PeopleSoft Integration for IBM Content Manager

Technical Integration Brief
Version 1.1

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CM Partner Enablement

Contents

Page 1 of 17

Introduction:

This document describes the integration of PeopleSoft Enterprise Portal and IBM Content Manager for Multiplatforms V8.1 and also lists the requirements and steps involved in integration.

Today's real-time enterprises are moving their business systems to the Internet to connect people to business processes across organizational boundaries. The PeopleSoft Enterprise Portal using PeopleSoft Pure Internet Architecture is designed to achieve this. The PeopleSoft Enterprise Portal is a open framework for integrating any type of system. IBM integrated its Content Manager for Multiplatforms V8.1 with PeopleSoft Enterprise Portal to enable access to all forms of information connected to the PeopleSoft portal. This integration provides a centrally managed repository for all types of content produced by both PeopleSoft and non-PeopleSoft applications. IBM Content Manager provides a foundation for managing, storing, and distributing all forms of digital content, including correspondence, purchase orders, e-mail, faxes, and video collections, in a single virtual repository. Content Manager for Multiplatforms can be easily integrated into an existing ebusiness infrastructure. This enables companies to quickly gain a competitive advantage by content-enabling PeopleSoft applications and all information associated with running a business.

The IBM Content Manager eClient provides browser based access to digital assets via the PeopleSoft Enterprise Portal and does not require any special software to be downloaded on the end users workstation. The PeopleSoft certified integration allows customers to work with and analyze digital assets in a secure environment.

These two cutting-edge technologies when integrated can offer very unique solutions to enterprises, by which customers can access all forms of enterprise content through a common software interface. It shouldn't matter whether this content consists of business documents, rich media or dynamic Web content, nor should its repository be a hindrance. In fact, customers can perform *federated searches*, in which a single query can retrieve content from a heterogeneous set of repositories distributed on the network. Integration of these technologies change the way Enterprise Content is accessed. This solution provides many advantages :

- Quick access to data in real time

- Improved search capabilities

    o Parametric search

    o Free/full text

    o Combined search

- Access to both Structured and Unstructured data; IBM and non-IBM data repositories - Federated Search capabilities

- Ability to Stream Rich Multi Media

- Flexible environment

- Reduce downtime of servers

- Workflow

    o Light WorkFlow

    o Advanced workflow leveraging MQSeries

- Access and archival of Content

Integration Overview:

The integration between PeopleSoft Enterprise Portal and IBM Content Manager can be achieved in two ways:

1) Loose association
2) Optimized association

Loose association: The purpose of the loose association is to provide a very simple method for a PeopleSoft user to navigate from somewhere in the PeopleSoft portal to the IBM Content Manager eClient Logon page.   Although the integration is simple to establish, providing loose association requires PeopleSoft users to do additional steps, because it forces them to perform the normal logon steps required for the IBM Content Manager eClient. Loose association requires that users provide their user ID, password, and choose a Server. This paper is more focused on an Optimized association.

Optimized association: This allows for single sign-on and a more optimized user interface path from the PeopleSoft portal to the IBM Content Manager eClient. The benefit of single sign-on for PeopleSoft users is that they are only required to enter a user ID and password once: when signing on to the PeopleSoft portal. When PeopleSoft users navigate to the link for IBM Content Manager eClient, they only need to click that link.

They do not need to reenter a user ID and password to use the eClient.

Both the above associations allow all the CM eClient functionality to users.

The integration provides the following functionality:

- Unified logon to PeopleSoft portal and Content Manager
- Launch the CM eClient from the PeopleSoft portal automatically
- Point & click access to the documents stored in Content Manager
- Access to CM is authenticated by PeopleSoft

Software Requirements:

PeopleSoft:

PeopleSoft Enterprise Portal 8.4 and later
PeopleTools 8.40.09 or 8.41.07

IBM Content Manager for Multiplatforms V8.1:

eClient Server V8.1.0.10 (Fixpack 1)
EIP V8.1.0.10 (Fixpack 1)
CM V8.1.0.10 (Fixpack 1)

Web Browsers:

Microsoft Internet Explorer 5.5 on Windows 98, Windows NT, Windows 2000
Microsoft Internet Explorer 6.0 on Windows 98, Windows NT, Windows 2000, Windows XP
Netscape Navigator 4.7x on Windows 98, Windows NT, Windows 2000, AIX & Solaris
Netscape Navigator 6.2x on Windows 98, Windows NT, Windows 2000, Windows XP

