

The
Information
Management
Company



Open4Tech – Concepte de baza ECM



Agenda

Enterprise Content Management (ECM)

- Cum a aparut?
- Ce inseamna?
- Avantajele unui sistem ECM
- Cine a dezvoltat platforme ECM?

EMC Documentum – lider in Enterprise Content Management

- Descriere generala
- Componentele platformei
- Descriere tehnica a unor functionalitati de baza pentru o aplicatie EMC – Documentum.

Enterprise Content Management (ECM)



Ce reprezinta o organizatie?

Asociatie de oameni cu conceptii sau preocupari comune, uniti conform unui regulament sau unui statut, in vederea depunerii unei activitati organizate.



Ce inseamna un proces de lucru intr-o organizatie?

Un ansamblu de activitati ce au ca scop realizarea unor obiective, in baza unor sarcini precise.



Enterprise Content Management (ECM)

Ce entitati sunt implicate in procesele de lucru din organizatii?

- Oameni
- Resurse tehnico-materiale
- Documente



Enterprise Content Management (ECM)

Ce reprezinta documentele intr-o organizatie?



- Reguli
- Proceduri
- Plan de lucru
- Documentatie tehnica
- Contracte
- etc



Enterprise Content Management (ECM)

Documentele pot exista:

Fizic

- pe birou
- in dosare
- In arhiva



Electronic

- In sistemele informatice
- Pe suport magnetic

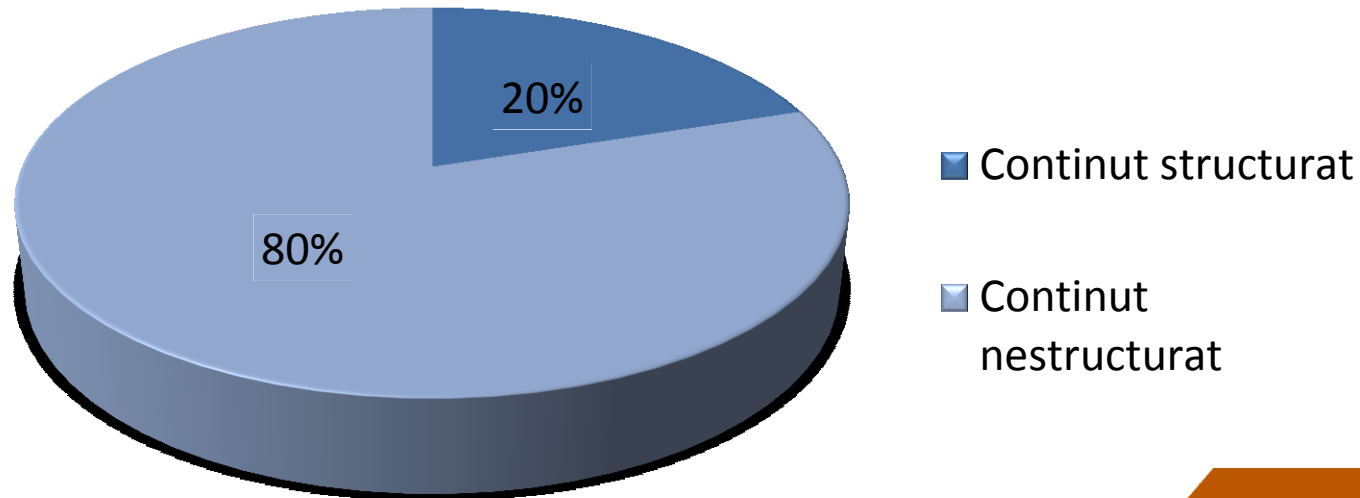


Enterprise Content Management (ECM)

Electronic, continutul unui fisier poate fi de mai multe tipuri

- Text, pdf, MS-Office (doc, xls), Media (mpeg, avi), Image (jpg, bmp)
- Toate aceste fisiere, adunate impreuna reprezinta continut nestructurat.

Continutul in organizatii



Cum a aparut ECM?

Problemele cauzate de continutul nestructurat

- Dificultati in clasificarea continutului
- Regasirea greoaie de informatii
- Politicile de securitate se aplica greu sau chiar deloc.
- Atunci cand avem formate diferite de fisiere, trebuie realizata o gestiune individuala pentru fiecare format.



Cum a aparut ECM?

Efectul asupra organizatiei



- Timpul irosit in procesele functionale, va duce la cresterea ineficientei si intr-un final la cresterea costurilor in organizatie.
- In momentul in care unei companii ii cresc costurile, trebuie trase semnale de alarma si gasite solutii de redresare.

Solutia

Enterprise Content Management (ECM)

Enterprise Content Management (ECM)

Definitie

Enterprise Content Management (ECM) reprezinta un ansamblu de strategii, metode si tehnologii care servesc la capturarea, gestionarea, stocarea, conservarea si distribuirea de continut digital si documente, necesare in procesele organizationale.

(c) 2010 - [AIIM](#) (Association for Information and Image Management)

Ce inseamna de fapt ECM?

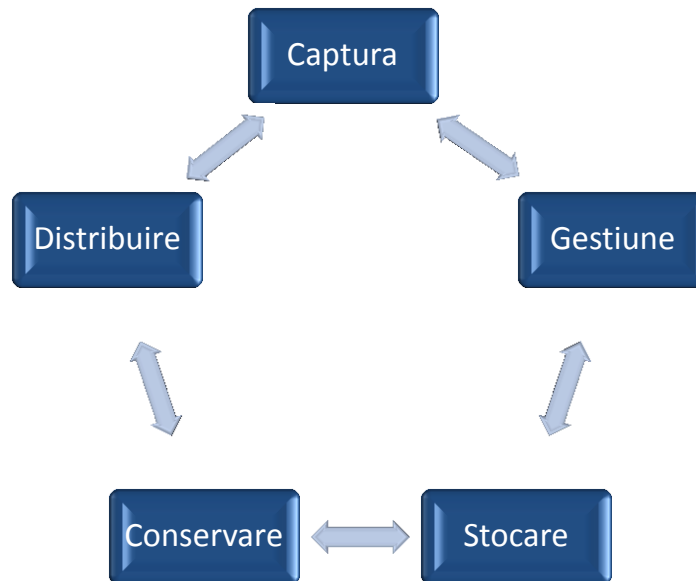
ECM nu este numai o suita de tehnologii pentru gestionarea de continut, ci mai presus de toate este o suita de strategii de organizare si management al informatiilor care trebuie sa raspunda la nevoile reale ale companiilor.

=

Enterprise Content Management (ECM)

Ce inseamna de fapt ECM? (cont)

Astfel, ECM s-a concentrat pe acoperirea nevoilor companiilor si astfel, prin componentele sale, acopera urmatoarele directii:



Enterprise Content Management (ECM)

Captura

Procesul de captura presupune convertirea informatiilor din format fizic in format electronic, cu ajutorul scanarii.

Procesul de captura poate cuprinde urmatoarele etape:

- **Recunoastere:** se folosesc tehnologii de OCR, HCR, ICR, OMR, Barcode Recognition.
- **Corectie:** se folosesc tehnologii pentru aliniere, ajustare culori, separare pagini, indepartare elemente grafice din pagina.
- **Indexare:** este procesul prin care unui document scanat i se asociaza attribute caracteristice astfel incat ulterior in sistem, acest document sa poate fi gasit mai usor.

Enterprise Content Management (ECM)

Gestiune

Procesul de gestiune din cadrul ECM, presupune includerea a 5 componente, in functie de continutul gestionat, procesele de lucru, precum si de aria de activitate.

