object_oraseq')

  sys_context('CMIC_DASHBOARD','cmic_job_comp_code')

  sys_context('CMIC_DASHBOARD','cmic_job_code')

  sys_context('CMIC_DASHBOARD','cmic_job_contract_code')

  sys_context('CMIC_DASHBOARD','cmic_job_rowid')

  (b) values related to the company to which the specific "project" (job) belongs

  sys_context('CMIC_DASHBOARD','cmic_comp_conschart_code')

- Special Values

The dashboard catalog maintenance has available on the screen a field called “CMIC_PARAM_VALUE”. Any data inside this field, (except for trailing blanks, but leading and embedded blanks are allowed) is available “as is” to the view as sys_context('CMIC_DASHBOARD','cmic_param_value’). This is convenient when a single view (serving multiple purposes) must appear multiple times for different objects in the catalog, where the view is identical in each of the catalog objects but the data returned by the view is filtered (or modified) by the value(s) contained inside “cmic_param_value”.

You may create your own “sys_context” namespace to use within your views as long as the following rules are followed:

- the namespace must be prefixed with something other than either “CMIC” or “USER” or “JC7001” or “CUSTOM”
- neither the string “CMIC” nor “CUSTOM” may appear in any part of the name of the namespace
- the name does not conflict with any name used by Oracle

The method to implement a “sys_context”, and to initiate it for use in a dashboard view, is beyond the scope of this document. In any case it will depend on your specific requirements. Because this is an advanced topic, you will need to consult with CMiC for more information on how to proceed.

Drilldown

The creation of a view that allows drilldown depends on the method you choose and the structure of underlying data.

In principle, any view may drill down to any other view, without any special coding, by using the facility available in the dashboard catalog maintenance. The disadvantage is that the data retrieval may be slow depending on the complexity of the views involved.

An optimized view which is the target of a drill down may be created by using “sys_context” to filter data in the inner most portion of a complex view. The dashboard catalog maintenance (“Drill-Down Keys” button, under the title “Column Name in View”) allows the administrator to link a particular column of retrieved data (from the parent view) to a particular sys_context parameter (under the title “Context Name” , which means parameter name).

The sys_context thus created may be accessed in the view as *sys_context('CMIC_DASHBOARD','n’)* where *‘n’* is any valid name entered by the administrator under the title “Context Name”. **The name must not begin with “cmic”.**

Image Search Utilities Setup Screen

The CMiC Imaging application includes functionality to search the contents of image files and attachments. CMiC Imaging supplies support for searching text files, pdf files, and Microsoft Word files.

The functionality is extensible – you can install additional search utilities to the system to handle additional file types.

In order for the Imaging program to be able to search through the contents of files that are not in a textual format, the files' contents must first be translated into a textual format.

No translation is needed for any file that is already in textual format. Any other file type must go through the translation process.

The programs that do the translation these various file types are called "search utilties". CMiC Imaging includes a new program called the "Image Search Utilities Setup Screen". You use this program to define parameters for each search utility.

The information that you define is stored in the database table *DA.IMAGE_SEARCH_UTILITY*. The Image Search Utilities Setup Screen maintains the data in the table.

The table comes with pre-defined rows for text files, pdf files, and Microsoft Word files. You can add additional search utility definitions to allow searching through other file types. Suggested utilities are listed in the table for pdf and Word translation utilties. You will need to download and install them on your system.

The fields are:

File Type – File type (max. 4 characters).

Utility – Name of the utility used for searching this file type. The value entered must be formatted as:

```
CommandName %filename% %filename_no_ext% temp_filename% filename_dir%
```

Variables between % are replaced by appropriate values in runtime.

Environment Variables – Define the PATH and HOME variables for the search utility program (both "\" and "/" are allowed). Use a comma to separate the PATH entry from the HOME entry (see screenshot below).

Output File – Specifies the output file generated by this utility program.

Output Flag – Most utility programs used for searching work by translating the input document into textual format. Sometimes this is done by generating a new text file on disk. Other programs write directly to standard output. Consult the documentation for the utility program and enter the appropriate value here. Appropriate values are: "F" for new file and "S" for standard output. If the utility program does not create a new file or write to standard output, but just reads the input file directly, leave this field blank.

Reader Flag – Set this flag to "Y" if this file type does not need translation (i.e. if it is a textual format). Set it to "N" otherwise, i.e. if a search utility program is needed to translate the file contents to a textual format.

A sample screen shot follows below.