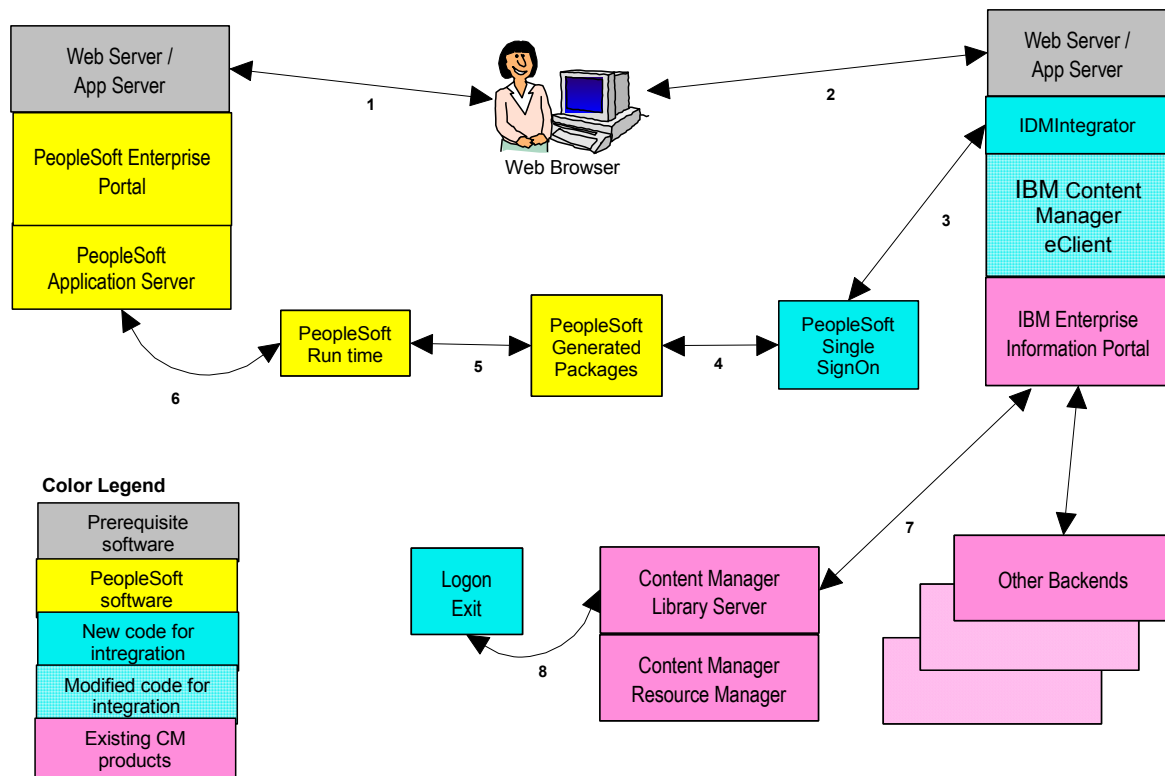## Platforms CM Supported:

Windows NT/2000
AIX
Solaris

Connectors tested include:

Direct Connection to CM 8.1.0.10 on Windows NT/2000, AIX & Solaris

Federated Connection to:
        CM 8.1.0.10 on Windows NT/2000, AIX, and Solaris
        CM 7 on Windows NT/2000, and 390
        OD on AIX, NT, AS400, and 390
        IP 390
   VI 400

Integration Architecture:

The above diagram explains the actual integration between the portal and CM. The numbered activities are listed and explained below:

1. The user accesses the PeopleSoft Portal through a Web browser.
2. The user clicks a pagelet configured to access CM.
3. Control passes to the sample code (ICMPSSSO.class).
4. Control passes to the PeopleSoft generated packages (PeopleSoft.Generated.CompIntfc and PeopleSoft.Generated.PeopleSoft).
5. Control passes to the PeopleSoft runtime.
6. The PeopleSoft user is authenticated by the PeopleSoft Application Server and returns back to the IDMIntegrator servlet.
7. The logon passes down the CM stack to the logon stored procedure.
8. The logon stored procedure invokes the logon user exit routine for PeopleSoft. The logon user exit routine completes authentication.
9. The response is passed back to the waiting eClient.
10. The user is granted or denied access to content. When access is granted, the eClient opens in a new browser window. Depending on pagelet configuration, the eClient window either shows the eClient logon page, the homepage of the ICM server, or the homepage of the Federated server.

Integration Procedure:

This integration is achieved through PeopleSoft portal pagelets. A pagelet is simply a space within a portal containing categorized information. Examples of pagelets: to-do lists, scorecards, company news, e-mail, and Content Manager. Think of a pagelet as a small window of information. Pagelets are the modular, self-contained building blocks of your portal home page mini-applications within your overall Enterprise Portal framework. When you build your enterprise portal solution, you assemble pagelets into the actual web pages that will be viewed and used by your customers, employees, and suppliers. People can then further personalize their home page by selecting which pagelets are most relevant to their role.