- **Document Management (DM):** gestioneaza documentele de la creare pana la arhivare.
- **Collaboration:** ofera posibilitatea utilizatorilor sa lucreze impreuna la gestionarea unor documente comune.
- **Web content management:** ofera posibilitatea utilizatorilor sa creeze web content, fara cunostinte detaliate in domeniu.
- **Records management:** presupune existenta unor reguli cu privire la clasificarea, arhivarea si pastrarea unor documente.
- **Workflow si business process management (BPM):** ofera suport pentru definirea si gestiunea fluxurilor informationale.

Enterprise Content Management (ECM)

Stocare

Pastrare de informatii care inca nu sunt clasificate pentru conservare, dar care trebuie sa fie persistente o perioada de timp.

- **Depozite de date:**
 - Sisteme de fisiere
 - Sisteme de gestiune a continutului
 - Baze de date
- **Servicii de acces la date:** sunt componente ce permit accesul la informatiile stocate in depozite.
- **Suport de stocare:**
 - Hard disk-uri
 - Compact Disk-uri, DVD

Enterprise Content Management (ECM)

Conservare

Pastrarea pe termen lung si in siguranta a informatiilor.

Exista specificate anumite politici de retentie a informatiilor in conservare.

Enterprise Content Management (ECM)

Distribuire

Componenta responsabila pentru export de informatii din ECM catre surse externe.

Enterprise Content Management (ECM)

File Systems

- Nu poti fi sigur ca lucrezi pe ultima versiune de continut
- Permisii limitate asupra drepturilor pe un anumit fisier
- Cautari de documente pe un set restrans de proprietati
- Formate diferite retinute ca fisiere separate
- Nu exista suport pentru distribuirea documentelor pe fluxuri.

ECM

- Intotdeauna accesezi cea mai noua versiune
- Posibilitate de a restrictiona drepturile pentru citire, modificare sau stergere
- Cautari precise si exacte pe proprietati descriptive
- Formate diferite pot fi atribuite unui singur document.
- Suport pentru distribuirea documentelor pe fluxuri

Enterprise Content Management (ECM)

Producatori de platforme ECM (selectie):



- Documentum (EMC)
- Alfresco
- IBM
- Microsoft
- Nuxeo
- Ever Team
- OpenText
- Oracle
- Autonomy
- Hyland Software, Inc.
- Xerox

Enterprise Content Management (ECM)

EMC

Lider mondial in produse, servicii si solutii
pentru stocarea si managementul informatiei

The EMC logo, consisting of the letters "EMC" in a large, bold, blue serif font, with a superscript "2" to the right. Below it, the tagline "where information lives" is written in a smaller, black, sans-serif font.

EMC²
where information lives[®]

Enterprise Content Management (ECM)

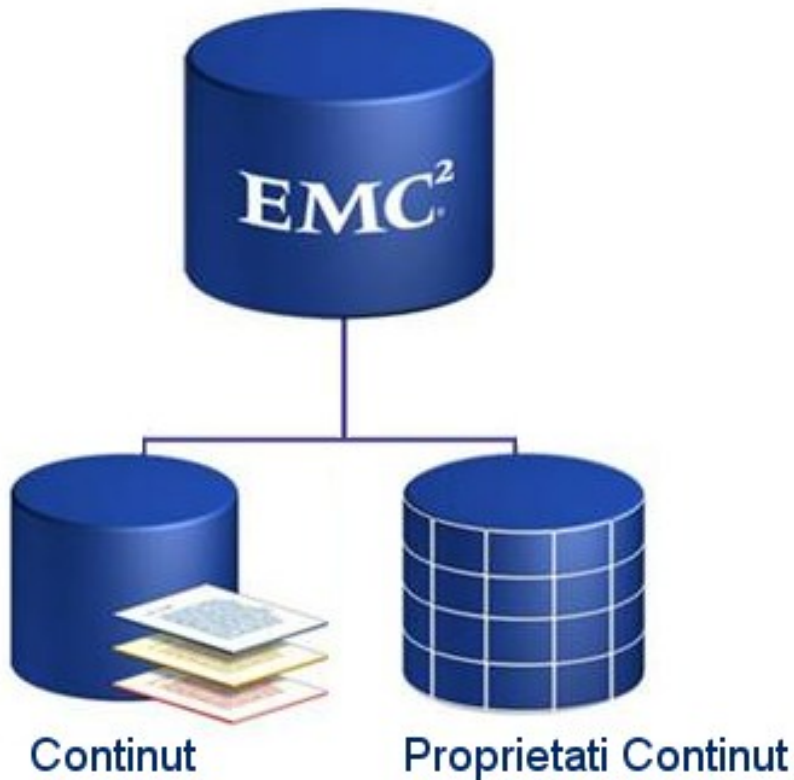
EMC Documentum

EMC² | documentum

EMC²
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EMC Documentum

Structura Documentum



- Stocheaza continutul in sisteme de fisiere =
- Stocheaza proprietatile fisierelor in baze de date relationate (RDBMS)
 - Oracle
 - SQL Server
 - DB2
- Suporta mai multe sisteme de operare (Unix, Linux, Windows)

EMC Documentum

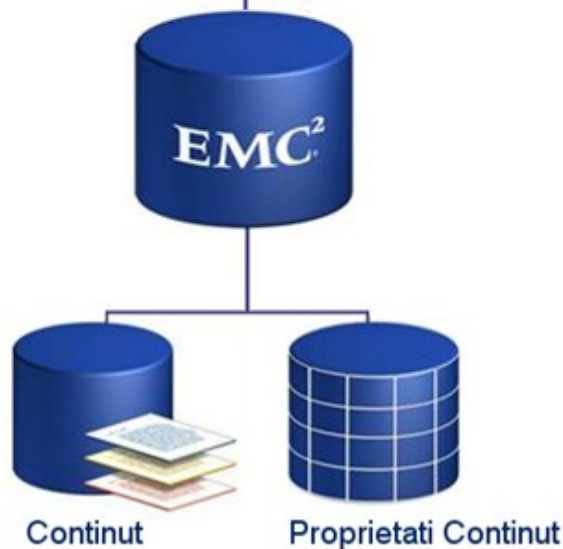
Server Continut (Content Server)



Serviciul care gestioneaza depozitul de documente

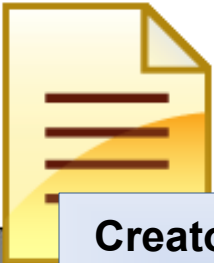
- Depozitul de documente poate fii accesibil numai prin Content Server.
- Continutul este stocat in repository ca un obiect
- Un obiect este compus din 2 elemente: **Proprietati** si **Continut**

Depozit Continut (Docbase)



EMC Documentum

Continut



Proprietati

Creator: Student
Data Creare: 17.03.2011
Nume: Proiect ECM
Subject: Programare
Keywords: emc, j2ee

Proprietatile sunt folosite pentru a descrie obiectele din repository

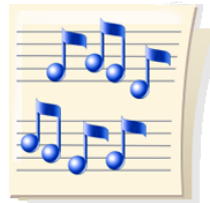
Pot fi create:

- Automat de Content Server
- Aplicatie externa
- Manual de utilizator
- Programatic prin customizare

Proprietatile detin un rol extrem de important in cautari si organizari de informatii.

