

HP Business Availability Center

for the Windows and Solaris operating systems

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Embedded UCMDB Applets Using Direct Links

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Embedding UCMDB Applets Using Direct Links

This document describes how to embed UCMDB applets into external applications using direct links.

Note: This document is relevant to integration developers only.

This document includes:

Concepts

- ▶ Using Direct Links to Embed UCMDB Applets on page 6
- ▶ UCMDB Applet Tag Overview on page 7

Reference

- ▶ Direct Link Operation Flow on page 9

Using Direct Links to Embed UCMDB Applets

You can directly embed UCMDB applets into external applications using a direct link. A direct link is a URL that you create using the Direct Links wizard. For details, see “Direct Links to an Application Page” in *Platform Administration*.

You can embed UCMDB applets in the following ways:

- ▶ Using the URL itself to display CMDB content in an external application. For example, you can create a URL in the Direct Links wizard to display the properties of a certain CI. The login page opens if you are not already logged into HP Business Availability Center or if Lightweight Single Sign-On Authentication Support (LW-SSO) is not enabled for HP Business Availability Center.

Note: Using the URL to enable the integration requires opening the link in an IFrame or a new window. This does not allow you to manage the resulting UCMDB applet using JavaScript due to cross-site scripting issues. For example, if you use a URL that displays the properties of a specific CI using the object ID, you cannot use the same URL to display the properties of another CI.

- ▶ Using the UCMDB applet tag to embed the UCMDB applet in an external application. This enables integration developers to display a part of the HP Business Availability Center user interface as part of their own application. In addition, this enables interaction with the embedded HP Business Availability Center user interface using JavaScript.

UCMDB Applet Tag Overview

The UCMDB Applet tag creates the environment needed for the UCMDB applet to run (HTML, JavaScript, and server session parameters). The code behind the tag can log into the HP Business Availability Center server in one of the following cases:

- ▶ The login parameters are specified and the user is not already logged in (or if Lightweight Single Sign-On Authentication Support (LW-SSO) is not enabled for HP Business Availability Center)
- ▶ The **clear session** parameter is true.

Once a user session is established, the tag continues to write the needed environment "in-place", replacing the tag in the JSP with actual HTML / JavaScript. The resulting HTML page includes the required JavaScript code to load the UCMDB applet from the specified server. On error, the specified error string is printed to the page. This string can be customized using the **userErrorMessage** parameter and may include HTML and JavaScript to initiate error handling scenarios.

Example of a UCMDB Applet Tag

```
<ucmdb:ucmdb_applet
serverConnectionString="x.com"
serverType="BAC"
directLinkParameters="cmd=ShowProperties&objectId=2d3b0fec385b535431ea01324
43625a4&navigation=false&interfaceVersion=8.0.0"
userName="admin"
userPassword="admin"
clearSessionCookies="false"/>
```

Important: You get the **directLinkParameters** from the URL created in the Direct Links wizard. Delete the part of the parameter that comes before "cmd=", as it is not part of the parameter needed for the UCMDB applet tag. For details on how to create a direct link, see "Direct Links Wizard" in Model Management.

The UCMDB applet tag is located at **HP Business Availability CenterAppServer\webapps\site.war\WEB-INF\tags\CMS\ucmdb_applet.tag** on the Gateway Server machine.

You can copy the UCMDB applet tag to an external application server. The UCMDB applet tag requests the login data from the HP Business Availability Center server provided that:

- The external application server can communicate with JSP tags
- The HP Business Availability Center server is accessible to the external application server and to the browser