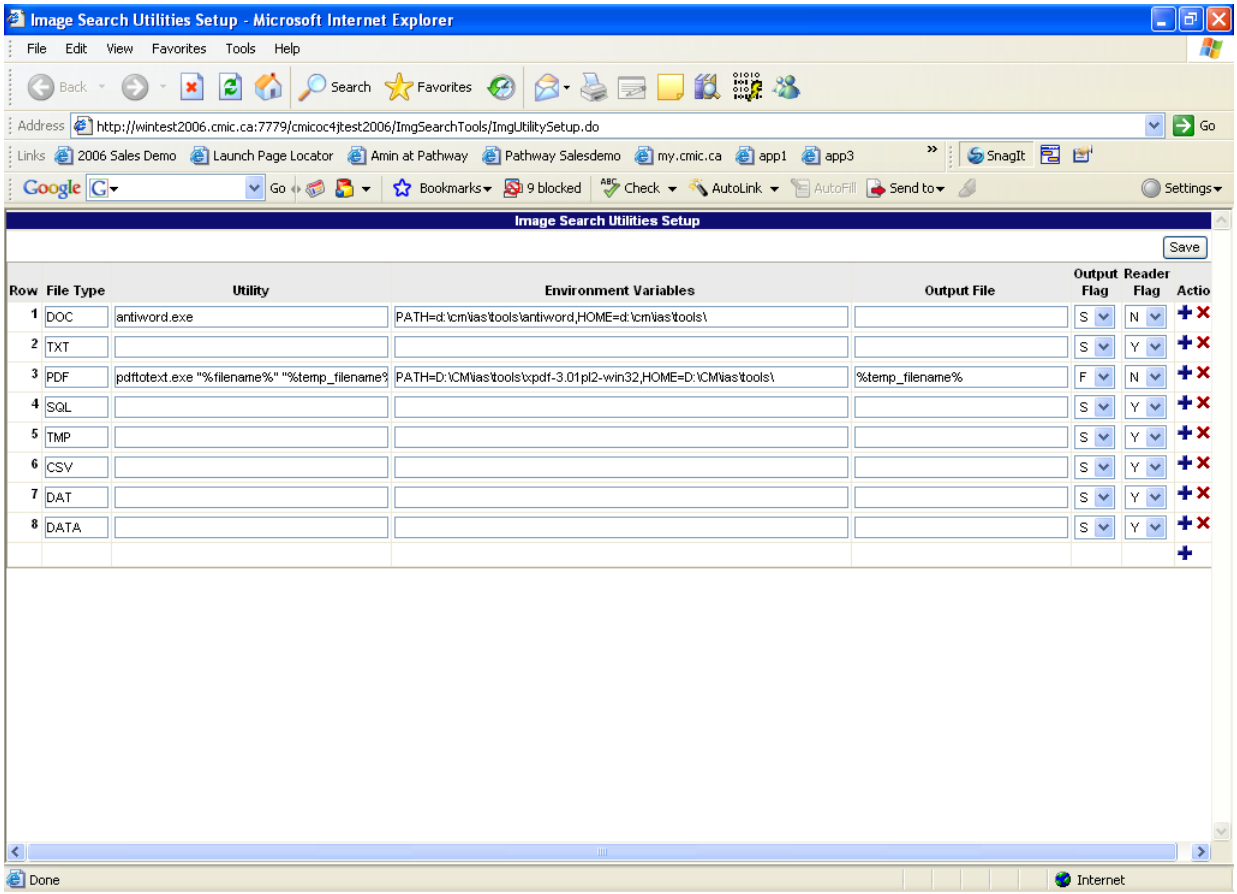
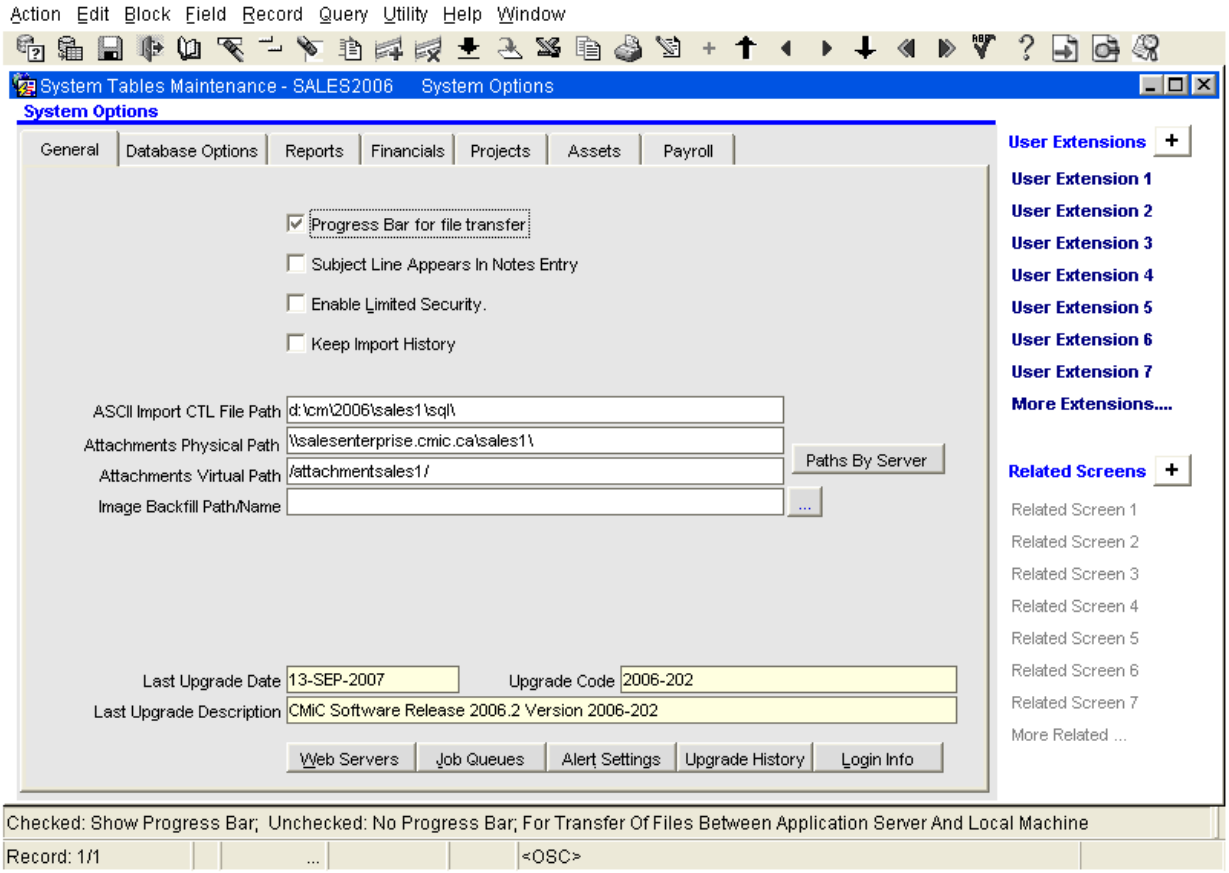