EMC Documentum

Continut

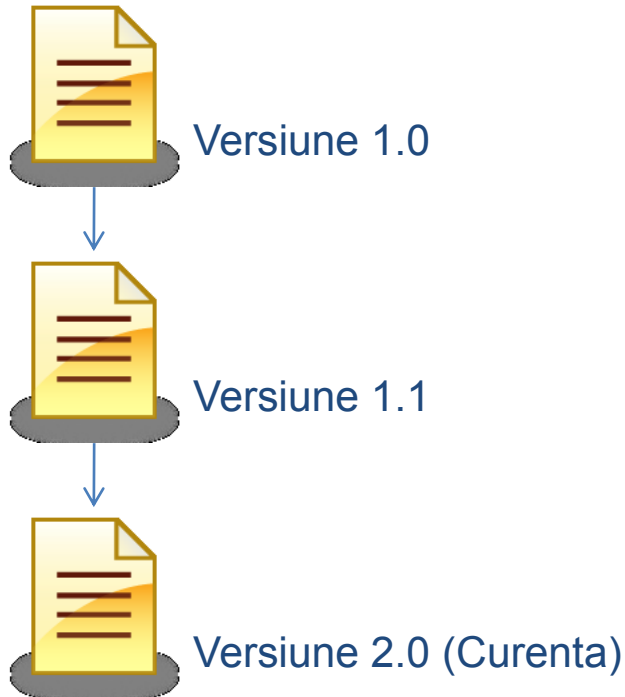


Continutul fisierelor poate fi in orice format:

- Document
- Pagini web
- Documente XML
- Fisiere executabile
- Fisiere audio/video
- Planse tehnice

EMC Documentum

Versionare



- Cand un document se modifica, se creeaza o noua versiune
- Fiecare versiune are un numar unic
- Implicit, utilizatorii acceseaza ultima versiune
- Se poate face revert in orice moment la o versiune anterioara

EMC Documentum

Renditii

O reprezentare a continutului original in acelasi format sau in formate diferite.



Document Original



Continutul unui document poate fi asociat uneia sau mai multor renditii

EMC Documentum

Securitate

Accesul la depozitul de date (eng Repository) este controlat de permisiuni.



Users/Group	Permisiuni
Financiar	Browse
Autor	Delete
Management	Write
Vanzari	Read
Marketing	Version

Permisiunile pot fi aplicate automat sau manual, in functie de cerinte.

EMC Documentum

Continutul este stocat, folosind o structura ierarhica cabinet folder.

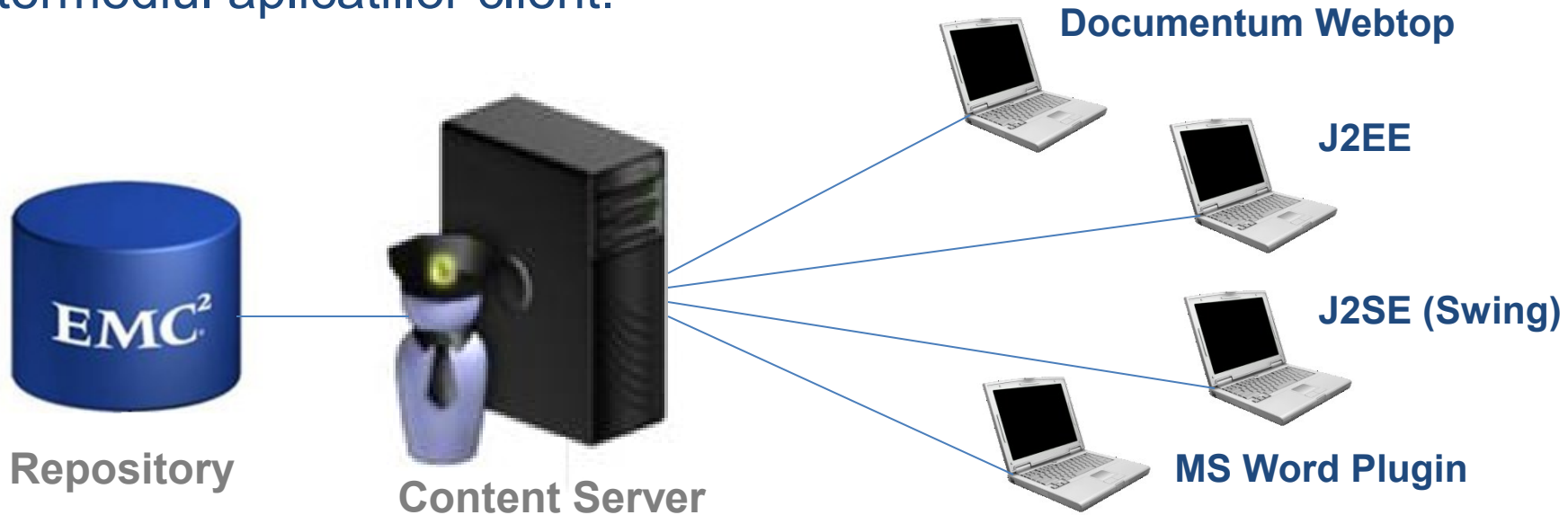


- **Cabinet** este cel mai inalt nivel de organizare pentru repository
- **Cabinet-ul** poate sa contina foldere si content.
- **Folder** este nivelul imediat urmator de organizare
- **Folder-ul** poate sa contina alte foldere si content.

EMC Documentum

Aplicatii Client

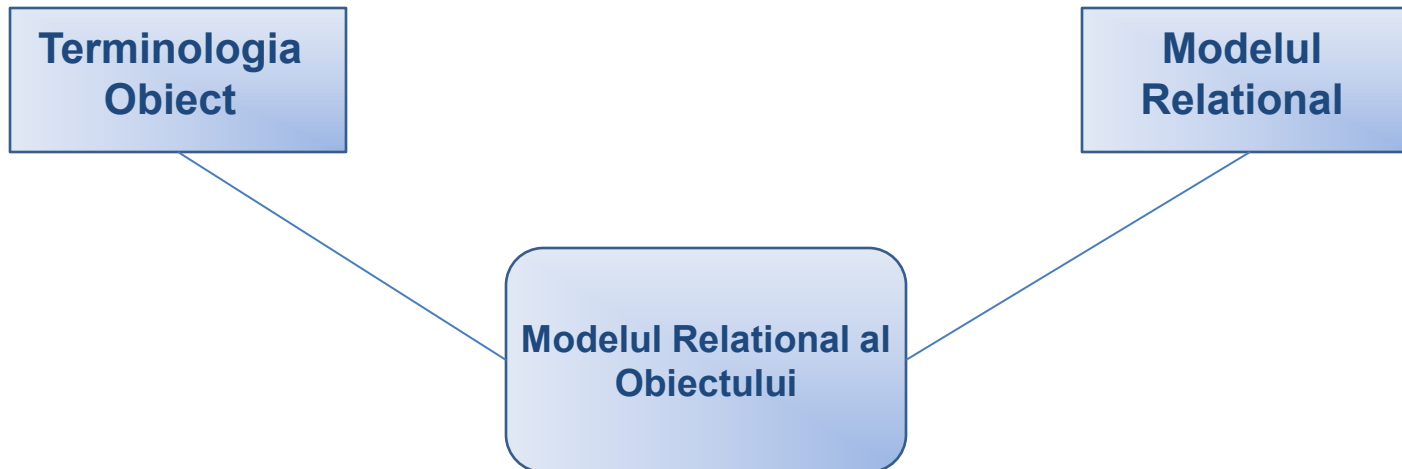
Utilizatorii interactioneaza cu Content Server-ul prin Intermediul aplicatiilor client.