Direct Link Operation Flow

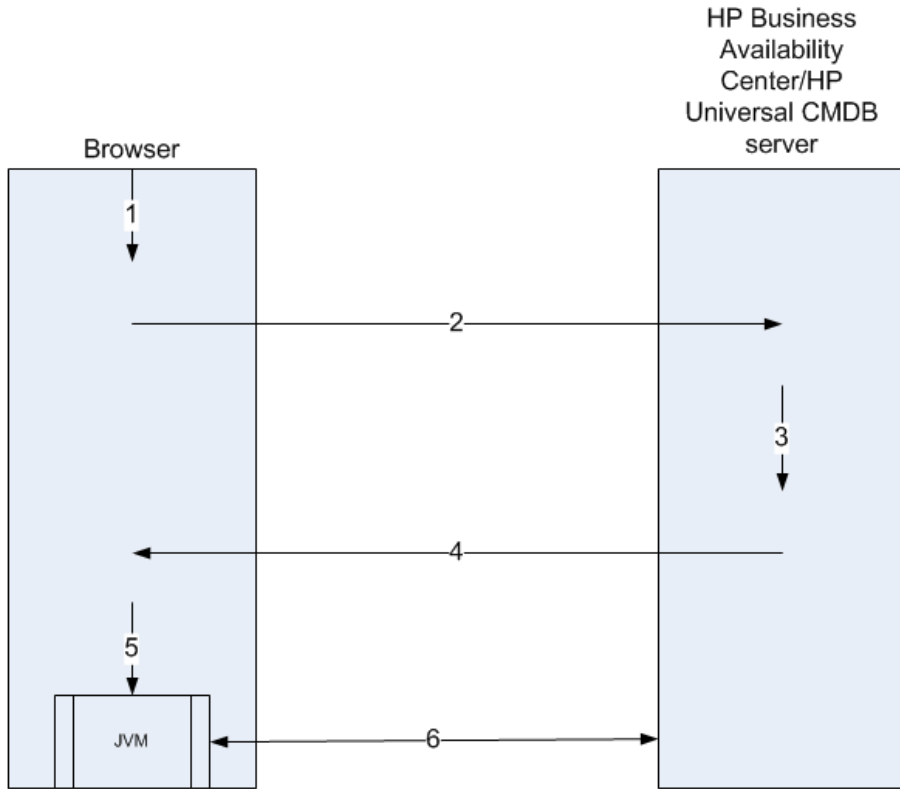
This section describes different scenarios in which direct links are used to embed UCMDB applets into external machines.

This section includes the flow descriptions:

- “Regular Login” on page 5
- “An Embedded UCMDB Applet Using a Direct Link URL” on page 8
- “An Embedded UCMDB Applet Using a UCMDB Applet Tag” on page 10

Regular Login

This flow describes a regular login to the HP Business Availability Centerserver. It serves as a base reference for the direct link flows.



- 1** The user enters the direct link URL (into the browser) to log into the HP Business Availability Centerserver.
- 2** The browser sends the login request to the HP Business Availability Center server.
- 3** The server checks the user credentials and creates a user session if required.
- 4** The server returns the requested first page of HP Business Availability Center.