Image Search Utilities Setup - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://wintest2006.cmic.ca:7779/cmicoc4jtest2006/ImgSearchTools/ImgUtilitySetup.do
Go
Links 2006 Sales Demo Launch Page Locator Amin at Pathway Pathway Salesdemo my.cmic.ca app1 app3
SnagIt
Google Go Bookmarks 9 blocked Check AutoLink AutoFill Send to Settings
Image Search Utilities Setup
Save
Row File Type Utility Environment Variables Output File Output Flag Reader Flag Actio
1 DOC antiword.exe PATH=d:\cm\ias\tools\antiword,HOME=d:\cm\ias\tools\ S N
2 TXT S Y
3 PDF pdftotext.exe "%filename%" "%temp_filename% PATH=D:\CM\ias\tools\xpdf-3.01pl2-win32,HOME=D:\CM\ias\tools\ %temp_filename% F N
4 SQL S Y
5 TMP S Y
6 CSV S Y
7 DAT S Y
8 DATA S Y
Done
Internet

Creating Attachment Directories When You Have Multiple Application Servers



If you have midtier and midtierjsp on a separate boxes then there must be a shared drive to save attachments otherwise the objects saved through Forms (i.e. Midtier) will not be available from CMIC Enterprise (i.e. Midtierjsp) and vice versa.

There are two steps to change the path; the attachments virtual and physical path must be identical on both steps.

As a first step we need to change it from CMIC application. Go to System->Setup->System Options

In the Second Step we need to change HTTP server configuration.

To setup attachments we need to configure HTTP server on both “Midtier” and “Midtierjsp”.

The files to change are D:\cm\ias\j2ee\<ENV>\conf\devv10_middle.conf

And D:\cm\ias\j2ee\<ENV>\conf\ devv10_jsp.conf

Scroll down to the end of the file and under the heading of “Attachment alias for environment <env>”

Change the physical path and virtual path accordingly and put forward slash at the end of each path.

Example:
#Attachment Alias for environment devv10
Alias /attachmentdevv10/ "D:\cm\attachments/"

After applying changes that will ask for restart the HTTP server.

Note: If shared drive is used put four back slashes before physical path.

Example:

Alias /attachments/ “\\\\sharedrive\attachment\prod/”

Cloning Procedures for CMiC

Cloning Overview

Cloning means copying the complete database from one environment to another. This is usually done to ensure that your TEST environment has relevant, up to-date data that can be used for In-house Training, Testing new business processes and/or testing new functionality.

As cloning means copying the complete database, and there are certain data objects in the database that refer uniquely to the originating environments (such as directory paths and logo/signature locations), it is necessary to preserve the data and then re-import it after cloning.

Cloning can only be done between two databases that are same CMiC Software patch level.

In this document we use the terms “source environment” and “target environment”. In most cases the source environment is the PROD environment, and the target environment is the TEST environment. This document uses the more generic terms because in theory you can clone from any environment to any other environment, provided they are at the same CMiC Software patch level.

What To Do First

Before you start the pre-cloning process, verify whether you have installed any hot fixes or custom programs into the target environment that are not yet installed in the source environment. If you have, please make a note of all the issue #’s that you installed, and put that aside. You will need to reinstall them in the target environment later, as described in the section titled “What To Do Next” below.

CMiC recommends that you promote all hot fixes and custom programs into the source environment from the target environment before doing the cloning. That way both environments are absolutely identical when you start, and you won’t have any issues to deal with after the cloning. Of course, that may not be possible, because you may not have approved the change for promotion into the source environment yet. In that case you must manually keep track of it, so that you can reinstall it later.

Pre-Cloning Procedure

The pre-cloning procedure creates special cloning copies of specific tables from the target environment that contain environment related data in the source environment database.