Integration of the PeopleSoft portal with Content Manager is achieved through pagelets.
These pagelets when built as per the instructions explained in the user guide, will appear somewhat similar to the image shown below:
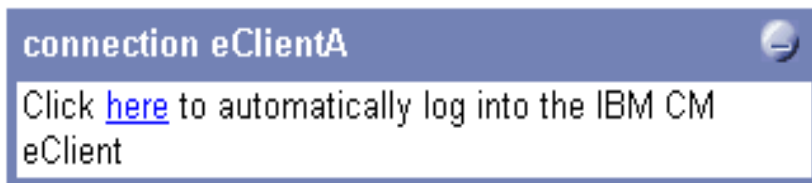
The constructed URL, for an optimized association may look like this link:
http://eClientA.emms.bocaraton.ibm.com/eClient81/IDMIntegrator?&
ReleaseLevel=PEOPLESOFTV840&
userid=VP1&
IPFile=PeopleSoft&
iType=logon

Or it could look like this link:

http://eClientA.emms.bocaraton.ibm.com/eClient81/IDMIntegrator?&
ReleaseLevel=PEOPLESOFTV840&
IPFile=PeopleSoft&
iType=connection&
server=ICMNLSDB&
serverType=ICM&
userid=VP1

The parts of the URL are explained below:

ReleaseLevel
This request parameter indicates the release level of the PeopleTools application. The acceptable valid values are ReleaseLevel=PEOPLESOFTV840 or ReleaseLevel=PEOPLESOFTV841 .

IPFile
This request parameter specifies the name of the integration properties file. The IP file has a file extension of .properties, however, you do not include properties when you specify the IPFile value in the URL. The case sensitivity of the IPFile parameter varies by platform. For more on the
integration properties file, see the User guide "Task 3: Configure the integration properties file".

iType
This request parameter specifies the type of integration to use. For PeopleSoft, you specify either iType=logon or iType=connection. Use iType=logon when you do not want to specify the server and serverType properties. This setting allows the PeopleSoft user to manually select the server. If the eClient has only one backend server defined to it, then the eClient takes the user directly to the home page for this server. When you use iType=connection , you must specify the server parameter. If you do not specify a serverType , then a serverType of Fed is assumed. If you want users to log on to another serverType other than Fed, like ICM, then you must specify the serverType either in the URL or in the integration properties file. The iType=connection setting enables users to link straight to the home page of a server.

server
This request parameter is the name of the Content Manager server to which the eClient connects. The server must be specified when iType=connection is used. An example specification is server=ICMNLSDB . If this value is also specified in the integration properties file, then the value specified in the URL takes precedence.

serverType
This request parameter is the type of Content Manager server to which the eClient connects. The valid specifications are serverType=ICM or serverType=Fed . When the iType=connection, then the serverType is automatically assumed to be serverType=Fed . If you want users to log on to another serverType, like ICM , then, you must specify the serverType=ICM in the URL or the integration properties file. When you specify the serverType parameter, it must be specified in the same location as the server parameter. For example, either you specify server and serverType in the URL or the integration properties file. If the serverType value is also specified in the integration properties file, then the value specified in the URL takes precedence.

userid
This request parameter specifies the user ID that was used to sign on to the PeopleSoft portal and will be used to log on to the Content Manager library server database. This argument is dynamically determined and it may not match the user ID that connects to the PeopleSoft authentication server.

Before we execute the above URL the following steps must be completed to achieve integration.

1) Configure the PeopleSoft Internet Architecture (PIA) to pass the PeopleSoft cookie to the eClient browser session. The PeopleSoft cookie contains the user's credentials, which are passed to the Content Manager eClient for authentication. PeopleSoft browser cookies are used for enabling PeopleSoft single sign-on and for restricting user access to, for example, resources, Web pages, controls, and databases.

Please note that PeopleSoft only shares the single sign-on authentication token (cookie) with the CM eClient when both web servers belong to the same authentication domain.

2) Construct and configure PeopleSoft pagelets from the PeopleSoft Portal connecting both the Portal and the eClient.

