vmware vSphere Client – HTML SDK Fling

The vSphere HTML Client SDK Fling provides libraries, sample plug-ins, documentation and various SDK tools to help you develop and build user interface extensions which are compatible with both vSphere Client (HTML5) and vSphere Web Client. The HTML Client SDK Fling is based on the existing HTML Bridge APIs which allows already existing HTML Bridge plug-ins functionality to be fully supported in the new vSphere Client (HTML5). You can use the HTML Client SDK Fling to extend existing HTML Bridge plug-ins or build pure HTML5 plug-ins from scratch and test them in the vSphere Client (HTML5).

You can successfully deploy existing or new HTML plug-ins on the vSphere HTML5 Client Fling if you have followed the forward compatibility instructions for developing HTML-based plug-ins.

The HTML Client SDK Fling consists of the following components:

- Libraries for server and user interface development.
- Documentation about how to setup your development environment, build HTML plug-ins compatible with both the vSphere Web Client and the new HTML5-based vSphere Client, and troubleshooting information.
- Sample HTML plug-ins that work on both HTML5-based vSphere Client and the vSphere Web Client.
- Various SDK tools.

The following features have been introduced to the HTML Client SDK Fling:

- HTML-Based Portlet Support on Summary View

Starting with the first HTML Client SDK Fling release, plug-in developers can implement HTML-based portlets and display them within an existing Summary view for vSphere or custom object.

- HTML-Based Plug-Ins Compatibility

To ensure that your HTML-based plug-ins are compatible with the new HTML5-based vSphere Client (in addition to the already existing vSphere Web Client), always use relative URLs in your HTML and JS code and use the *webContextPath* defined in *web-platform.js* file.

For detailed technical instructions refer to the documentation provided inside the SDK and updated samples.

Note: This is a Fling release and the official documentation is not completed. Please use the documentation provided inside the SDK and feel free to share your feedback.

RELEASE NOTES

Use the latest version of *Getting_Started_with_HTML_Client_SDK_Fling.pdf* after you download a new Fling version. All new features are covered.

HTML SDK Fling 9 [Feb 20, 2017] - Build 5097204

New Features

- OSGi Sandboxing deployment for HTML Client plug-ins is implemented on HTML Client side. OSGi Sandboxing aims to achieve HTML plug-in isolation by re-using Virgo server's scoping feature. The feature aims to be a transparent isolation mechanism that does not incur any additional work on existing HTML plugins assuming OSGi Best Practices were followed during plug-in development. HTML Client SDK Fling documentation available from *\html-client-sdk\doc\Getting_Started_with_HTML_Client_SDK_Fling.pdf* provides detailed overview of the feature and requirements for the HTML plug-in developers.

HTML SDK Fling 8 [Jan 30, 2017] - Build 4978469

New Features

- New HTML sample called *custom-object-sample* is available from *\html-client-sdk\samples* . The sample demonstrates how you can use Clarity Design System (https://vmware.github.io/clarity/) to achieve the same look and feel as the HTML-based vSphere Client. More details how to build and deploy the sample are available from the *\html-client-sdk\doc\Getting_Started_with_HTML_Client_SDK_Fling.pdf*.
- Instructions how to setup your development environment with IntelliJ IDEA are available from *\html-client-sdk\docs\IntelliJ-Setup.html.*
- OSGi bundles are deployed using the Virgo's *ApplicationDeployer* instead of the internal deployer using Virgo's pickup folder (known as HotDeployer). This change reduces bundle deployment latency incurred by the scan interval of the pickup folder, reduces boot time on startup thanks to eliminated I/O operations of copying artifacts to the pickup/ folder and frees */usr/lib/vmware-virgo/server/pickup* folder from any responsibilities to the production plugin deployment.
    - On development environment you can add *pickup.deployer=true* in the *webclient.properties* file so that you can use the */usr/lib/vmware-virgo/server/pickup* folder for deployment.
    - If a bundle is deployed in production mode using Virgo's ApplicationDeployer, it cannot be redeployed using the pickup.