Follow the steps below:

1) Login to the Forms Application Server as the user ORACLE
2) Start a DOS prompt in the d:\cm\V10\<target_env>\sql directory

3) Type the following command
pre_clone <source_env> <target_env>
Example: pre_clone PROD TEST

This program uses the connection info from dbdefine.sql to connect to the source and target databases as needed. It verifies that both databases are at the same release level, and it will quit with an error message if they are not.

Cloning Procedure

Log into the database server and run the pre-defined cloning procedures as outlined in your Installation documentation.

NOTE: If you add any data files to your source database, the cloning scripts must be updated to include the new data file(s). If you don't do that before running the scripts, the target database that you are trying to create will not work because the additional data files will not have been copied.

Post-Cloning Procedure

The Post-cloning procedure reads the cloning tables created in the Pre-cloning procedure and updates the actual tables with the specific environment related data.

Follow the steps below:

1) Login to the Forms Application Server as the user ORACLE
2) Start a DOS prompt in the d:\cm\V10\<target_env>\sql directory
3) Type the following command
post_clone <source_env> <target_env>
Example: post_clone PROD TEST

The data that is updated by this procedure (subject to change in future releases) is:

Table	Column	Description
COMPANY	COMP_LOGO_FILE_ON_WEB	Company Logo Path and File Name
ARCTRL	ARCTRL_LOGO_FILE	AR – Company Logo Patch and File Name
	ARCTRL_LOCKBOX_FILE_PATH	AR Control Lock Box related field
	ARCTRL_LOCKBOX_FILE_PATTERN	AR Control Lock Box related field
BABANKACCT	BAB_SIGN_FILE1	Bank Account Auto Signature # 1 – Set to null if there was no data in this field before the clone.
	BAB_SIGN_FILE2	Bank Account Auto Signature # 2 – Set to null if there was no data in this field before the clone.

Table	Column	Description
	BAB_COMP_LOGO_FILE	Bank Account Company Logo – Set to null if there was no data in this field before the clone.
IMG_ALBUM_TABLE	IMGA_ALBUM_DIRECTORY	Imaging Album directory
	IMGA_ACTIVE_FLAG	Imaging Album Directory Active Flag
	IMGA_ALBUM_DESC	Imaging Album description.
IMG_SOURCES_TABLE	IMGS_SOURCE_DESC	Imaging Source Description
	IMGS_SOURCE_DIRECTORY	Imaging Source Directory
	IMGS_PROCESSED_DIRECTORY	Imaging Processed Directory
	IMGS_ACTIVE_FLAG	Imaging Source Active Flag
	IMGS_OWF_VIRTUAL_DIRECTORY	Imaging Source Virtual Directory
IMG_SYSTEM_OPTION	IMGSO_DOCUMENT_LOCATION	Imaging System Options
	IMGSO_DEFAULT_WORK_DIRECTORY	Imaging System Options
	IMGSO_IMAGE_SERVER_ROOT	Imaging System Options
	IMGSO_IMAGE_APP_DIR	Imaging System Options
	IMGSO_IMAGE_START_PAGE	Imaging System Options
	IMGSO_ICON_DIRECTORY	Imaging System Options
LDAPSERVERS (2006-206 and later)	LDAPS_URL	Ldap URL
	LDAPS_NAME	Name you call server
	LDAPS_USER	Ldap-login-user
	LDAPS_PASSWORD	Ldap-log-in-password
	LDAPS_BASE	e.g. domain
	LDAPS_PORT_NUM	Port for ldap
	LDAPS_PRIMARY	Primary server Y or N
PYTAXSET	TXS_DESCRIPTION	US Payroll – Vertex Tax Object
	TXS_PATH	US Payroll – Vertex Tax Path
SEC	SEC_USER	Enterprise User Name
	SEC_EMAIL	User Default E-mail Address
	SEC_MAIL_MERGE_DIR_NAME	User Default Mail Merge Directory
	SEC_DFLT_PRNSRVR_DESNAME	User Defaults Printer Server Name
	SEC_DFLT_PRNSRVR_DESTYPE	User Defaults Printing Type

Table	Column	Description
	SEC_DFLT_PRNSRVR_DESFORMAT	User Defaults – Printing Format
	SEC_FAXSOFT_NAME	User Defaults – Fax Software
	SEC_DFLT_PRNSRVR_NAME	User Defaults – Printer Name
SYSATTOPT	SAO_SERVER_URL	System Options Attachments Server URL
	SAO_ATTACHMENT_ROOT_DIR	System Options – Attachment Root Directory
	SAO_ATTACHMENT_WEB_VIRTUAL_DIR	System Options – Attachment Virtual Directory
SYSLOGININFO	SLI_PROD_CODE	System Options – Login Info – Product Code
	SLI_ACCESS_TYPE_CODE	System Options – Login Info – Access Type
	SLI_FRAME_TYPE_CODE	System Options – Login Info – URL
IOEMAIL_SYSOPT	All Columns	CMiC I/O Parameters
IOEMAIL_EMAIL_ADDRESS	All Columns	CMiC I/O Parameters Email Error Recipients and Address Separators
IOEMAIL_OBJECT_TYPE	All Columns	CMiC I/O Object Types
IOEMAIL_BODY_TEMPLATE	All Columns	CMiC I/O email Body Template
IOEMAIL_TEMPLATE	All Columns	CMiC I/O email Template
IOEMAIL_REPLY_FIELDS	All Columns	CMiC I/O Reply Field Definitions
IOEMAIL_REPLY_SQL	All Columns	CMiC I/O Reply SQL

What To Do Next

After you've finished the post-cloning process, if you had previously installed any hot fixes or custom programs into the target environment, and those programs are not yet installed in the source environment, you need to reinstall them in the target environment so that they will continue to work properly.