EMC Documentum

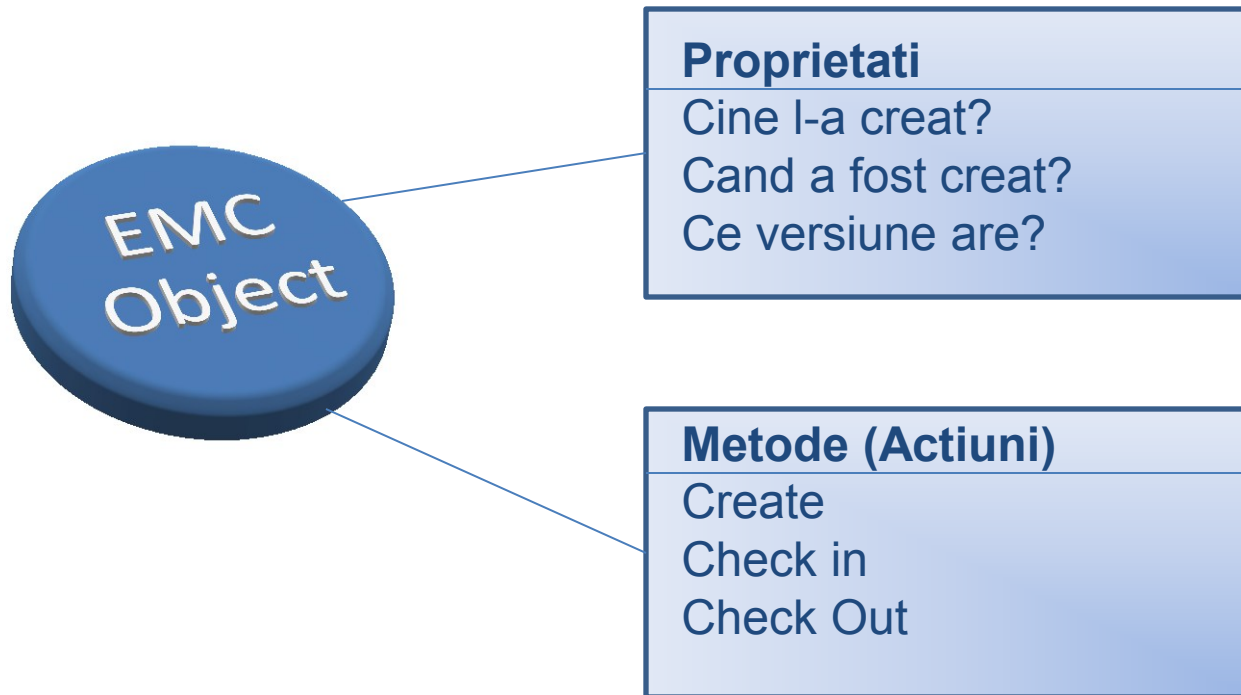
Obiecte

Content Server-ul gestioneaza continut folosind o schema obiectual-relationala a datelor



EMC Documentum

Ce este un obiect?

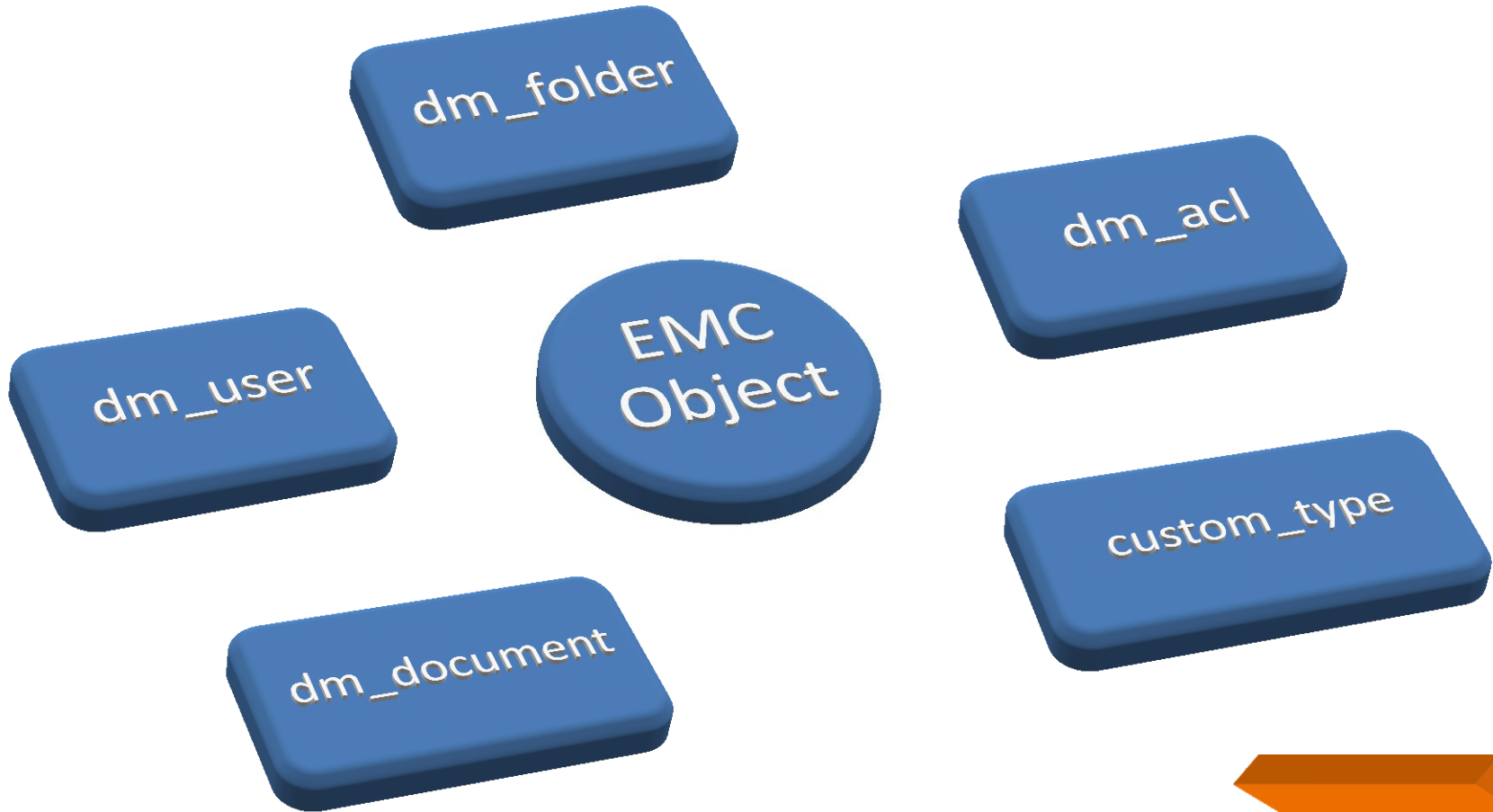


Cabinete, foldere, documente, utilizatori si tot ce este stocat in repository este reprezentat ca un obiect.