3) Configure the integration properties file called PeopleSoft.properties located in the ECLIENTROOT\CMeClient directory, where *ECLIENTROOT* is the location where you installed Content Manager eClient. This file name can be renamed as required and this filename should be consistent with the IPFile request parameter specified in the eClient URL used by the PeopleSoft pagelet. The properties specified in this file are:
authToken=
server=
serverType=
type=

The above elements are further explained below:

authToken
This is the authentication cookie name. The authToken parameter must be PS_TOKEN for PeopleSoft integration.

server and serverType
The server is the name of the document datastore and serverType is the type of datastore, either ICM or Fed. These properties are ignored when iType=logon in the URL. These properties must be provided as a pair.

Please remember, values specified in the URL override PeopleSoft. properties file values.

type

This parameter controls the look and feel of the eClient and this must be set to 3 for PeopleSoft integration.

Please refer to the PeopleSoft Integration User Guide for further information.

4) Synchronize User ID's on both PeopleSoft Portal and Content Manager. If the user does not exist on CM, create the user using the System Administration client.

5) You must define a special PeopleSoft user ID that has access to the PeopleSoft portal single sign-on component interface (PRTL_SS_CI). The PRTL_SS_CI identifies the PeopleSoft portal to Content Manager, allowing sign-on to occur. When the PeopleSoft user ID connects to Content Manager, Content Manager uses the PRTL_SS_CI to authenticate the user ID as a valid user ID in Content Manager. You need to define and use a unique user ID that has full access to the PRTL_SS_CI in its permission list.

6) Copy the logon user exit routine file ICMXLSLG.DLL to the directory *ICMROOT\databaseName*\DLL from the directory *ICMROOT*\integration\peoplesoft , where *ICMROOT* is the location where you installed Content Manager and *database name* is the name of the Content Manager library server database. This step is not automatically done for you because customers who do not integrate with PeopleSoft can experience a performance penalty and copying this file may overwrite the LDAP logon user exit routine file, replacing user authentication using LDAP. Please use the following table for further information.

Platform	Install Directory	Runtime Directory
Windows	<ICMROOT>\integration\peoplesoft	<ICMROOT>\databaseName\DLL
Unix	<ICMROOT>/integration/peoplesoft	<ICMDLL>/databaseName/DLL

See the following table for default values for ICMROOT and ICMDLL for different platforms:

| Platform	Path	Example
Windows	<ICMROOT>	C:\Program Files\ibm\CM81
AIX	<ICMROOT>	/usr/lpp/icm
AIX	<ICMDLL>	/home/db2fenc
Solaris	<ICMROOT>	/opt/IBMicm
Solaris	<ICMDLL>	/export/home/db2fenc1

7) Generate the PeopleSoft portal single sign-on component interface (PRTL_SS_CI) using the PeopleSoft Application Designer and compile these packages. Compile the ICMPSSSO.java program. These compiled classes should be copied to the appropriate eClient directory.
If the eClient Server is deployed on WebSphere Application Server AE, then the target directory would be:
C:\ProgramFiles\CMeClient\installedApp\eclient81.ear\eclient81.war\WEB-INF\classes.

In case of WAS Single Server Edition, the target directory would be:
C:\WebSphere\AppServer\installedApps\eclient81.ear\eclient81.war\WEB-INF\classes.
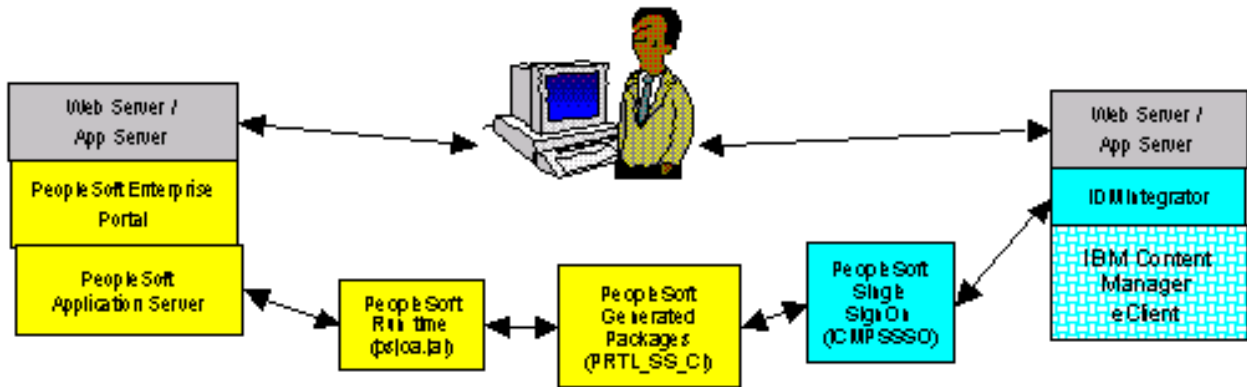
The above picture explains the PeopleSoft single Sign-On mechanism. Please refer to the User Guide for detailed information on this topic.

