Integrating Webtop Components With Thin-Client Web Applications Using WDK Tickets

Presented by:

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Goal

> Share content with non-Documentum users

> Deliver content via thin-client

> Integrate with websites
Agenda

- Sharing content: Why a custom application?
- Server deployment environment
- Core competencies required for development
- Lessons learned
Speaker’s Credentials

> B.S. Mechanical Engineering SJSU

> M.S. Client/Server Computing SJSU

> 7+ years application development experience
  • IBM, Sun Microsystems, NASA Ames Research Center
  • Current Focus J2EE, Semantic Web, KM

> Documentum educational courses
Challenges of sharing content

- Content Management not centralized
- Workgroup and Center level Doc Mgmt systems in use (e.g.: PostDoc, DocuShare, Documentum)
- Limited Documentum client licenses
- NASA teams need to share docbase content with non-Documentum users
- Mac & Win clients
Sharing content: Why a custom application?

Survey of existing add-on modules

- Not practical or lacked key functionality
- WebDAV Services
- FTP Services
- Web Publisher
- Need web delivery
Solution

> Thin-client WDK-based application deployed on NASA Intranet
  
  • Webtop Streamlineview and Search components
  • Embed into existing NASA web pages
  • Silent-login, secure
  • Users publish with Desktop Client or Webtop
Application Functionality

> How it works

- Web application content root is a Cabinet
- Users publish content to Intranet by:
  - Workflow
  - Import directly to Cabinet
- Webtop components operate on target cabinet
Server Deployment Environment

> Webtop 5.2.5
> Tomcat 4.0.x or 4.1.x
> JDK 1.4.2
> Content Server 5.1 or 5.2
Enterprise Architecture
Technologies/Skills required for development

> HTML, CSS, JavaScript
> WDK, DFC
  • Configuring and Customizing Webtop
  • Components, Actions and Tickets
  • DQL
> Java
  • Servlet
  • JSP
Webtop Actions

- Atomic operation
- Have preconditions
- Defined in an action configuration file
- Launched by URL
- WDK framework searches for the action definition by action ID
Webtop Actions

> Invoking Actions via a URL

• Example:

/mywebtop/action/view?objectId=0c3fcff38000338e

Customized Webtop Application
Action type
Target Docbase Object (i.e.: cabinet)
Authentication Methods

> Manual Authentication
> Silent-login
  • External resource login
  • Anonymous login
> J2EE Principal Authentication
> Ticketed Login
Any application that has a docbase session can use ticketed login

- DM_TICKET=00000118296965a0.Docbase@HOST

Login user without a login screen

Can be combined with Webtop Actions
Components Utilized

> What is a Component
  • Re-usable piece of UI
  • Hides actual UI implementation from caller
  • Provides a component contract specified in the component definition file (parameters)

> Component Definition contains pointers to
  • Presentation
  • Behavior Class
  • NLS Bundle

> View and Search Component
Out-of-the-box View Component

Security
Risk

Tweak
Functionality
Out-of-the-box View Component

Properties: Permissions

**APC\LLO13**
Type: dm_document
Format: mpg

Your permissions: READ

Active permissions set: public-cabinet-ACL
Permissions set description: ACL for the Public cabinet
Permissions set owner: ARCd1

<table>
<thead>
<tr>
<th>User/Group</th>
<th>Permissions</th>
<th>Extended Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>dm_world</td>
<td>READ</td>
<td></td>
</tr>
<tr>
<td>dm_owner</td>
<td>DELETE</td>
<td>Run procedure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Change location</td>
</tr>
<tr>
<td>public-cabinet-group</td>
<td>DELETE</td>
<td>Change location</td>
</tr>
</tbody>
</table>
Out-of-the-box Search Component
Drilldown Component Customizations
- Restrict Breadcrumb navigation
- Disable ActionLists
- Cabinet permissions
- Proxy user permissions
View Component Customization

- Problem – Default Breadcrumb implementation allows navigation to docbase root

- Solution - Override StreamlineView class in package com.documentum.webtop.webcomponent.streamline
Search Component Customization

Docbase Search

Document body contains: Some text
File or Folder name: MyFilename

Search

Search Servlet

Search Results

Sort by: Name | Modified

1 of 2 ✉️ Number of Items to Display: 5

- **Integrated Baseline Review May 2004**
  - Size: 0 KB
  - Version: CURRENT, 1.0
  - Modified: 5/21/04 8:39 AM
  - Path: /Internal

- **Code T 2004 Success Stories**
  - Size: 0 KB
  - Version: CURRENT, 1.0
  - Modified: 5/24/04 4:29 PM
  - Path: /Internal

- **NASA FY2005 Budget Estimates**
  - Size: 11 MB
  - Version: CURRENT, 1.0
  - Modified: 2/24/04 1:54 PM
  - Path: /Internal

- **ECS Success-Story Rev?**
  - Size: 9 MB
  - Version: CURRENT, 1.0
  - Modified: 5/28/04 3:59 PM
  - Path: /Internal/Code T 2004 Success Stories

- **ECS Success-Story Rev?**
  - Size: 1 MB
  - Version: CURRENT, 1.0
  - Modified: 5/28/04 4:12 PM
  - Path: /Internal/Code T 2004 Success Stories
Search Component Features

