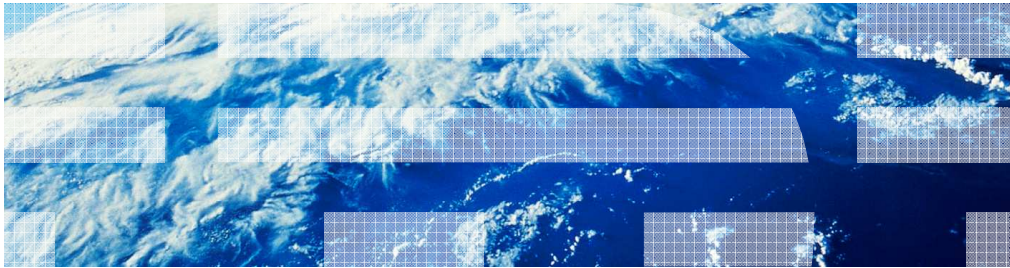




IBM WebSphere Application Server V8.5

Web 2.0 and Mobile Toolkit V1.1.0.2



WebSphere software

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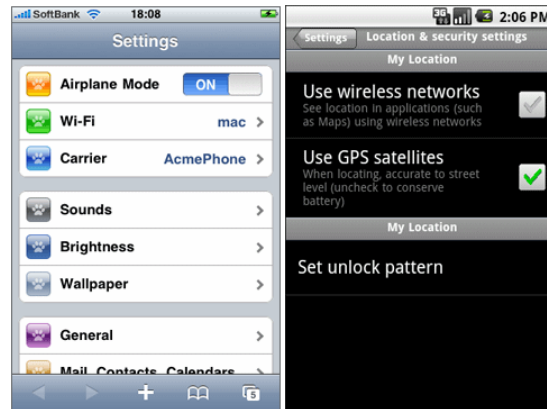
This presentation describes support for the Web 2.0 and Mobile Toolkit V1.1 included in IBM WebSphere Application Server V8.5.

Overview

The Web 2.0 and Mobile Toolkit uses standards-based technologies to help developers create connected, interactive desktop and mobile applications.

What is the Web 2.0 and Mobile Toolkit?

- Set of technologies that helps developers create connected, interactive desktop and mobile applications
- Includes Ajax client run time
 - Dojo Toolkit 1.7.2
 - Dojo Diagrammer
- Includes REST-based mobile and rich Internet application (RIA) building blocks
 - Analytics
 - Graphics conversion
 - Optimizer Service
 - Map Converter Service
- Includes Showcase Sample



The Web 2.0 and Mobile Toolkit adds simplified, standards based development of mobile web applications, rich Ajax websites, and Representational State Transfer (REST) web services.

The Web 2.0 and Mobile Toolkit includes an Ajax client runtime, which consists of Dojo 1.7.2 and IBM extensions to the Dojo Toolkit including Dojo Diagrammer. Dojo 1.7.2 includes mobile capabilities to help with the development of web based mobile applications for smart phones and tablets. Dojo Diagrammer is a set of Dojo widgets with advanced diagramming and graph layout capabilities. Dojo Diagrammer provides a solution for Dojo-based applications to display and interact with graphs, such as networks of nodes connected by links. Mobile capabilities included in the Ajax client runtime are web-based. Native and Hybrid mobile development is not included in the Web 2.0 and Mobile Toolkit.

The Web 2.0 and Mobile Toolkit also includes a set of rest based application services designed to work with Dojo 1.7.2 and other rest based clients. These application services simplify the development of Ajax and mobile applications. These application services are Java Platform Enterprise Edition installable applications.

Finally the Web 2.0 and Mobile Toolkit provides a showcase gallery featuring newly available functions from the Ajax client runtime and application services. The showcase gallery includes sample code that can be used as a starting point for developing Web 2.0 and Mobile applications



What is new with Web 2.0 and Mobile Toolkit?