8) Specify the PeopleSoft configuration parameters in a file called ICMPSSSO.properties for use by Content Manager to authenticate the PeopleSoft users. These configuration parameters include the name of the PeopleSoft server, the port on which the PeopleSoft server is listening, and a user ID and password for connection. This file must be copied to the same directory as ICMPSSSO.class, as explained in step 7.

9) The eClient must have access to the PeopleSoft run-time file in the WebSphere Application Server's CLASSPATH. The run-time file is a JAR file called psjoa.jar . In a default PeopleSoft 8.4 installation, psjoa.jar is in *PS_HOME*\web\psjoa\psjoa.jar , where *PS_HOME* is where you installed the PeopleSoft Files. Depending on your PeopleSoft license agreement, the license might permit the copying of the run-time file to the eClient machine. An example for WebSphere Application Server Advanced Edition is:
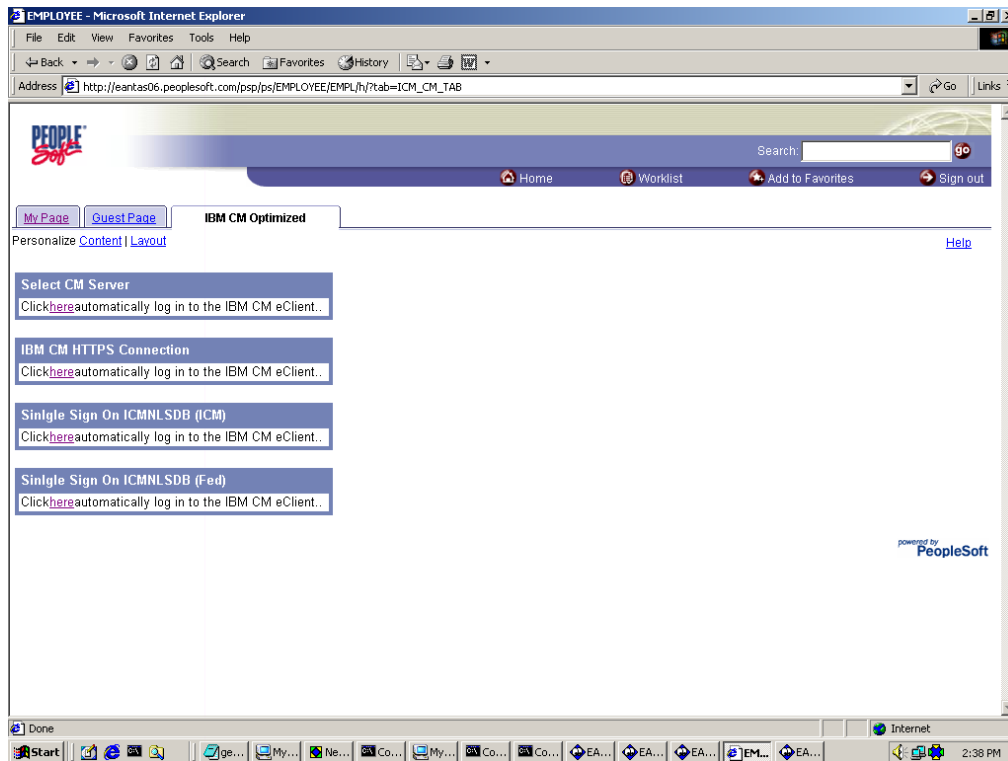C:\ProgramFiles\CMeClient\installedApp\eClient81.ear\eClient81.war\WEB_INF\lib\psjoa.jar
An example for WAS Single Server Edition is:
C:\WebSphere\AppServer\installedApps\eclient81.ear\eclient81.war\WEB-INF\lib\psjoa.jar

If your PeopleSoft license agreement does not allow this copying, you must configure WebSphere Application Server to access the run-time on the PeopleSoft server.