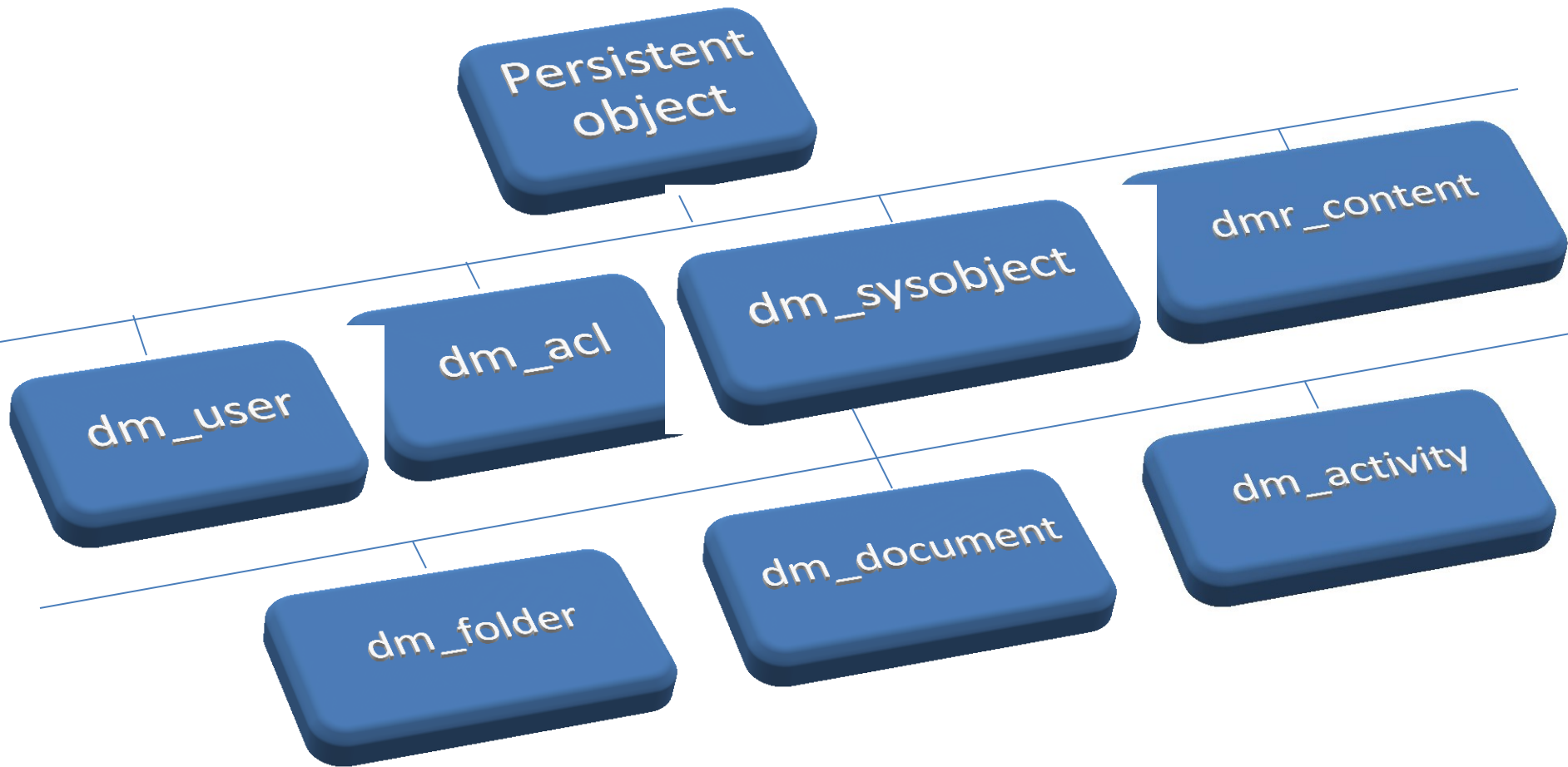
EMC Documentum

Tipuri de obiecte

➤ Peste 100 de tipuri predefinite



EMC Documentum



EMC Documentum

DQL (Documentum Query Language)

- Limbaj de interogare intern, aplicabil peste limbajele proprii SGBD-urilor.
- Folosit de administratori, dezvoltatori si aplicatii pentru a aduce informatii din Content Server
- DQL opereaza pe obiecte, dar si pe tabele.
- Nu sunt acoperite toate operatiile SQL

```
select object_name, title, r_creation_date from dm_document
```

EMC Documentum

DFC (Documentum Foundation Classes)

- API Java pentru acces si lucru cu obiecte documentum
- Se foloseste in aplicatii client, care realizeaza operatii pe obiecte din Content Server
- Se foloseste pe nivelul median intr-o aplicatie n-tier.

Enterprise Content Management (ECM)

Documentum Webtop

EMC² | documentum


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EMC - Documentum Webtop

Ce este Webtop?

- Aplicatie Web, construita pe platforma WDK (Web Development Kit)
- Are implementate operatiile standard de Documentum
- Un set de componente configurabile care genereaza pagini HTML si ofera posibilitatea sa accesezi repository.

EMC - Documentum Webtop



Search  Logout ?

File Edit View Tools

facultate : marius.stancaie/EVIDENTA STUDENTI/Acte de identitate

CI - Ion Popescu Close

Renditions Items per page: 10

Format	Size	Modified	Store Name
 Acrobat PDF	89 KB	3/16/11 4:36 PM	filestore_01
 JPEG Image	162 KB	3/16/11 4:50 PM	filestore_01

test_mst

- facultate : marius.stancaie
 - Inbox
 - Saved Searches
 - Subscriptions
 - My Files
 - Categories
 - Administration
 - User Management
 - Users
 - Groups
 - Roles
 - Security
 - Presets
 - My Home Cabinet
 - Workspace Customizations
 - Startup Items
 - Cabinets
 - EVIDENTA STUDENTI
 - Acte de identitate
 - facultate
 - marius.stancaie
 - Resources
 - System
 - Temp
 - Templates
 - Add Repository

EMC - Documentum Webtop

Exemplu de operatii

- Creare Conexiune catre Docbase
- Grupuri si roluri
- Creare permisiuni (ACL)
- Creare Folder
- Creare Document
- Adaugare Continut la Document si Versionare
- Creare Renditie

Operatii – Creare Conexiune la Docbase (Repository)

```
IDfClientX clientX = new DfClientX();
IDfSessionManager sMgr = null;
IDfSession session = null;
try {
    IDfClient client = clientX.getLocalClient();
    IDfLoginInfo identity = clientX.getLoginInfo();

    identity.setUser(userName);
    identity.setPassword(password);

    sMgr = client.newSessionManager();
    sMgr.setIdentity(docbase, identity);

    session = sMgr.getSession(docbase);

    System.out.println("DCTM Content Server version: "
        + session.getServerVersion());
} catch (DfException e) {
    e.printStackTrace();
} finally {
    if (sMgr != null) {
        sMgr.release(session);
    }
}
```


Grupuri

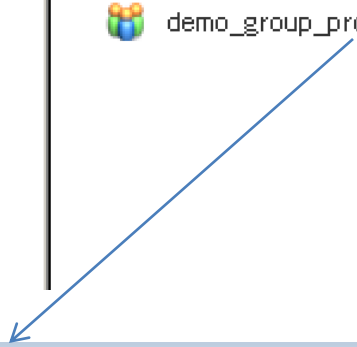
facultate : mihai

- Inbox
- Saved Searches
- Subscriptions
- My Files
- Categories
- Administration
 - Basic Configuration
 - User Management
 - Users
 - Groups**
 - Roles
 - Module Roles
 - Sessions

Administration / User Management /

Groups

Name	Description
 demo_group_profesori	



File Edit View **Tools**

Administration / User Management / Groups / demo_group_profesori

Groups

Name	Description
------	-------------

 Profesor




Roluri

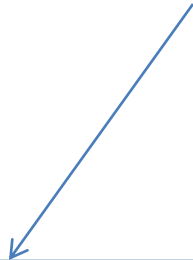
facultate : mihai

- Inbox
- Saved Searches
- Subscriptions
- My Files
- Categories
- Administration
 - Basic Configuration
 - User Management
 - Users
 - Groups
 - Roles**
 - Module Roles
 - Sessions
 - Security