Maintaining the Database Cloning Scripts

The database cloning scripts (on the database server) are created at the time the database is installed, and they contain hard-coded references to data files and directories on the server.

If you make any changes to your database files, such as adding a new data file, or moving the files to a different location, you MUST modify the database cloning script to take the new change into account. Otherwise future cloning attempts will cause errors.

If you are unsure how to modify the cloning scripts please contact CMiC Technical Support for assistance.

Caveats

Sometimes not all the data can be restored from the target database (see "Post-Cloning Procedure" above). As example, the LDAP server information (LDAPSERVERS) is restored according to the following rules:

- if the source and target each have only one entry (one LDAP server), then it is restored
- if the source and target each have two entries exactly, the primary restores to primary, and the non-primary restores to non-primary
- if the source and target have different number of LDAP entries, or more than two entries each, then **only** the primary is restored

Cloning PROD to TEST across Separate Hardware Systems

Some clients maintain their PROD and TEST environments on separate hardware systems. In this situation, cloning PROD to TEST becomes a bit more challenging.

Here are the suggested steps to follow in this situation:

1. Run pre_clone.bat on the TEST application server. This will produce a file called clone_prestep.dmp that you will use in step 7 below.

2. Do a full database export of the PROD database. Choose statistics=none during the export.

3. Drop all the database objects owned by the user DA in the TEST database. Do not drop the user DA, just the objects owned by the user DA. You can log in to sql*plus as DA and use the script utdelu.sql for this. Be very careful – make sure you are logged into the correct database when you run it!

4. Copy the full database export of the PROD database to the TEST database server. If you are using ftp to do the copy, make sure you run ftp in binary mode. Import DA's objects from the export file into the TEST database. Choose grants=no during the import.

5. Run this SQL statement against the PROD and TEST databases. The result should be the same. If not, investigate why it is different and fix it before continuing.

```
Select object_type, count(*) total_count
  From all_objects
 Where owner = 'DA'
Group by object_type
Order by 1;
```

6. Log in to the TEST database using sql*plus as user DA and run grantall.sql followed by recompx.sql.

7. Run post_clone.bat on the TEST application server to finish the operation.

Database Functions/Utilities

Removing Company 'ZZ'

CMiC Software installs with a pre-defined company 'ZZ' already setup. This is done on purpose. It allows new clients to run the system without having to know how to setup a company. This makes it easier for CMiC consultants to Show the system, discuss different areas, aspects and relationships between the modules.

At some point, during the installation and training process some companies would like to see company 'ZZ' removed from their system, as they have now defined their own companies.

Procedure

Before you begin, find out into which "syscontact" company the user "DA" is to be placed. The desired company must already have been set up in the database (da.company) before you begin. Further, the "log-in" screen for each and every user (for each application) which uses 'ZZ' company as the default must have been manually corrected before proceeding.

The system ships with scripts named UTDELCO.sql and UTDELCO_SAMPLE.sql which reside in the SQL directory. Make sure there is nothing else running (no one else is using the system) when running these scripts. The version of UTDELCO_SAMPLE.sql must be dated 2008 or later.

1) On the Application Server create a temporary working directory

2) Open a Dos Prompt in the temporary working directory (making it the current directory)

Part I

3) Copy UTDELCO_SAMPLE.sql into the temporary working directory

copy D:\CM\V105\PROD\SQL\UTDELCO_SAMPLE.sql

4) Load the copied UTDELCO_SAMPLE.sql into an editor, enter the value for C_new_comp_code, and save.

5) Start SQL Plus by issuing the following command at the DOS prompt:

D:\ora10g\midtier\bin\Sqlplus

6) Login as the user 'DA' to the database where company ZZ is to be removed.

7) ***Start utdelco_sample.sql***

8) When the script finishes running, "rollback;" if any errors or invalid data has been displayed, else, "commit;"

9) In either case, execute (copy and paste) the two commands that the script displays on the screen at the end. If there are any errors when executing the pasted commands, correct the errors and try this step again.

10) When there are no more errors, you may proceed to Part II

Part II

13) exit sqlplus (you should now be in the temporary working directory)

14) Set the SQL Path correctly by issuing the following command at the DOS prompt:

Set SQLPATH=.;D:\CM\V10\PROD\SQL;

15) Start SQL Plus by issuing the following command at the DOS prompt;

D:\ora10g\midtier\bin\Sqlplus

16) Login as the user 'DA' to the database where company ZZ is to be removed.