# Screen Shots captured during integration :

1. The pagelets to CM are displayed as shown below:

2. This is the first eClient page a loose association user will see. User must supply user ID, password, and select a server.
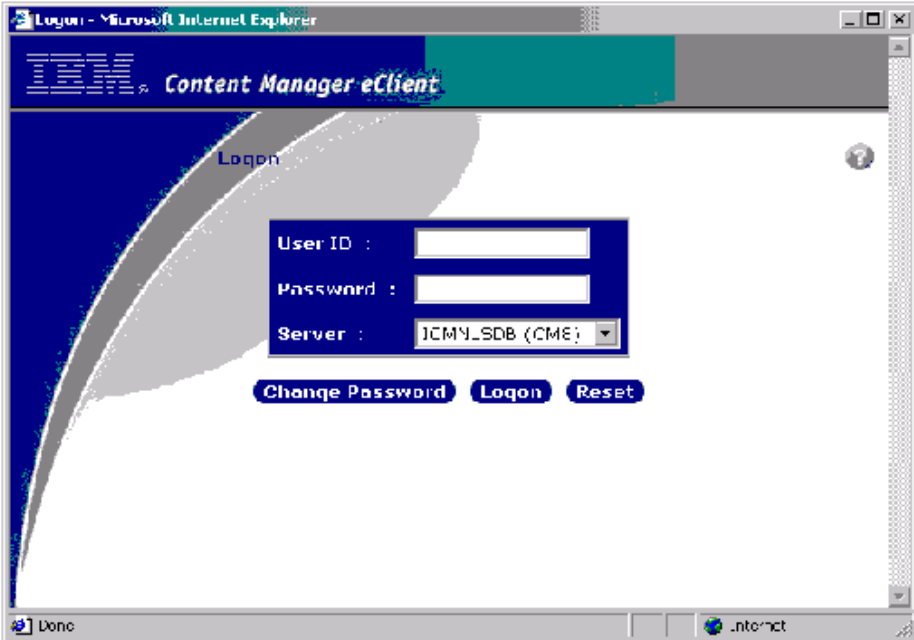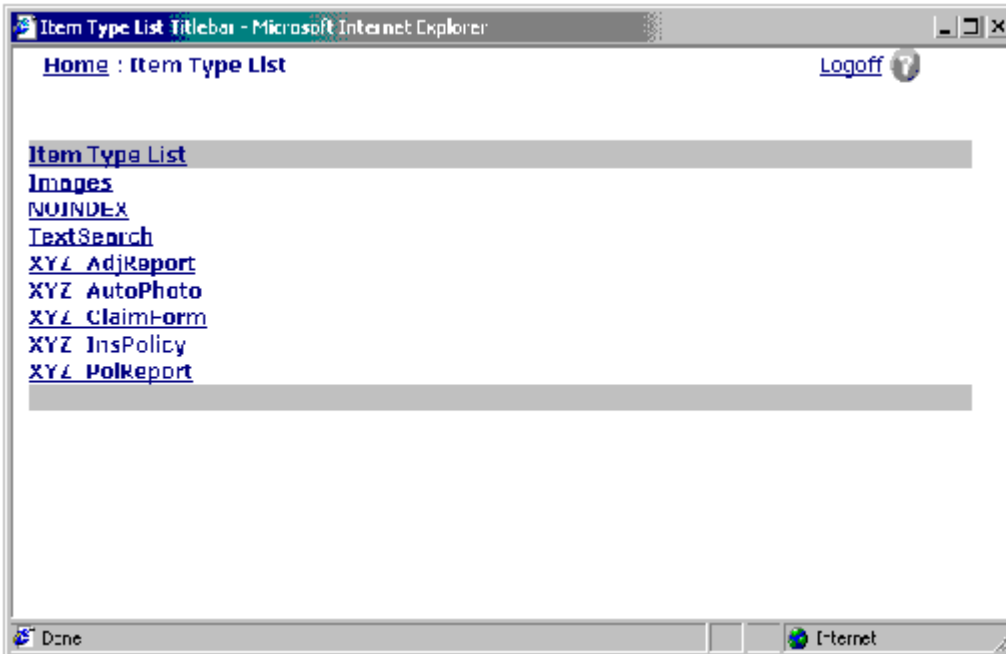