> Search Component
  • Performs search queries and displays the results
  • Full text and meta search
  • Limit search scope
  • Modify search results
  • Documentum Query Language (DQL)
> DQL for search:

```
SELECT object_name FROM dm_sysobject
SEARCH FIRST DOCUMENT CONTAINS 'text_to_search_for'
WHERE CABINET ('/MyCabinet', DESCEND)
AND object_name LIKE '%MyFileName%'
```
1. Call Servlet, doGet method
2. Check HTTP Session for a docbase session (IDfSession), make one if needed
3. Get a ticket from the IDfSession object
4. Build the Action URL with Ticket
5. Redirect to Action URL
1) Request for HTML page
2) Page returned to browser
3) iframe src calls Servlet doGet
4) Servlet gets docbase session
5) IDfSession object
6) Servlet uses IDfSession object to get a Ticket.
7) Using the ticket, the Servlet forms an Action URL and sends the component to the client
<!-- intranet web page -->
<html>

…

<iframe id="dctwidget" src="http://myserver.com/somewebapp/dctglueservlet"
    height="650" width="700">
</iframe>

…

</html>
```java
public void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException
{
    try
    {
        HttpSession httpSession = request.getSession();
        String dctSessionEstablished =
            (String)httpSession.getAttribute("dctSessionEstablished");
        IDtSession dctSession = null;
    }
    catch
```
if("TRUE".equals(dctSessionEstablished))
{
    dctSession = (IDfSession)httpSession.getAttribute("dctGatewaySession");
}
else
{

else
{
    IDfClient client = DfClient.getLocalClient();
    IDfLoginInfo suLoginInfo = new DfLoginInfo();
    suLoginInfo.setUser("SomeSuperUser");
//get the encrypted password from the web.xml file
String encryptedPwd = getInitParameter("encryptedPwd");
String unlockKey = "BVKYJ-H3W9F-WVM9G-DYVW9";

String superPwd =
    DfClient.getLocalClient().decryptText(encryptedPwd, unlockKey);
suLoginInfo.setPassword(superPwd);

<init-param>
    <param-name>encryptedPwd</param-name>
    <param-value>DM_ENCR_TEXT=BrPeI4eb0dh20GGDcSgVLr3i221gwWozfaNm/Paii15T+RlwWtQSxAeD79rKm9q</param-value>
</init-param>
httpSession.setAttribute("dctSessionEstablished", "TRUE");
dctSession = client.newSession("MyDocbase", suLoginInfo);
httpSession.setAttribute("dctGatewaySession", dctSession);
} //end else
//get the ticket from the IDfSession object
String ticket = dctSession.getLoginTicketForUser("UserWithReadPermissions");

//URL Encode ticket string
int charLoc = ticket.indexOf('=');
ticket = "DM_TICKET%3d" + ticket.substring(charLoc + 1);

//make the Action URL string
String action =
        "http://myserver.com:80/mywebtop/action/view?objectId=0c3fcff38000338e" +
        "&ticket=" + ticket + "&docbase=MyDocbase&username=UserWithReadPermissions";

//invoke action
response.sendRedirect(action);
String fulltext = request.getParameter("fulltext");
String filename = request.getParameter("filename");

String query = "SELECT object_name FROM dm_sysobject ";
if(fulltext != null && !fulltext.equals(""))
    query += "SEARCH FIRST DOCUMENT CONTAINS '" + fulltext + "' ";
query += "WHERE CABINET ('/SomeCabinet', DESCEND) ";
if(filename != null && !filename.equals(""))
    query += "AND object_name LIKE '" + filename + "'";

<form name="searchForm" method="get" target="dctSearchWin"
action="http://localhost/dctecbridge/dctsearchservlet">
## Code Example – Search Results

<table>
<thead>
<tr>
<th>Search Results</th>
<th>Number of Items to Display:</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sort by:</strong> Name</td>
<td>Ranking</td>
<td>Modified</td>
</tr>
<tr>
<td>NASA FY2005 Budget Estimates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size: 11 MB</td>
<td>Version: CURRENT,1.0</td>
<td>Modified: 2/24/04 1:54 PM</td>
</tr>
<tr>
<td>Path: /Internal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECS Success-Story Rev7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size: 9 MB</td>
<td>Version: CURRENT,1.0</td>
<td>Modified: 5/28/04 3:59 PM</td>
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<td>Modified: 5/28/04 4:12 PM</td>
</tr>
<tr>
<td>Path: /Internal/Code T 2004 Success Stories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSM IDR ECS 19May2004 Techv9.vn.ppt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size: 23 MB</td>
<td>Version: CURRENT,1.0</td>
<td>Modified: 5/21/04 8:40 AM</td>
</tr>
<tr>
<td>Path: /Internal/Integrated Baseline Review May 2004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECS IDR rev11Mayvn.ppt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size: 2 MB</td>
<td>Version: CURRENT,1.0</td>
<td>Modified: 5/21/04 8:40 AM</td>
</tr>
<tr>
<td>Path: /Internal/Integrated Baseline Review May 2004</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Gotchas

> Browser compatibility issue
  • Content Transfer Applets
  • Use Sun Java when possible
  • Mac OS X, SSL and Certificates (keytool)

> Session Management
  • Cache
NASA is able to share docbase content with non-Documentum users via the Intranet
NASA did not have to procure additional client licenses
Users are able to publish documents to the Intranet without involving web administrators
Summary

> Sharing content with non-Documentum users is possible
> Components can be fine-tuned for your web users
> Tickets used with Actions can be powerful
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Wednesday 4:15 pm – 6:00 pm  Registration Area – 2nd Floor
Thursday 8:00 am – 9:00 am  General Session Theater – 5th Floor