Administration / User Management /

Roles

<u>Name</u>	<u>Description</u>
 demo_role_student	




File Edit View Tools

Administration / User Management / Roles / demo_role_student

Roles

<u>Name</u>	<u>Description</u>
-------------	--------------------

 Student	
---	--




Create ACL (obiect de permisiuni)

- [-] facultate : mihai
 - Inbox
 - Saved Searches
 - Subscriptions
 - My Files
 - Categories
 - [-] Administration
 - + Basic Configuration
 - [-] User Management
 - Users
 - Groups
 - Roles
 - Module Roles
 - Sessions
 - Security
 - Audit Management

Administration /

Permission Sets

<u>Name</u>	<u>Owner</u>	<u>Class</u>	<u>Description</u>	
 demo_acl	facultate	Regular	Demo ACL	Properties
				View Associations
				Save As
				Delete



Creare ACL (obiet de permisiuni)

Permission Set Properties

Info

Permissions



Permission Set : demo_acl

[-] Grant access to

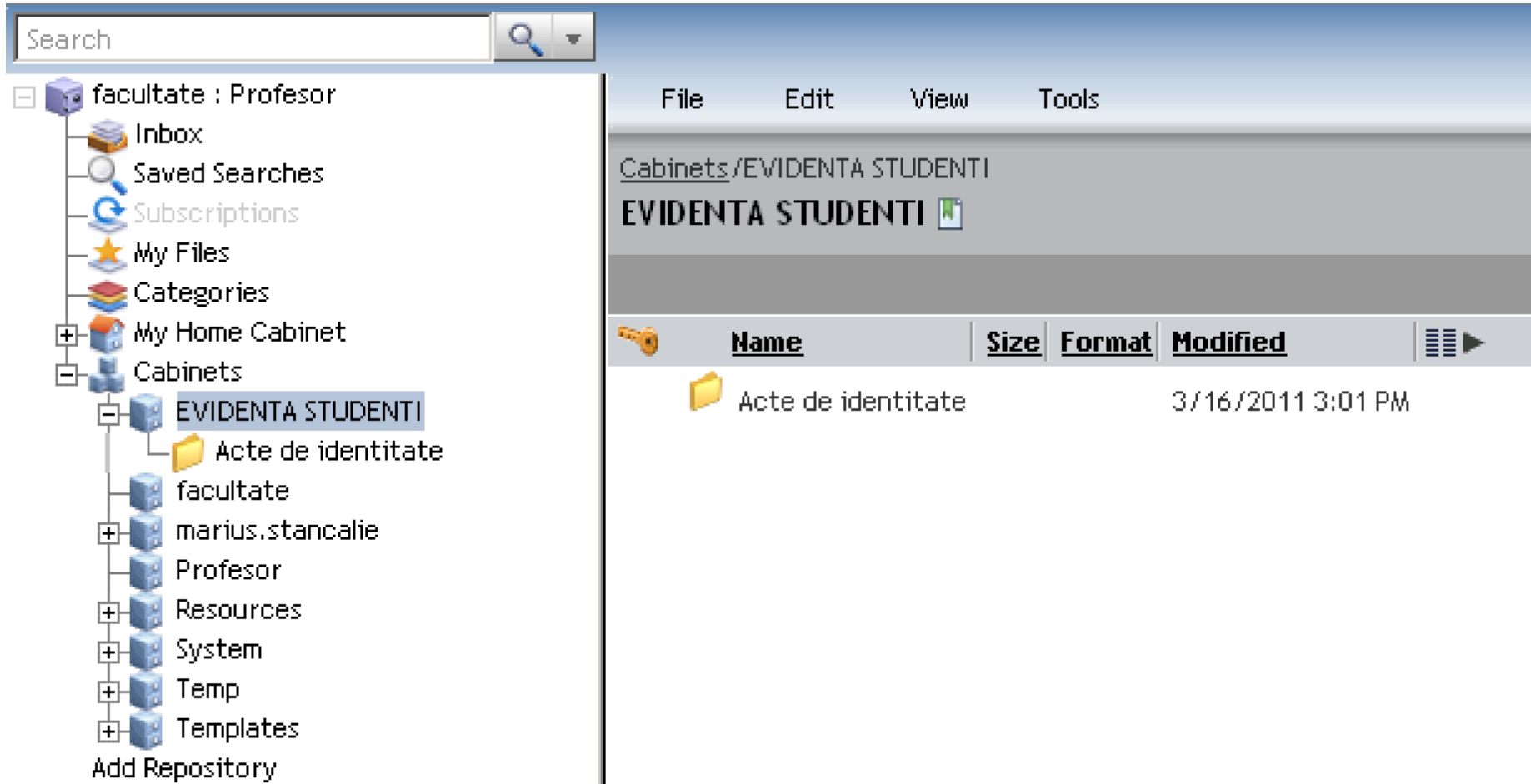
[Add](#) Edit Remove

<u>Accessors</u>	Permissions
demo_role_student	Read
dm_world	None
demo_group_profesori	Delete
dm_owner	Delete



Create Folder - Code

```
public static void main(String[] args) {  
    IDfSession session = getSession();  
  
    try {  
        IDfFolder aiFolder = (IDfFolder) session.newObject("dm_folder");  
        aiFolder.setObjectName("Acte de identitate");  
        aiFolder.link("/EVIDENTA STUDENTI");  
        aiFolder.setACLName("demo_acl");  
        aiFolder.setACLDomain("facultate");  
        aiFolder.save();  
    } catch (DfException e) {  
        e.printStackTrace();  
    }  
    releaseSession(session);  
}
```

Create Folder – Vizualizare Modificari (Webtop)



The screenshot displays a webtop interface with a search bar at the top left. The left pane shows a tree view of folders under 'facultate : Profesor'. The right pane shows a menu with 'File', 'Edit', 'View', and 'Tools'. Below the menu, the path 'Cabinets/EVIDENTA STUDENTI' is shown, followed by a folder icon and the name 'EVIDENTA STUDENTI'. A table below lists the contents of this folder:

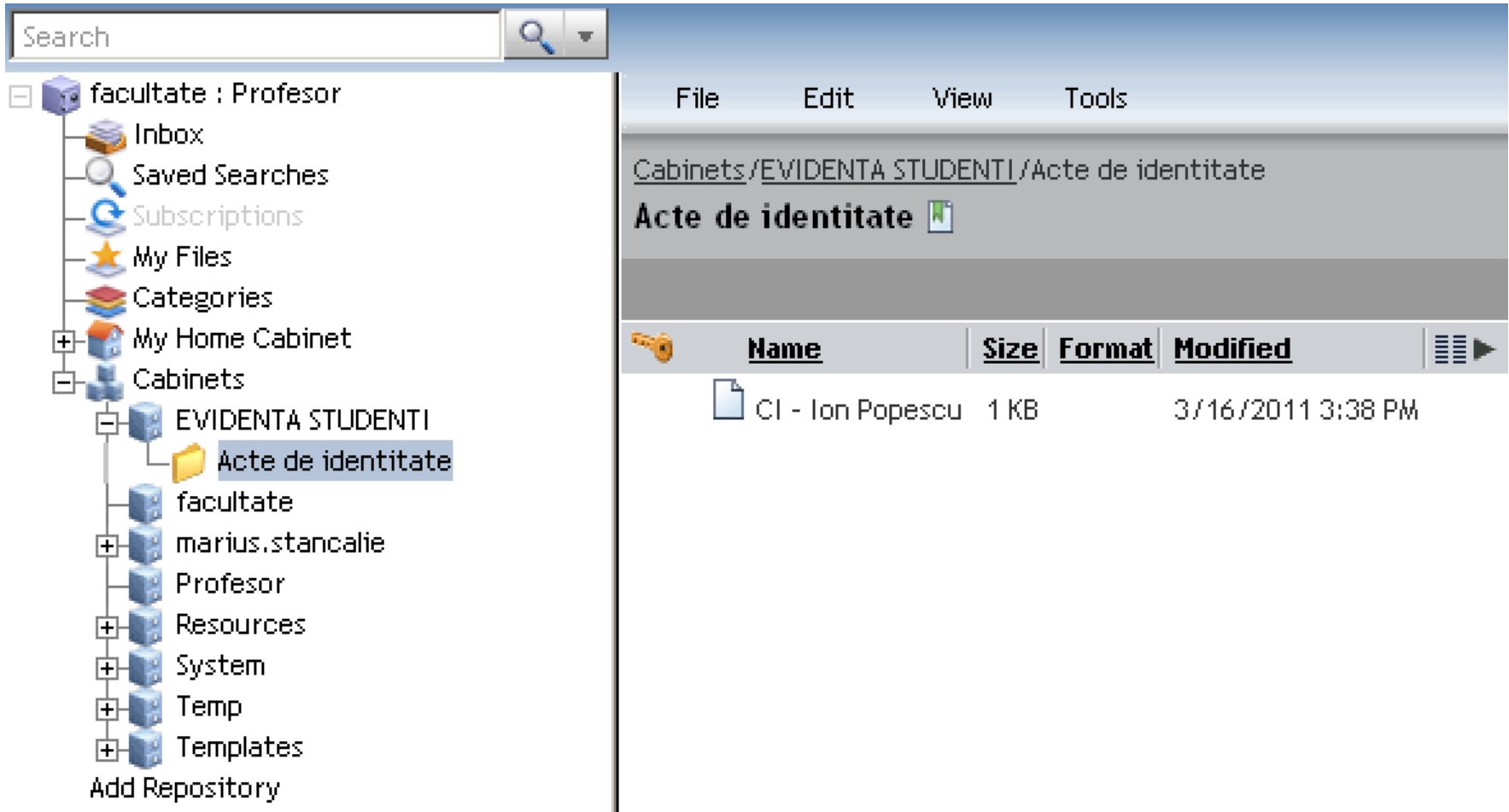
 Name	Size	Format	Modified
 Acte de identitate			3/16/2011 3:01 PM

Creare Document - Code

```
IDfSession session = getSession();

try {
    IDfSysObject myDoc = (IDfSysObject) session.newObject("act_identitate");
    // setare atribute custom
    myDoc.setString("nume", "Popescu");
    myDoc.setString("prenume", "Ion");
    myDoc.setString("cnp", "1881023163203");
    myDoc.setString("adresa", "Str. Carol I, Nr. 35");
    myDoc.setString("serie", "DX");
    myDoc.setString("numar", "123456");
    // setare atribute default
    myDoc.setObjectName("CI - Ion Popescu");
    myDoc.link("/EVIDENTA STUDENTII/Acte de identitate");
    myDoc.setACLName("demo_acl");
    myDoc.setACLDomain("facultate");
    myDoc.save();
} catch (DfException e) {
    e.printStackTrace();
}
releaseSession(session);
```


Creare Folder – Vizualizare Modificari (Webtop)



The screenshot displays a webtop interface with a file explorer on the left and a file details pane on the right. The file explorer shows a tree view of folders and files, with the 'Acte de identitate' folder selected under 'EVIDENTA STUDENTI'. The file details pane shows the file 'CI - Ion Popescu' with a size of 1 KB and a modification date of 3/16/2011 3:38 PM.

Search

facultate : Profesor

- Inbox
- Saved Searches
- Subscriptions
- My Files
- Categories
- My Home Cabinet
- Cabinets
 - EVIDENTA STUDENTI
 - Acte de identitate
 - facultate
 - marius.stancaie
 - Profesor
 - Resources
 - System
 - Temp
 - Templates

Add Repository

File Edit View Tools

Cabinets/EVIDENTA STUDENTI/Acte de identitate

Acte de identitate

Name	Size	Format	Modified
CI - Ion Popescu	1 KB		3/16/2011 3:38 PM

Adaugare Content si Versionare - Code

```
IDfSession session = getSession();

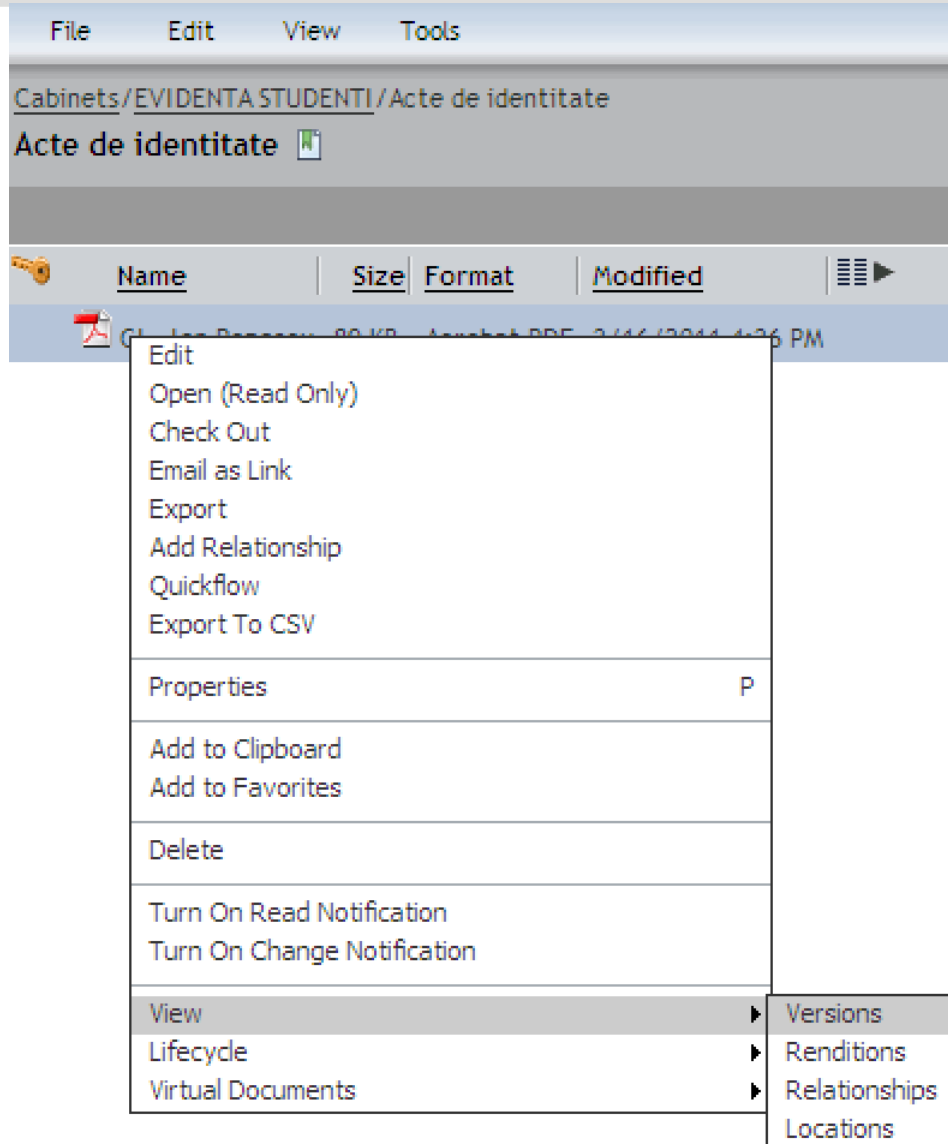
try {
    IDfSysObject myDoc = (IDfSysObject) session.getObjectByQualification(
        "act_identitate where object_name = 'CI - Ion Popescu'");

    myDoc.checkout();
    myDoc.setContentType("pdf");
    myDoc.setFile("c:\\demo\\MAST_CI.pdf");
    myDoc.checkin(false, "");

} catch (DfException e) {
    e.printStackTrace();
}


releaseSession(session);
```