3. This is the first eClient page an optimized association user sees when iType=logon. The User ID field is filled in, the password field is disabled, and the user is allowed to select a server.
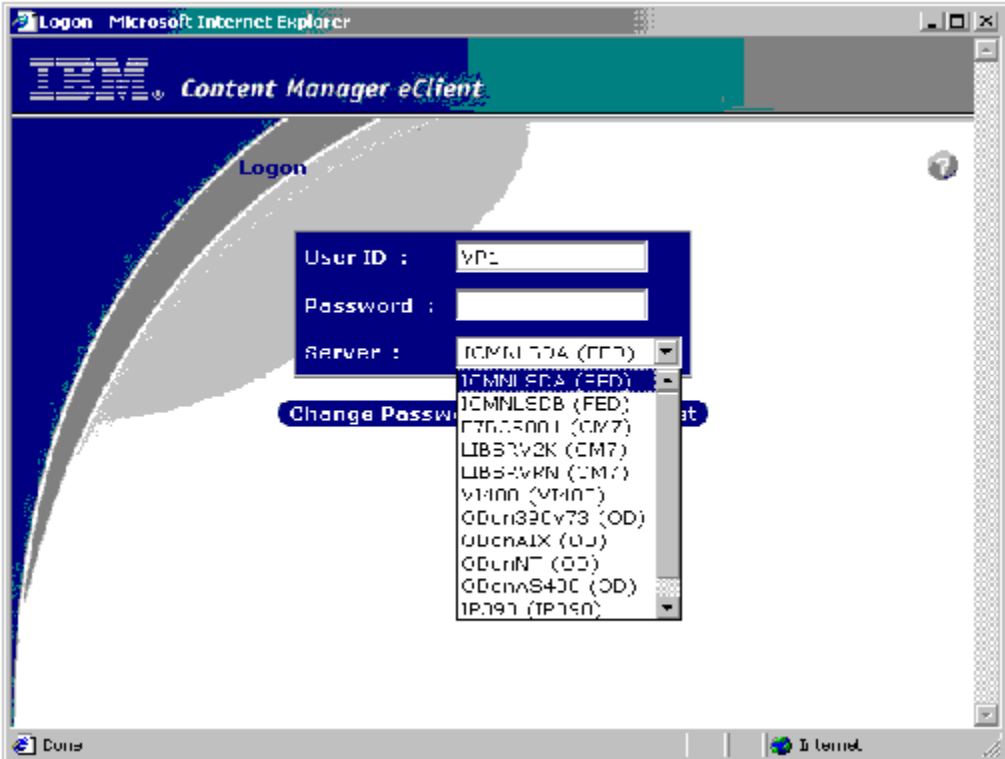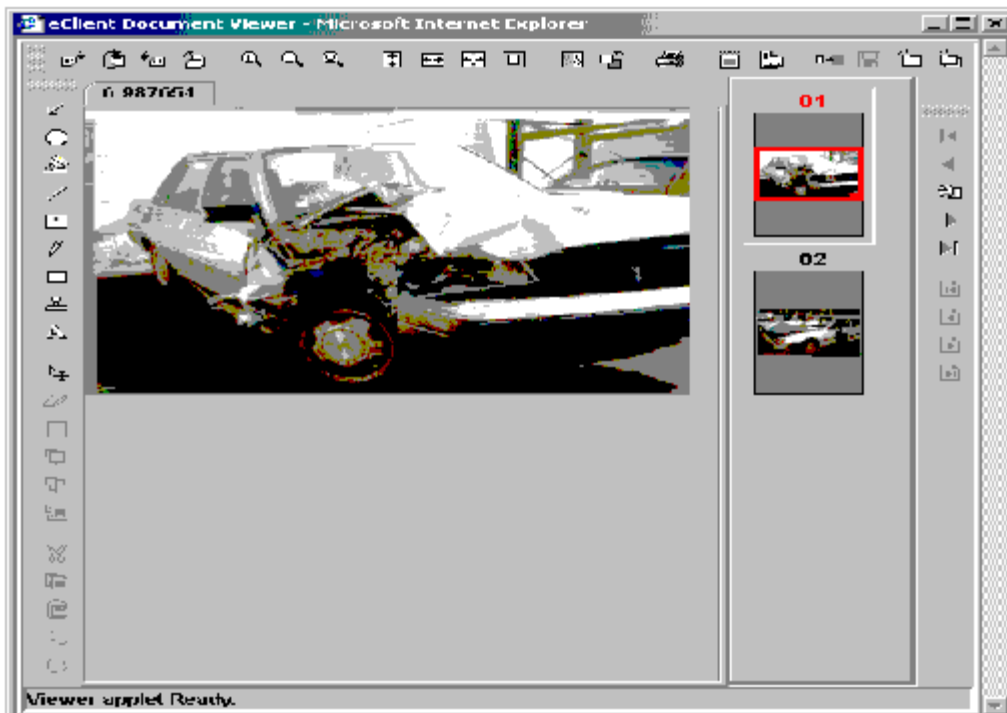