Bug Fixes

- An important fix is required in `web-platform.js` file to support HTML plugins on Chrome version 55 and above. All samples have been updated. You should update your current version

of `web-platform.js` the same way, i.e. replace the lines at the top:

```
if (!WEB_PLATFORM) {
   WEB_PLATFORM =
self.parent.document.getElementById("container_app"));
```

with:

```
if (!WEB_PLATFORM || WEB_PLATFORM.name === "container_app") {
   WEB_PLATFORM = Object.create
(self.parent.document.getElementById("container_app"));
```

- All *.sh* script files have the correct end of line character (EOL) and do not throw error "^M: bad interpreter: No such file or directory".
- `WEB_PLATFORM.getString()` now works when many parameters are passed.

Additional Notes

- "Quick setup steps" section from *\html-client-sdk\docs\Getting_Started_with_HTML_Client_SDK_Fling.pdf* to has been improved with the exact sequence of steps you need to take for a setup.

All new features are covered in details in Getting_Started_with_HTML_Client_SDK_Fling.pdf.

HTML SDK Fling 7 [Nov 9, 2016] - Build 4625171

New Features

- vCenter registration scripts available from /tools directory are improved to simplify the process of registering your development machine to vCenter Server. New scripts *server-registration.bat* and *server-registration.sh* connect to the vCenter server and copy the generated files which previously you had to move manually.
- API setGlobalRefreshHandler now supports multiple portlets in the HTML Client. Note that it requires an extra parameter (the view document) which is explained in the Javascript API doc. Samples are updated to use setGlobalRefreshHandler in a consistent manner so that views are refreshed when a user clicks on the toolbar's Refresh button.
- When an action controller returns a successful result the client now broadcasts a global refresh event to give the plug-in a chance to update its view (as long as it is using the setGlobalRefreshHandler API). For instance the Summary view in ChassisA or Chassis B samples is updated correctly after you edit a chassis.

All new features are covered in details in Getting_Started_with_HTML_Client_SDK_Fling.pdf.

HTML SDK Fling 6 [Oct 19, 2016] - Build 4507438

New Features

- If you want to make an HTML plug-in deployable only on the HTML-based vSphere client a dependency on pluginPackage id="com.vmware.vsphere.client.html" version="6.5.0" should be added in your plugin.xml.
- HTML plug-in developers can implement context independent global actions in the toolbar list. Such actions can be used for creating new custom object. For example have a look at the "Chassis A" sample where "Add Chassis" button is always present and enabled on the toolbar.
- New APIs WEB_PLATFORM.getClientType() and WEB_PLATFORM.getClientVersion() return the client type and version. For example client type can be "html" or "flex" and versions correspond to the official release versions e.g 6.0.

Bug Fixes

- Global View size is adjusted correctly and does not spill out.
- Saving settings in Global App sample under Windows is fixed (method getGlobalViewDataFolder() is unified throughout all the OS).

Additional Notes

- You no longer need to download the entire Adobe Flex SDK to build string resources like swf files. Flex compiler is available from *html-client-sdk**resources**flex_sdk_4.6.0.23201_vmw* folder.
- We have done plenty of updates to the documentation! Have a look at the /docs directory.

All new features are covered in details in Getting_Started_with_HTML_Client_SDK_Fling.pdf.

HTML SDK Fling 5 [Sep 29, 2016] - Build 4450180

New Features

- Sub-menus of vSphere objects menus is now supported (VM, Host, etc.). The same extension points *vsphere.core.menus.solutionMenu* and *vise.actions.sets* are used, so you can verify that your plugin submenus working in the Flex Client are working the same way in the HTML Client.
- The *vsphere-wssdk* sample was updated with different VM sub-menu, including actions enabled/disabled based on the VM's powerState. See *DataProviderImpl.java* for details.
- Internationalization of plug-in's view and menus is supported correctly. Follow the section on Internationalization in *docs/Javascript-API.html#i18n*.
- WEB_PLATFORM.getLocale() is implemented, i.e. the locale parameter is passed correctly to each plugin view.
- WEB_PLATFORM.sendModelChangeEvent() is implemented.

Bug Fixes

- The Administration category and VM Configure tab can now be extended so plug-ins can add their own views at these locations.