- Successor to Web 2.0 and Mobile Feature Pack
- Standalone Installation Manager Offering
- Ships with WebSphere Application Server V8.5
- Web 2.0 and Mobiles samples now available in the 8.5 Samples Infocenter
- Some previous Web 2.0 and Mobile Feature Pack server-side content has moved into WebSphere Application Server Base, Network Deployment, Express, and Developers Edition
- Feedsphere libraries, ibm_atom, ibm_opensearch, and ibm_gauge, and some samples no longer shipped
- Only supported DojoX modules are included in Ajax client run time. Other DojoX modules are made available as a free, as is download

The Web 2.0 and Mobile Toolkit V1.1 is the WebSphere Application Server V8.5 successor to the WebSphere Application Server V6.1, V7.0, V8.0 Web 2.0 and Mobile Feature Pack. There are many changes to consider as you move from the Web 2.0 and Mobile Feature Pack to the Web 2.0 and Mobile Toolkit.

The Web 2.0 and Mobile Toolkit is now a stand-alone Installation Manager offering that does not require the selection of an existing WebSphere Application Server installation during install. You can now choose which directory to install the Web 2.0 and Mobile Toolkit.

Samples are now available in the 8.5 Samples Infocenter and are no longer installed by the Web 2.0 and Mobile Toolkit. Some Feature Pack samples, such as QuoteStreamer, and RPCAdapter samples, are no longer available with the Web 2.0 and Mobile Toolkit.

Feature Pack server-side applications and optionalLibraries that have been moved into application server installation. The libraries and applications that have moved include: RPCAdapter libraries, Web messaging libraries, webdav extension library, and the AjaxProxy installable application. Feedsphere libraries are no longer available with the Web 2.0 and Mobile Toolkit. Finally, the Web 2.0 and Mobile Toolkit only includes stable and tested Dojo 1.7.2 DojoX modules. Experimental DojoX modules are available in a separate download. Information on DojoX modules availability is included later in the presentation.

Usage scenarios

The Web 2.0 and Mobile Toolkit is used in the following scenarios.

Installation

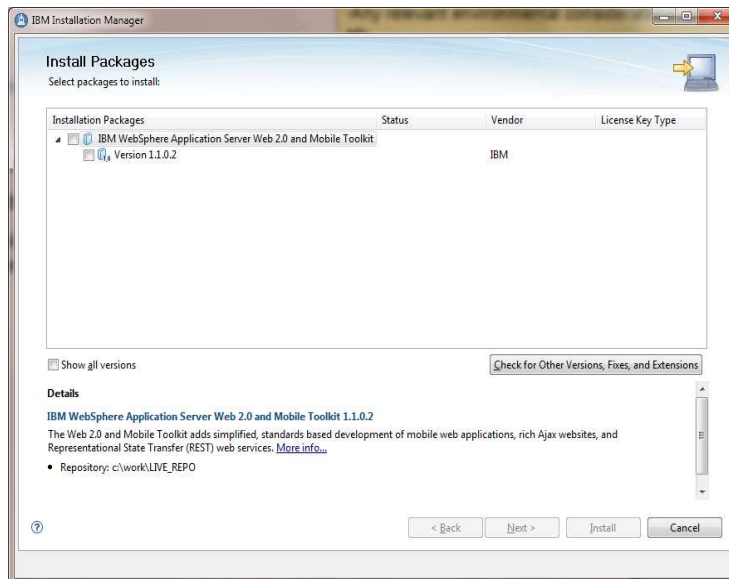
- Ships with WebSphere Application Server media or available on Passport Advantage. No longer a separate download
- Installation does not require an existing WebSphere Application Server installation.
- Now able to select the installation directory
- Content can be included in existing web application or served statically through a web server such as IBM HTTP Server
- Single Installation Manager offering supports Distributed, IBM I, and z/OS operating systems

The Web 2.0 and Mobile Toolkit is now shipped with WebSphere Application Server V8.5. The toolkit is available on physical media and Passport Advantage. The toolkit is also available as freely downloadable iLan Installation Manager offering that will be available on DeveloperWorks.

The Web 2.0 and Mobile Toolkit is delivered as a Installation Manager repository installable on multiple operating systems including IBM I and z/OS and is installable through Installation Manager. Installed Web 2.0 and Mobile Toolkit content consists of the Ajax client runtime and a set of installable applications. The Ajax client runtime consists of static HTML and JavaScript that is used in a web application that can be included in a web application and installed on WebSphere Application Server or the WebSphere Application Server Liberty profile. This static content can also be served through a web server such as IBM HTTP Server.

