

Advanced Web Client Dev and Deployment

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- **Advanced WebClient development techniques:**
 - Maintaining a single codebase for Smart and Web client
 - Mixing Servoy built-in security with your own to get the best of both worlds
 - Keeping a Logins Log to log sessions
 - Accessing Servoy Log from within WebClient
 - Running a WebClient session in background to automate scheduled tasks

Contents (cont'd)

- **Advanced WebClient Deployment:**
 - How to activate SSL in WebClient
 - Using an iFrame to load webclient
 - Using a Reverse Proxy

Single Code Base

- Things to keep in mind (what's different):
 - Access to the client hardware
 - Beans using Swing
 - Anchors
 - The Dialogs plugin
 - List views
 - No vertical scrollbars in table views
 - Form In Dialog
 - Forms sizes and elements alignment
 - `getApplicationType()` is your friend

Hybrid Security

- Create your own Users and Groups tables:
 - authentication can be done against Users table or LDAP
 - navigation can be linked to the Groups table
 - no need to recreate the users when deploying
- Define one or more Servoy groups:
 - link your groups to Servoy groups

Using a Logins log table

- Keep track of all logins and record:
 - login and logout time
 - user and group
 - client type (Smart/WebClient)
 - IP Address
- Useful for SaaS implementation
- Useful to build up access statistics
- Can be easily linked to your Security system

Using a Logins log table - DEMO

The screenshot shows the Servoy Developer IDE interface. The main window displays the code for `globals.js`. The code includes several functions and global variables related to form navigation and data handling.

```
514 // Fill the navbar global
515 globals.navBar = 'Rec. n. ' + forms[formName].controller.getSelectedIndex() + '/' +
516 forms[formName].controller.getMaxRecordIndex() + ' ( found recs: ' +
517 utils.numberFormat(databaseManager.getFoundSetCount(forms[formName].foundset), '###.###') + ' )'
518 // Update the rec info global
519 updateRecInfo()
520 // Execute the specific onRecSel form method
521 if(forms[application.getMethodTriggerFormName()].specificOnRecSelection) forms[application.getMethodTriggerF
522 ]
523 /**
524  * @properties=(typeid:24,uuid:"6c9a87d4-9a56-4ce4-8d28-4d264761236a")
525  */
526 function navLoadForm()
527 {
528     var _form = arguments[0]
529     forms.Main.elements.tab_main.removeAllTabs()
530     forms.Main.elements.tab_main.addTab(forms[_form])
531 }
532 /**
533  * @properties=(typeid:24,uuid:"bd464665-1b33-4d1e-9ac6-d09c2277cbc2")
534  */
535 function updateRecInfo()
536 {
537     var formName = globals.getActiveForm();
538     // Fill the recInfo global
539     globals.recInfo = 'Created by ' + application.getValueListDisplayValue('users',forms[formName].c_userid)+' on '+'
540     utils.dateFormat(forms[formName].c_date,'dd-MM-yyyy')+' '+'
541     'Modified by ' + application.getValueListDisplayValue('users',forms[formName].m_userid)+' on '+'
542     utils.dateFormat(forms[formName].m_date,'dd-MM-yyyy')
543     // Fill the recInfoTooltip global
544     globals.recInfoTooltip = 'Created by ' + application.getValueListDisplayValue('users',forms[formName].c_userid)+'
545     utils.dateFormat(forms[formName].c_date,'dd-MM-yyyy hh:mm:ss')+' '+'
546     'Modified by ' + application.getValueListDisplayValue('users',forms[formName].m_userid)+' on '+'
547     utils.dateFormat(forms[formName].m_date,'dd-MM-yyyy hh:mm:ss')
548 }
549 }
550
```

The console window at the bottom shows 3 errors, 28 warnings, and 0 infos. The error message is: "Module sintpro_webdialog_mod which is referenced by project sintpro_console_mod does not exist." The error details are as follows:

Description	Resource	P.	Location
Errors (3 items)			
Module sintpro_webdialog_mod which is referenced by project sintpro_console_mod does not exist.	sintpro_console_mod		Unknown

Accessing the Log from WebClient

- Sometimes it's not easy to access the Servoy Admin Pages
- Sometimes you want to have access to the plaintext log
- Sometimes you want some users to be able to see the log but not access the Admin Pages

Accessing the Log from WebClient - DEMO

The screenshot shows the Servoy Developer IDE with the following components:

- Solution Explorer:** Shows a project structure for 'SintProSystem' with folders for 'Globals', 'Forms', and 'nav'. The 'nav' folder contains a 'controller' and 'variables' sub-folders.
- Code Editor:** Displays the 'globals.js' file with JavaScript code. The code includes functions for updating record information and loading forms. A comment indicates that the code is for 'Fill the navbar global'. The code is as follows:

```
514 globals.navBar = 'Rec. n. ' + forms[formName].controller.getSelectedIndex() + '/' +
515 forms[formName].controller.getMaxRecordIndex() + ' ( found recs: ' +
516 utils.numberFormat(databaseManager.getFoundSetCount(forms[formName].foundset), '###.###') + ')'
517 // Update the rec info global
518 updateRecInfo()
519 // Execute the specific onRecSel form method
520 if(forms[application.getMethodTriggerFormName()].specificOnRecSelection) forms[application.getMethodTriggerF
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523 /**
524 * @properties=(typeid:24,uuid:"6c9a87d4-9a56-4ce4-8d28-4d264761236a")
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526 function navLoadForm()
527 {
528     var _form = arguments[0]
529     forms.Main.elements.tab_main.removeAllTabs()
530     forms.Main.elements.tab_main.addTab(forms[_form])
531 }
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533 /**
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541     utils.dateFormat(forms[formName].c_date,'dd-MM-yyyy')+' ' +
542     'Modified by ' + application.getValueListDisplayValue('users',forms[formName].m_userid)+' on ' +
543     utils.dateFormat(forms[formName].m_date,'dd-MM-yyyy')
544     // Fill the recInfoTooltip global
545     globals.recInfoTooltip = 'Created by ' + application.getValueListDisplayValue('users',forms[formName].c_userid)+
546     utils.dateFormat(forms[formName].c_date,'dd-MM-yyyy hh:mm:ss')+' ' +
547     'Modified by ' + application.getValueListDisplayValue('users',forms[formName].m_userid)+' on ' +
548     utils.dateFormat(forms[formName].m_date,'dd-MM-yyyy hh:mm:ss')
549 }
550
```
- Properties Window:** Shows a table with 'Property' and 'Value' columns, currently empty.
- Problems Window:** Shows 3 errors, 28 warnings, and 0 infos. One error is highlighted: 'Module sintpro_webdialog_mod which is referenced by project sintpro_console_mod does not exist.' with resource 'sintpro_console_mod' and location 'Unknown'.

The Windows taskbar at the bottom shows the Start button, a 'developer' folder, and several open windows including 'Form Design - sintpro...', 'SintProSystem - Main ...', and 'SintProSystem - Main ...'. The system tray on the right shows the time as 2:39.

Running a Web Client in background

- Perform lengthy operations in background
- Perform scheduled tasks in background

```
plugins.http.createHttpClient('backgroundWC');  
plugins.http.getPageData(application.getServerURL() +  
'/servoy-webclient/ss/s/mySolution/m/myMethod/  
argument/' + myArgument, 'backgroundWC');
```

Configuring Tomcat to use SSL

- generate your SSL key using keytool
- open the {servoy_install}/server/conf/server.xml file
- add a connector port with the following code:

```
<Connector port="8443"  
    protocol="HTTP/1.1" SSLEnabled="true"  
    maxThreads="150" scheme="https" secure="true"  
    clientAuth="false" sslProtocol="TLS"  
    keystoreFile="/path/to/keystoreFile.ks"  
    keystorePass="myPass" />
```