- Fixed the navigation to a custom object view after clicking on that object in a list view.
- Fixed the MANIFEST and plugin-package.xml of plugins generated with the scripts in *html-client-sdk/tools/Plugin generation scripts/* so that they can be deployed correctly.
- Fixed a nullPointerException in vsphere-wssdk sample's DataProviderImpl.java (when a host didn't have any VM)

Additional Notes

- Adding `dataservice.vmodl.version=public` in webclient.properties is no longer necessary when running with vCenter Server 6.5
- In Eclipse, the *vSphere SDK Tools* menu was removed because it didn't work and it was already replaced by the command line script under *html-client-sdk/tools/Plugin generation scripts/*

All new features are covered in details in Getting_Started_with_HTML_Client_SDK_Fling.pdf.

HTML SDK Fling 4 [Sep 13, 2016] - Build 4379154

New Features

- vCenter Plugin Registration tool available from "html-client-sdk\tools" directory is extended with update functionality. You can use this option to update the registration of already existing plug-in.
- Support for "external icons" was added, i.e icons displayed outside of your plug-in's views: Home view shortcuts icons, Menu icons, Objects icons. Note that Dialog icons are still missing. When upgrading from 5.5.x or 6.0.2 you need to define a separate plugin-icons.css.
- Support for object menu extensions was added, i.e. a plugin can extend the VM menu, Host menu, etc.
- Wssdk sample is extended to demonstrate how you can display information for more than one object on host's summary page.

All new features are covered in details in Getting_Started_with_HTML_Client_SDK_Fling.pdf.

New System Requirements

- Java SDK 1.8 is required for your local Virgo runtime to work with the vCenter 6.5 RC release.
- The Java target version is increased to 1.7 for Java services build scripts. This preserves the compatibility of your plug-in with vSphere Web Client 6.0.

Bug Fixes

- `sendNavigationRequest` API is fixed to update the left-hand side navigator.

- It is possible to add views under VM > Configure, i.e. extend `vsphere.core.vm.manageViews`
- vCenter Server registration failure is fixed and the previous issue: *"An error occurred while sending an authentication request to the vCenter Single Sign-On server - An error occurred when processing the metadata during vCenter Single Sign-On setup - Keystore to be used for remote connections is null.."* no longer appears.

HTML SDK Fling 3 [Aug 30, 2016] - Build 4321818

New Features

- If you want to register a plug-in as a vCenter server extension, you can use the newly introduced tool available from "html-client-sdk\tools\vCenter Plugin Registration" directory. In addition to prebuilt extension-registration.sh for Mac OS and extension-registration.bat for Windows OS scripts, this directory contains a plug-in registration source code that can be customized to fit your own business purpose.
- OSGi usage validation is present in this version of HTML Client which helps you identify if your plug-in follows important rules outlined in the "OSGi-Specific Recommendations" section of the Best practices guide.

New System Requirements

- Apache Ant version 1.8.0 or above.

Bug Fixes

- Ant build scripts of SDK samples report SUCCESS even when the compilation fails.
- Persistent XSS in VM name when navigating to a VM is fixed.
- Fixed the loading of string resources for plugins deployed as vCenter extensions.

HTML SDK Fling 2 [Aug 22, 2016] - Build 4287567

New Features

- If you want to deploy a plug-in on the HTML Client you no longer need to update the compatibility-matrix.xml used in HTML Client SDK Fling 1. Starting from HTML Client SDK Fling 2, in order to deploy a plug-in on the new HTML-based client you must add the attribute *type="html"* in your plugin-package.xml file. You can find exact technical example in the existing samples present in *"html-client-sdk\samples"* directory. This type shall be used only for HTML plug-ins.
- Custom object lists now show the object names with a link to the view of the selected object.
- There are new scripts to create template projects from the command line. Scripts are available from "html-client-sdk\tools\Plugin generation scripts" and called *create-html-plugin.sh* for Mac OS and *create-html-plugin.bat* for Windows OS.
- There are new scripts to create the plugin package folder. The scripts are called *build-plugin-package.sh* for Mac OS and build-plugin-package.bat for Windows and appear once *pluginName-ui* and *pluginName-service* are created.

Doc changes

- Fling documentation *Getting_Started_with_HTML_Client_SDK_Fling.pdf* includes a new section listing the location of Virgo logs.

- *Frequently Asked Questions* document available from "html-client-sdk\docs\ FAQ.html" is extended with new questions and corresponding answers.

Bug Fixes

- Missing extension *vsphere.core.navigator.solutionsCategory* is now added.
- Composed exception in vsphere-wssdk summary sample, when portlet viewed the first time, is fixed.