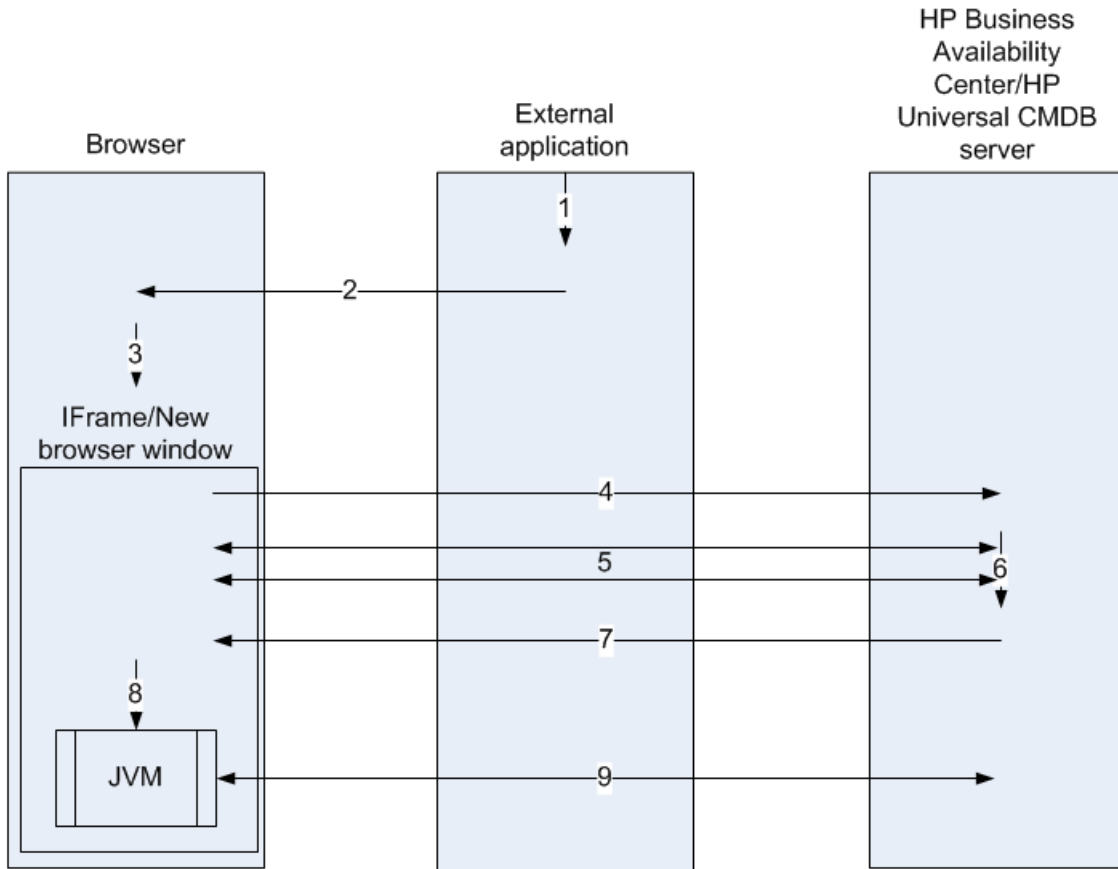
Note: This can be any page. For this flow, we can assume that it is the Admin > Universal CMDB > Modeling page in which the UCMDB applet is loaded.

- 5** The browser loads the Java virtual machine (JVM) with the "code base" location parameter (which instructs the JVM from where to load the UCMDB applet files) as the HP Business Availability Center server.
- 6** UCMDB applet files (jars) and data are transferred between the HP Business Availability Center server and the JVM loaded in the browser.

At this point that the UCMDB applet is loaded and regards HP Business Availability Center as the server with which it should communicate.

An Embedded UCMDB Applet Using a Direct Link URL

This flow shows how to use the direct link to open a UCMDB applet (opened to a specified context) in a new browser frame.