17) At the SQL> prompt type in the following statements.

```
begin
 execute immediate 'purge recyclebin';
 end;
 /
```

Start utdelco.sql

Utdelco.sql will create a secondary script in the working directory called utdelcox.sql that contains the delete statements.

18) ***Start utdelcox.sql***

This script creates an ouput LST file UTdelcox.lst.

19) Review the file UTdelcox.lst – if it has no error messages, you are done. If not, then repeat step 18 (or in rare cases, go back to step 7 if necessary) until the output file is clean. It depends on the usage of company ZZ as to how many times you need to run UTDELCOX.sql. It will normally run clean within 4 runs. If it takes more than 4 runs and it is still not clean, you should contact CMiC Support.

Copying Form Letters between Databases

This utility allows the user 'DA' to copy a Form Letter definition from Database A to Database B. In most cases this utility is used to copy Form Letters created and verified in TEST into the PROD environment. The utility allows for the copying of all letters associated with a specific Application and Letter Type, or All documents with the Letter Type. This utility does a full replace of the document if it already exists in the target database.

This utility is designed to be used by the system administrator. The utility is run via SQL as the user 'DA'.

Procedure

This procedure is written as if copying a form letter definition from the TEST environment to the PROD environment. If you are using this procedure to copy between different environments or your database names are not standard please modify all references to 'TEST' or 'PROD' as required.

1) Using the Form Letter Definition screen, find the Form Letter that you want to copy to the new database, take note of the Application Code, Letter Type Code, and Letter Format Code.

2) On the Application Server create a temporary working directory

3) Open a Dos Prompt in the temporary working directory

4) Set the SQL Path correctly by issuing the following command at the DOS prompt:

Set SQLPATH=.;D:\CM\V10\TEST\SQL;

5) Start SQL Plus by issuing the following command at the DOS prompt;

D:\ora10g\midtier\bin\Sqlplus

6) Login as the user 'DA' to the TEST database.

7) At the SQL> prompt type in the following command:

Start sysddatx.sql

The utility will then ask three questions, answer them using the information noted in step 1:

Specify Application Code to extract:

Specify Document Type to extract:

Specify Letter Code (blank for all letters):

The system will then display messages something like below:

Extracting system data for Form Letter definitions

Please wait ...

Emptying tmp_sysdoc_sqlcmd

Finished

Output in 'FLPM2030.SQL'

Take note Output file name. This file was created in the temporary working directory.

8) At the SQL> prompt type the command '***Exit***' and hit enter. This will close the SQL session and return you to the DOS prompt.

9 Start SQL Plus again by issuing the following command at the DOS prompt;

D:\ora10g\midtier\bin\Sqlplus

10) Login as the user 'DA' to the PROD database.

11) At the SQL> prompt type in the following command:

Start xxxx.sql

Where xxxx.sql is replaced by the output file name noted in step 7.

12) At the SQL> prompt type the command '***Exit***' and hit enter. This will close the SQL session and return you to the DOS prompt.

The copying is now complete.

Restrictions

This utility copies the report definition it does NOT create user extension tables or custom views used within the report. If the report definition being copied makes use of any custom object or user extension table then these objects will need to be created identically in the target database. (If a user extension is being used you may opt to use the Copy User Extension Utility).

Copying User Extension Table Definitions between Databases

Overview

This utility allows the user 'DA' to copy a User Extension Table Definition from Database A to Database B. In most cases this utility is used to copy a UE Table defined/created and verified in TEST into the PROD environment. This utility creates the complete extension if it does not exist and will add new columns and valid data to existing extensions. This utility will not change any existing definition.

This utility is designed to be used by the system administrator. The utility is run via SQL as the user 'DA'.

Procedure

This procedure is written as if copying a User Extension Table definition from the TEST environment to the PROD environment. If you are using this procedure to copy between different environments or your database names are not standard please modify all references to 'TEST' or 'PROD' as required.

1) Using the User Extension Table Maintenance screen, find the table that you want to copy to the new database, take note of the Table Code.

2) On the Application Server create a temporary working directory

3) Open a Dos Prompt in the temporary working directory

4) Set the SQL Path correctly by issuing the following command at the DOS prompt:

Set SQLPATH=.;D:\CM\V10\TEST\SQL;

5) Start SQL Plus by issuing the following command at the DOS prompt;

D:\ora10g\midtier\bin\Sqlplus

6) Login as the user 'DA' to the TEST database.

7) At the SQL> prompt type in the following command:

Start uewrap.sql

This utility will then ask two questions:

Enter Table: - ***Enter the Table Code noted in step 1 (Case Matters)***

Enter File Name to save creation script of collections:

(Extension will be ".UE") Specify Letter Code (blank for all letters):

Enter the Table Code noted in step 1 (Case Matters)

The system will create a file called <***Table Code>.ue***

This file was created in the temporary working directory.

8) At the SQL> prompt type the command '***Exit***' and hit enter. This will close the SQL session and return you to the DOS prompt.

9 Start SQL Plus again by issuing the following command at the DOS prompt;

D:\ora10g\midtier\bin\Sqlplus

10) Login as the user ‘DA’ to the PROD database.