4. After logging into CM eClient :
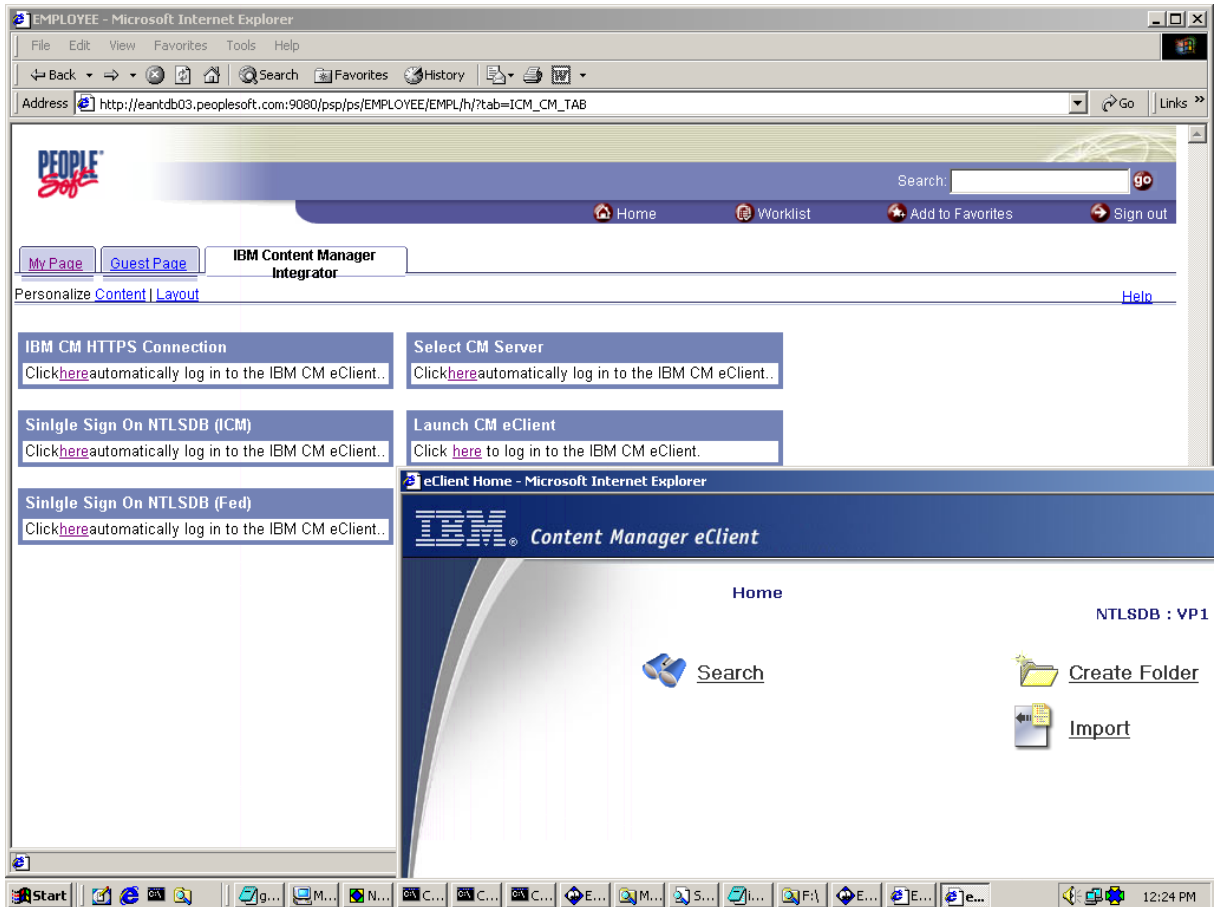
The user sees the following after clicking on "Search" .

The following could be the final output when clicked on one of the result records.

PeopleSoft Integration Guide:

The PeopleSoft Integration for IBM Content Manager Guide can be accessed from the eClient help. This guide offers detailed explanations of all the steps required to perform the integration. The table of contents is below:

1. Overview
2. Requirements
3. Installing
4. Configuring
5. Troubleshooting
6. Removing
7. Getting more information

This guide and the eClient readme file distributed with the software are very important reference documents during the integration process. The PeopleSoft Integration for IBM Content Manager Guide is also translated to Simplified Chinese, German, Japanese, Korean, and Brazilian Portuguese.

Additional Information:

Further information on PeopleSoft Enterprise Portal please can be found at the following URL:
http://www.peoplesoft.com/corp/en/products/technology/appcon/portals/features.asp

Further information on IBM Content Manager for Multiplatforms V8.1, can be found at the following URL:
http://www-3.ibm.com/software/data/cm/cmgr/mp

Further information on IBM Enterprise Information Portal (EIP) V8.1 can be found at:
htp://www.ibm.com/software/data/eip/v8.html

IBM Content Manager V8.1 technical manuals can be found at the following URL:
http://www-3.ibm.com/software/data/cm/cmgr/mp/library.html

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<u>Acknowledgments:</u>

<u>References:</u>

1. User Guide for PeopleSoft Integration for IBM Content Manager

2. T3 Presentation of Emily White and Rob Sawyer on "PeopleSoft Integration for IBM Content Manager V8.1 "