An integrated development environment is recommended with the Web 2.0 and Mobile Toolkit content. Rational Application Developer or WebSphere Application Server Developer Tools for Eclipse are two recommended tools that include Dojo Toolkit tools.

Install Web 2.0 and Mobile Toolkit (1 of 6)

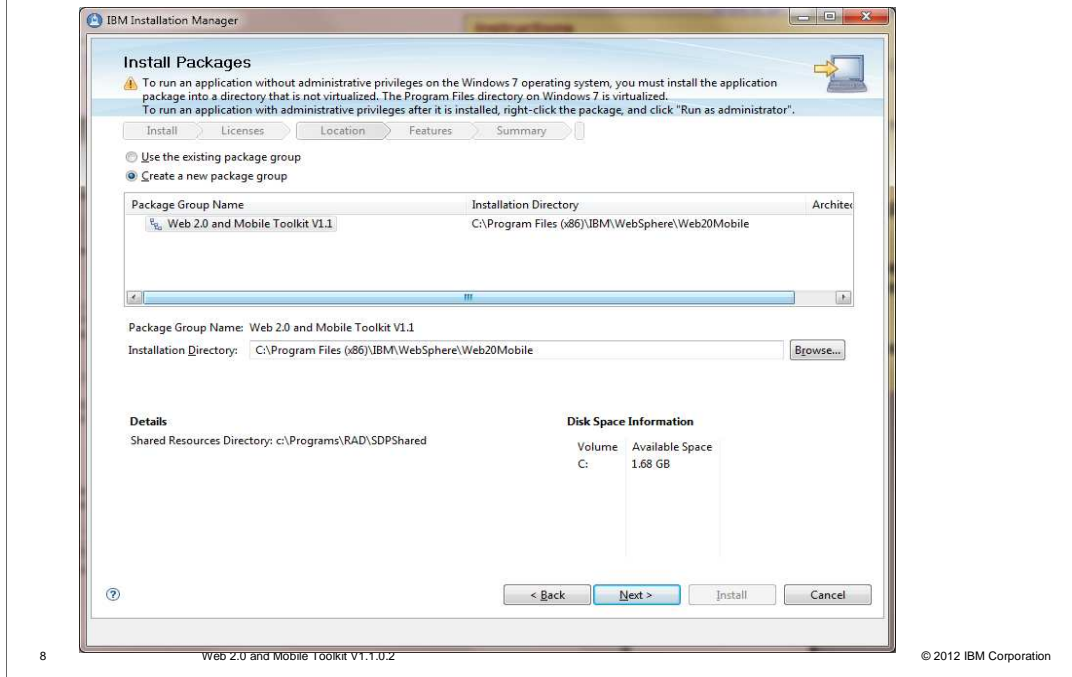


Installation of the Web 2.0 and Mobile Toolkit requires Installation Manager 1.5.2 or greater. Installation Manager is available on the product media, from Passport Advantage, and from IBM support pages. Once Installation Manager 1.5.2 or greater is installed, there are multiple Installation Manager installation modes supported including GUI, silent, and console modes. In the next slides we will walk through the graphical install. Refer to the Web 2.0 and Mobile Infocenter for more information on supported installation modes.

A link to start the installation is available from LaunchPad on the Web 2.0 and Mobile Toolkit media. If installing from Passport Advantage, enter the repository URL and credentials for the Web 2.0 and Mobile Toolkit in Installation Manager. Once done hit install. The first panel will list the installable software. A short description and a link to more information is included at the bottom. Select Version 1.1.0.2 of the IBM WebSphere Application Server Web 2.0 and Mobile Toolkit and hit next.