11) At the SQL> prompt type in the following command:

Start < Table Code>.ue

Where <Table Code> is replaced by Table Code noted in step 1. This command may give errors where it cannot insert due to existing data. Don’t worry about this.

.12) At the SQL> prompt type the command ‘***Exit***’ and hit enter. This will close the SQL session and return you to the DOS prompt.

13) Verify the copy by logging into CMiC Enterprise and comparing the User Extension Fields and Table Maintenance Screens between PROD and TEST

Copying Flysheet Definitions between Databases

This utility allows the user ‘DA’ to copy an Imaging Flysheet Definition from Database A to Database B. In most cases this utility is used to copy a Flysheet defined/created and verified in TEST into the PROD environment.

The utility creates all ‘Flysheets’ and related data associated with a document type. It will create new or update an existing definition where possible.

This utility is designed to be used by the system administrator. The utility is run via SQL as the user ‘DA’.

Procedure

This procedure is written as if copying a definition from the TEST environment to the PROD environment. If you are using this procedure to copy between different environments or your database names are not standard please modify all references to ‘TEST’ or ‘PROD’ as required.

1) Using the Imaging Document Type screen, find the document type that you want to copy to the new database, take note of the Document Type.

2) On the Application Server create a temporary working directory

3) Open a Dos Prompt in the temporary working directory

4) Set the SQL Path correctly by issuing the following command at the DOS prompt:

Set SQLPATH=.;D:\CM\V10\TEST\SQL;

5) Start SQL Plus by issuing the following command at the DOS prompt;

D:\ora10g\midtier\bin\Sqlplus

6) Login as the user ‘DA’ to the TEST database.

7) At the SQL> prompt type in the following command:

Start imgddatx.sql

This utility will then ask the following questions:

Specify Document Type Description to extract (Optional):

Enter the Document Type noted in step 1 (Case Matters) or leave blank and the system will export all Document Types

The system will then display the following:

Extracting flysheet data for Document Type Description: <***Document Type***>

Please wait ...

Emptying tmp_flysheet_sqlcmd

Finished

Output in 'imp_flysheet.sql'

The procedure created a file called ***Imp_Flysheet.sql*** in the temporary working directory.

8) At the SQL> prompt type the command '***Exit***' and hit enter. This will close the SQL session and return you to the DOS prompt.

9 Start SQL Plus again by issuing the following command at the DOS prompt;

D:\ora10g\midtier\bin\Sqlplusw

10) Login as the user 'DA' to the PROD database.

11) At the SQL> prompt type in the following command:

Start Imp_Flysheet.sql

12) At the SQL> prompt type the command '***Exit***' and hit enter. This will close the SQL session and return you to the DOS prompt.

13) Verify the copy by logging into CMiC Enterprise and comparing the document types and flysheet definition screens between PROD and TEST.

Note: In the PROD environment you will need to run the [Create Flysheet Structure] function on each flysheet imported to actually validate and create the flysheet tables.

Installing CMiC Patches

Patching

Note that in these instructions we will assume that you are applying a patch into the PROD environment. If you are applying it in a different environment, change PROD (or prod) to TEST (or test).

CMiC Patches must be installed on every application server that has a midtier or midtierjsp installation. Normally every application server has a midtier or a midtierjsp installation, or both. The only exception to this is if you have a stand-alone infrastructure server. A stand-alone infrastructure server only has an infra installation. The rule is: if you have more than one application server, you must install CMiC patches on every application server, except any stand-alone infrastructure server.

When you install a patch on the first application server, the patch installation program will recognize that the database has not been updated yet, and it will run the database upgrade scripts as part of the patch installation process. When you install the same patch on the subsequent servers, the patch installation program will recognize that the database is already up to date, and it will not run the database upgrade scripts again. This means that applying the patch on the subsequent servers will take less time (possibly significantly less time) than running it on the first server.

It is very important to run the patch installation program on each server. This is because the patch installation program does more than just copy files – it also updates configuration files on the server. The only way to properly install a patch is to run the patch installation program on every server.

A CMiC patch is not fully installed until you have installed it on all your application servers, and deployed the JSP programs for that patch on every application server that has a midtierjsp installation.

If you are installing more than one patch at the same time, the recommended methodology is to install the first patch on every application server, then install the second patch on every application server, etc.

Here are the steps to follow:

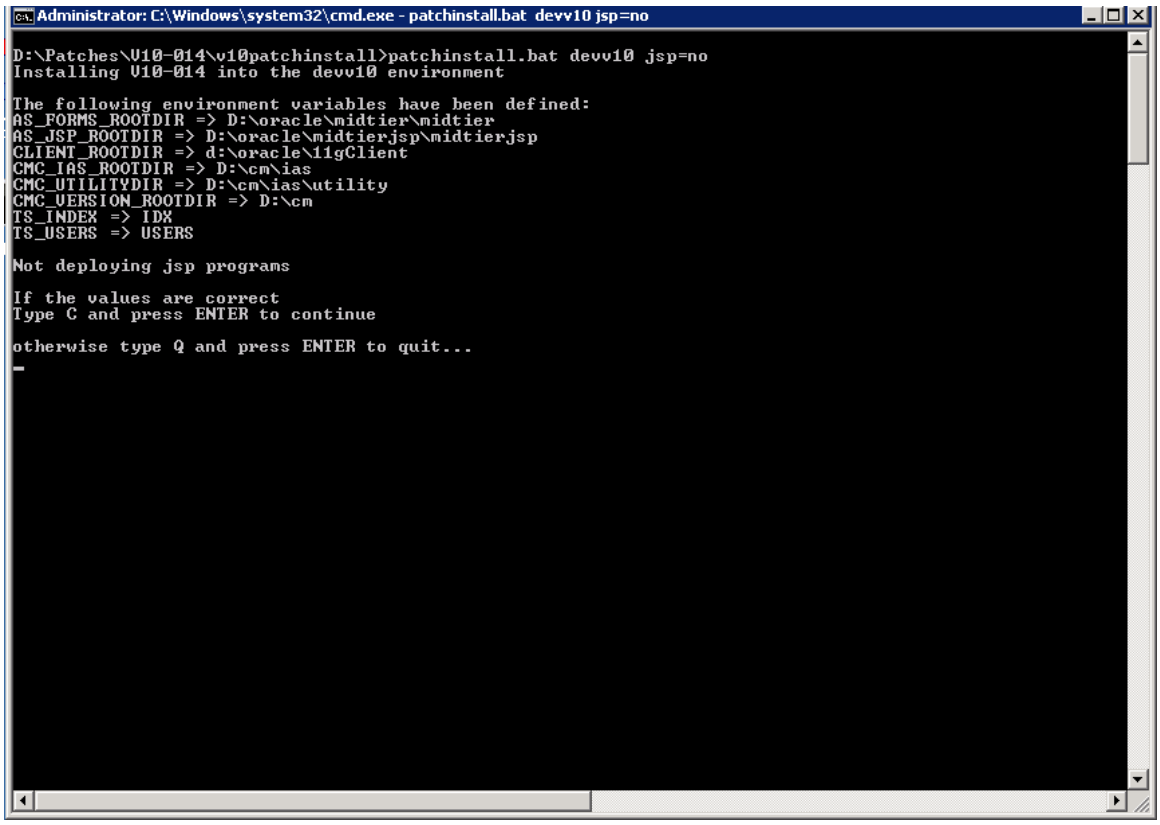
a) Download the patch from CMIC to the patches folder.

b) Run the .exe file and follow the prompts to extract the patch.

c) Open a DOS window from the patches folder egg: D:\Patches\V10-014\v10patchinstall

d) Enter D:\Patches\V10-014\v10patchinstall>patchinstall.bat devv10 JSP=no

This command says we are not deploying ‘JSP’s’ with the patch. The default action is to deploy JSP’s.



e) If the information displayed is correct then enter ‘c’ otherwise ‘q’.

f) The patch will run and at the end will display:

V10patchinstall.pl finished. Be sure to check the file V10-015_patch_install_log.txt for any error messages. Also please check the d:\cm\v10\salesv10\saved\V10-015 directory for any newer files that were found.

Please email SendToCMiC_salesV10_V10-015_salesv10.txt to patchlogs@cmic.ca for verification.

g) The file to email is located in a path similar to this:

D:\cm\ias\utility\patchinstall\logs\V10-014\<env>\2011-6-9--16-40-51

h) After a successful patch installation a file will be created at

D:\cm\ias\utility\patchinstall\successful_installs\env

i) Install the patch on all CMIC Application servers that contain a midtier or midtierjsp.

CMIC patches are NOT applied to the Infrastructure server.

j) After the JSPs have been deployed log on to CMIC as DA and test the application.

How to ‘Re-install’ Patches

This outlines what steps to take if for some reason it is necessary to re-install a patch older than the currently installed patch.

This procedure will NOT reverse a patch install. After re-installing a previous patch you MUST continue installing patches until the system is back up to the starting patch number

When Patchinstall is run it updates both the database and the server to indicate that patch X was installed successfully.

The database is updated to the correct Patch Number by updating the field sys_upgrade_code on the table da.SYSOPT, while the server is updated for the environment by putting a text file with the patch code name in the following directory – d:\cm\ias\utility\patchinstall\sucessful_installs\<env>\.

To reinstall a patch:

1) Remove the file(s) in d:\cm\ias\utility\patchinstall\sucessful_installs\<env>\ that are equal to or greater than the patch that needs to be re-installed.

   For example if the patch being re-installed is patch V10-14-2 and patch V10-15-2 and v10-16-2 have already been installed all 3 files must be removed.

2) Update sys_upgrade_code to be one patch # before the patch to be reinstalled. For example if the patch to be re-installed is V10-14-2 then update this field to be V10-13-2.

```
Update da.sysopt set sys_upgrade_code = ‘V10-13-2;

Commit;
```

3) Reinstall the Patch

4) Continue installing Patches in sequence until the system is back at the starting point.

Location of Log Files

D:\oracle\midtier\asinst_midtier\

D:\oracle\midtierjsp\asinst_midtierj

D:\oracle\midtierjsp\user_projects\domains\cmicdevv10\servers\cmicdevv10_dev2V10_cmic_ca\logs