Using an iFrame to load Webclient

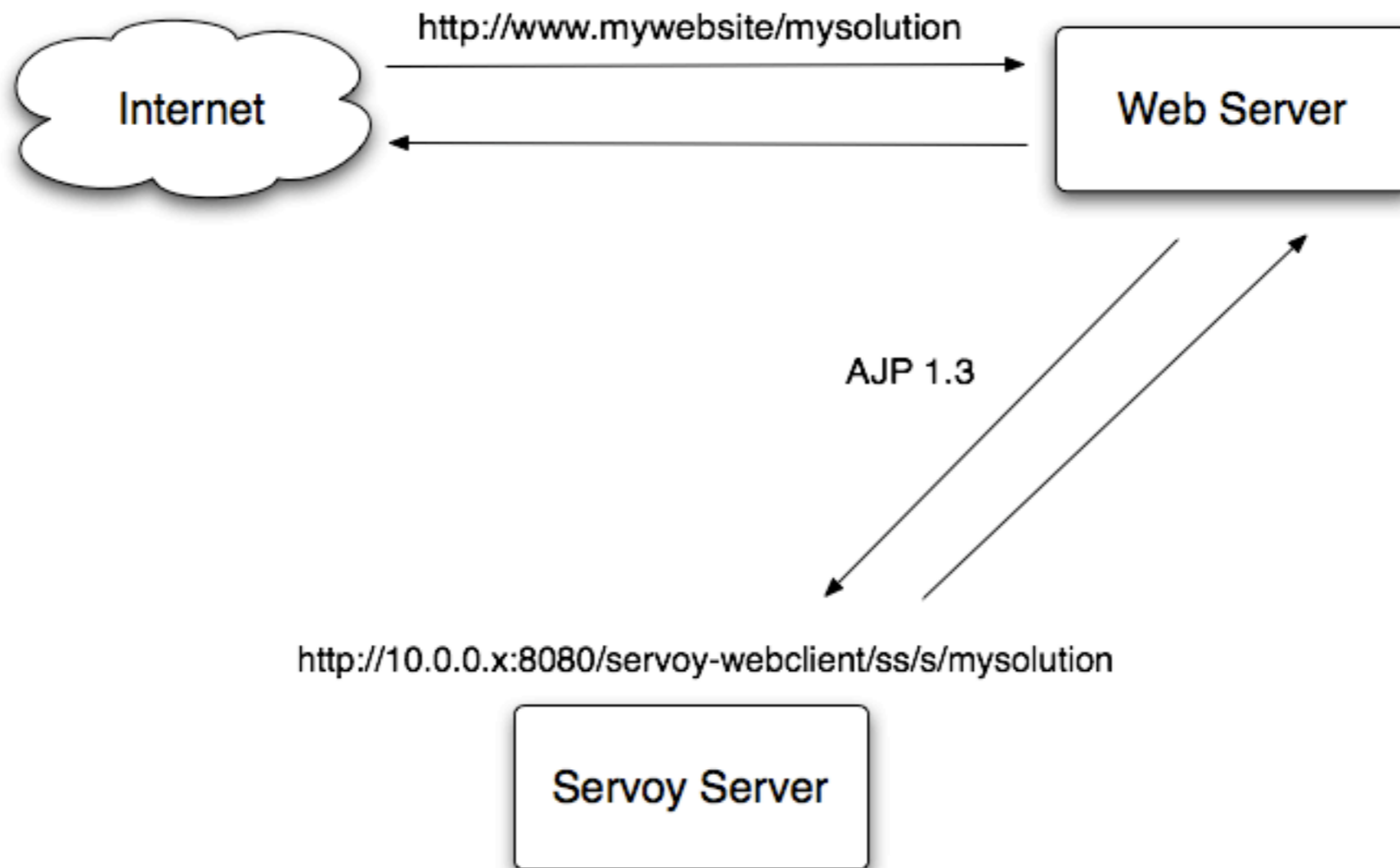
```
<html>

<body topmargin="0" leftmargin="0" rightmargin="0" marginwidth="0" marginheight="0"
  bgcolor="#F0F1F1" onload="var _x = document.createElement('iframe'); _x.id=(new
  Date()).getMilliseconds(); _x.height='504px'; _x.width='998px'; _x.scrolling='no';
  _x.src='servoy-webclient/ss/s/yourSolution'; _x.frameBorder='0';
  document.getElementById('framecontainer').appendChild(_x)">

  <div align="left">
    <table border="0" width="998" height="504" id="table2" cellspacing="0" cellpadding="0">
      <tr>
        <td id=framecontainer></td>
      </tr>
    </table>
  </div>
</body>

</html>
```

Reverse Proxy: how it works



Reverse Proxy: why?

- hide the Servoy server behind a Web Server
- integrate your solution with an existing website
- easily run web client on standard http port 80
- hide the “funny” webclient URL
- easily switch to maintenance mode without stopping the Servoy server
- SSL is handled by the Web Server
- it needs AJP 1.3 support in the web server
(Apache 2.2 and latest Microsoft IIS are ok)
- visit Tomcat web site for documentation

Conclusion

We have learned:

- advanced web client development techniques
- security is very important in web client
- advanced deployment strategies

More information:

www.sintpro.com

Q & A

Next up: dinner at Ceres Restaurant - Las Vegas
Strip tour sponsored by The Support Group