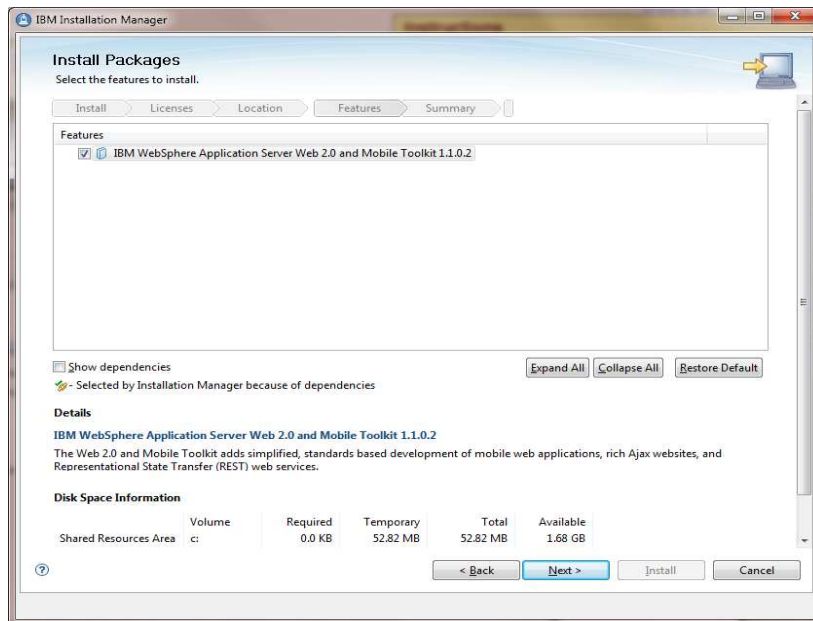
The next panel is the license acceptance panel. Reel through the license terms before accepting and hit next on this panel.

Install Web 2.0 and Mobile Toolkit (2 of 6)



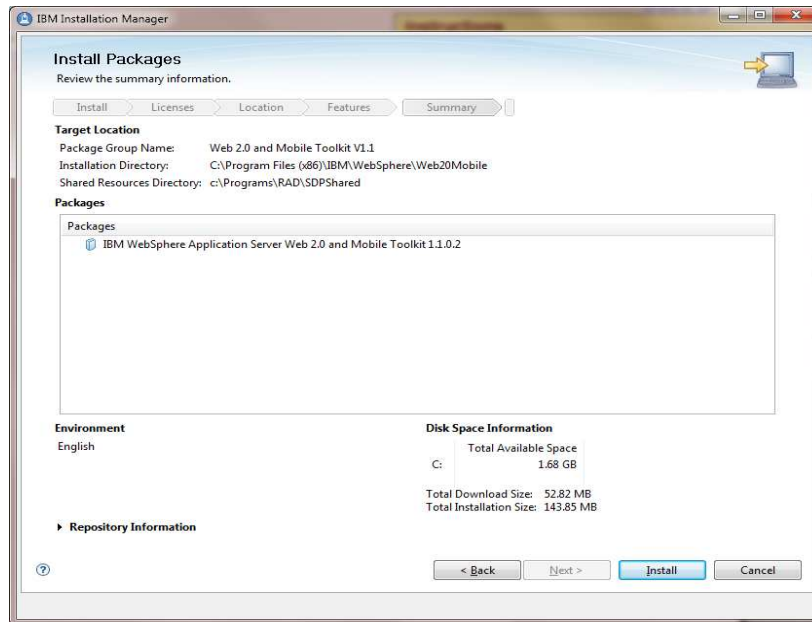
Installation of the Web 2.0 and Mobile Toolkit requires a new package group. Multiple installation of the Web 2.0 and Mobile Toolkit are possible through the creation of a new package group. When you create a new package group, you must select an empty directory where the toolkit content is installed. After completing these two fields, hit next to continue the installation.

Install Web 2.0 and Mobile Toolkit (3 of 6)



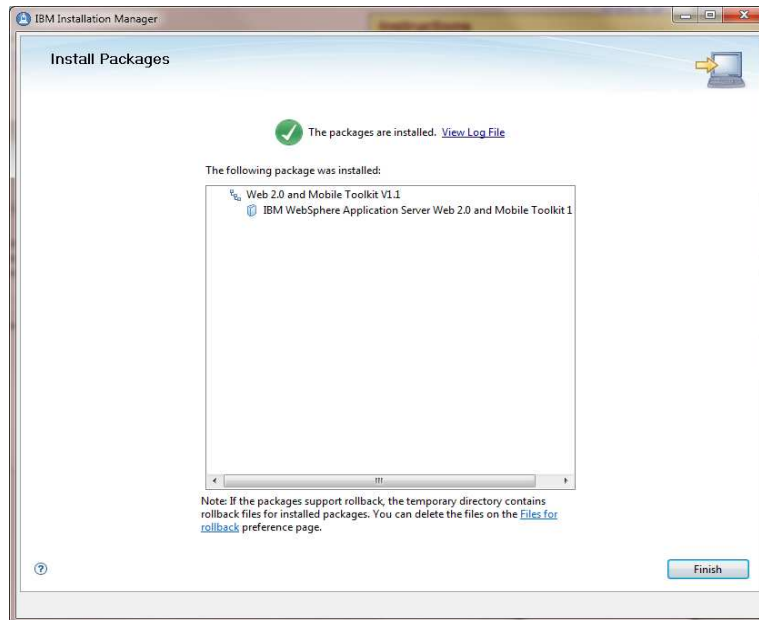
There is only one required feature available for the Web 2.0 and Mobile Toolkit. Hit next to continue the installation.