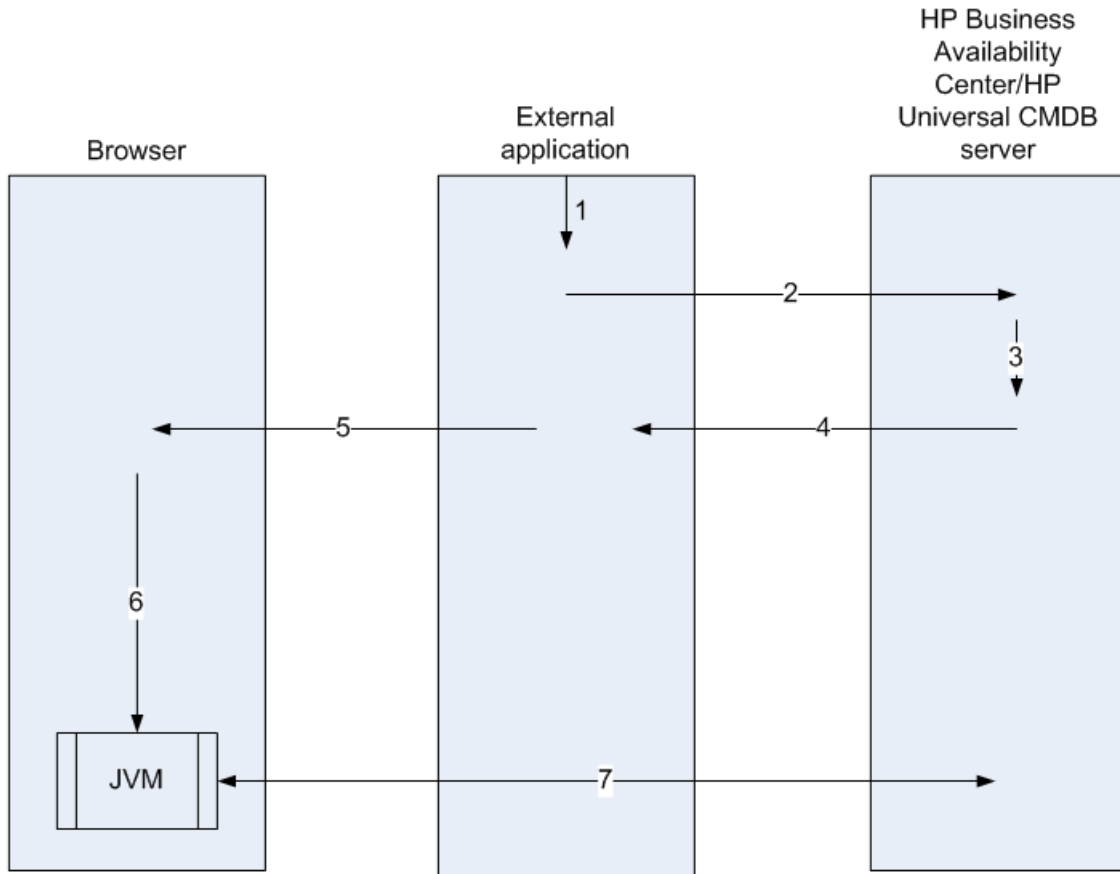
- 1** The external application has a page that needs to show the UCMDB applet.
- 2** The returned page includes a directive to open the direct link in an IFrame or new browser window.
- 3** The browser opens a new frame (IFrame or new window) with the direct link as the frame URL.

- 4** The new frame sends the direct link to the HP Business Availability Center server.
- 5** If the user is not already logged into HP Business Availability Center, or if Lightweight Single Sign-On Authentication Support (LW-SSO) is not enabled for HP Business Availability Center, HP Business Availability Center displays the login page and waits for the user to enter credentials and click the login button.
- 6** The user session is created, if required.
- 7** The HP Business Availability Centerserver returns a page that includes the directive to load the UCMDB applet.
- 8** The browser processes the page. When the browser encounters the directive to load the UCMDB applet, it starts the JVM. The browser then passes the needed parameters to the JVM, including the HP Business Availability Center server location as "code base".
- 9** UCMDB applet files (jars) and data are transferred between the HP Business Availability Center server and the JVM loaded in the browser.

Important: The HP Business Availability Center server must be accessible from the browser machine.

An Embedded UCMDB Applet Using a UCMDB Applet Tag

This flow shows how to use the UCMDB applet tag in conjunction with direct links to embed the UCMDB applet (opened to a specified context) in an external application page.



- 1** The UCMDB applet tag is included in the processed JSP in the external application.
- 2** The UCMDB applet tag uses the parameters given to it to create an HTTP/HTTPS connection to the HP Business Availability Center server and requests the applet HTML-let.

- 3** If the user is not already logged in, the parameters from the UCMDB applet tag are used (see the tag itself for reference information regarding this step). If login fails, the UCMDB applet tag returns an error message, either the preset one or the one specified in the UCMDB applet tag parameters.
- 4** The HP Business Availability Center server returns the HTML-let (with embedded JavaScript) that loads the UCMDB applet. The external application can now incorporate this HTML-let into the page, which it sends to the browser.
- 5** The external application sends the complete page which includes the HTML-let to the browser.
- 6** The browser processes the page. When the browser encounters the HTML-let that loads the UCMDB applet, the JVM is started. The browser then passes the needed parameters to the JVM, including the HP Business Availability Center server location as "code base".
- 7** UCMDB applet files (jars) and data are transferred between the HP Business Availability Center server and the JVM loaded in the browser.

Important: The HP Business Availability Center server must be accessible from the browser machine as well as the external application machine.