Versionare– Vizualizare Modificari (Webtop)



File Edit View Tools

Cabinets/EVIDENTA STUDENTI/Acte de identitate

Acte de identitate 


Name	Size	Format	Modified
 Gl. Lec. Proce... 89 KB Acrobat PDF 2/11/2014 4:26 PM			

- Edit
- Open (Read Only)
- Check Out
- Email as Link
- Export
- Add Relationship
- Quickflow
- Export To CSV
- Properties P
- Add to Clipboard
- Add to Favorites
- Delete
- Turn On Read Notification
- Turn On Change Notification
- View
 - Versions
 - Renditions
 - Relationships
 - Locations
- Lifecycle
- Virtual Documents





Versionare– Vizualizare Modificari (Webtop)

File Edit View Tools

facultate : Profesor / EVIDENTA STUDENTI / Acte de identitate

 CI - Ion Popescu

Versions

	<u>Version</u> ▼	<u>Description</u>	<u>Size</u>	<u>Format</u>	<u>Modified</u>	 <u>Path</u>
				Acrobat		
	1.1,CURRENT		89 KB	PDF	3/16/2011 4:36 PM	<u>/EVIDENTA STUDENTI/Acte</u>
	1.0		1 KB		3/16/2011 3:38 PM	<u>/EVIDENTA STUDENTI/Acte</u>

Create rendition- Code

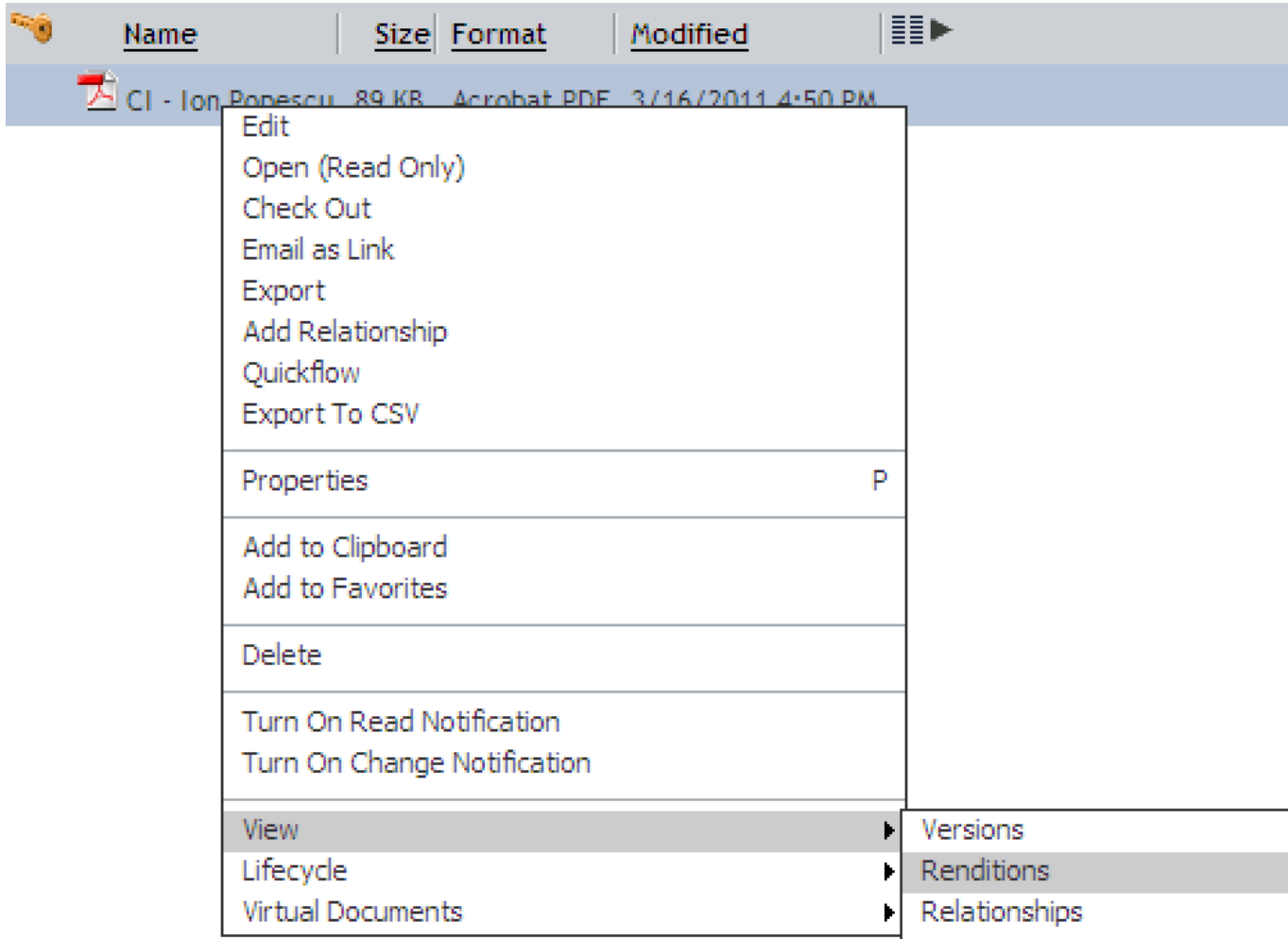
```
IDfSession session = getSession();

try {
    IDfSysObject myDoc = (IDfSysObject) session.getObjectByQualification(
        "act_identitate where object_name = 'CI - Ion Popescu'");

    myDoc.addRendition("c:\\demo\\MAST_CI.jpg", "jpeg");

    myDoc.save();
} catch (DfException e) {
    e.printStackTrace();
}
releaseSession(session);
```

Creare Renditie – Vizualizare Modificari (Webtop)



The screenshot displays a file management interface with a table of files. The table has columns for Name, Size, Format, and Modified. A context menu is open over a file named 'CI - Ion Popescu_89 KB Acrobat PDF_3/16/2011 4:50 PM'. The menu items are:

- Edit
- Open (Read Only)
- Check Out
- Email as Link
- Export
- Add Relationship
- Quickflow
- Export To CSV
- Properties P
- Add to Clipboard
- Add to Favorites
- Delete
- Turn On Read Notification
- Turn On Change Notification
- View ▸
 - Versions
 - Renditions
 - Relationships
- Lifecycle ▸
- Virtual Documents

Creare Renditie – Vizualizare Modificari (Webtop)

Search

facultate : Profesor

- Inbox
- Saved Searches
- Subscriptions
- My Files
- Categories
- My Home Cabinet
- Cabinets
 - EVIDENTA STUDENTI
 - Acte de identitate
 - facultate
 - marius.stancalie
 - Profesor

File Edit View Tools

facultate : Profesor / EVIDENTA STUDENTI / Acte de identitate

CI - Ion Popescu

Renditions

Format	Size	Modified	Store Name
Acrobat PDF	89 KB	3/16/11 4:36 PM	filestore_01
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