Install Web 2.0 and Mobile Toolkit (4 of 6)



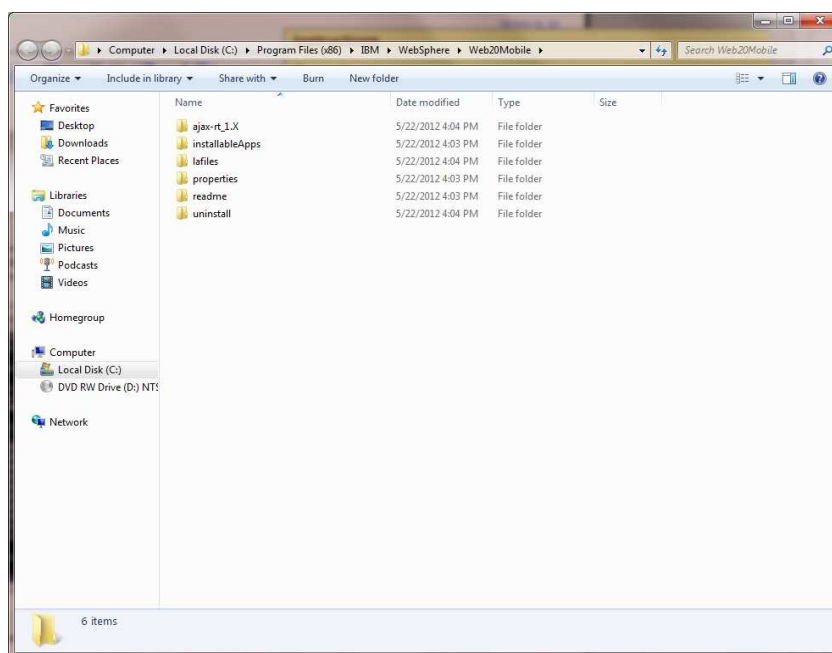
The next page summarizes your previous installation options and shows available and required disk space. Verify the options and click Install to install the product.

Install Web 2.0 and Mobile Toolkit (5 of 6)



Once the installation is complete an installation summary page is displayed. If there is a problem installing, an error message will be displayed and you select the "View Log File" link to get more information. Installation Manager is also used to uninstall, apply maintenance, and uninstall maintenance. See the Web 2.0 and Mobile Toolkit information center for more information on these operations.

Install Web 2.0 and Mobile Toolkit (6 of 6)



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Web 2.0 and Mobile Toolkit V1.1.0.2

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These are the directories that are installed by the Web 2.0 and Mobile Toolkit. The `ajax-rt_1.X` contains Dojo 1.7.2 and the `ibm_ilog`, and `ibm_soap` Dojo extensions. The `installableApps` contains the 5 application services web application archive files that can be installed to WebSphere Application Server or the WebSphere Application Server Liberty profile. A `readme` file includes links to the Web 2.0 and Mobile Infocenter, 8.5 Samples Infocenter, the location of the DojoX download and links to other key information.

The Web 2.0 and Mobile Toolkit does not ship with a Java SDK or with a `versionInfo` executable. The version number for the Web 2.0 and Mobile Toolkit can be determined by looking at the `properties/version/W2MTK.product` file. You can also use Installation Manager to determine the version. Use Installation Manager to determine if any ifixes have been installed. The Web 2.0 and Mobile Toolkit does not install any executable programs.

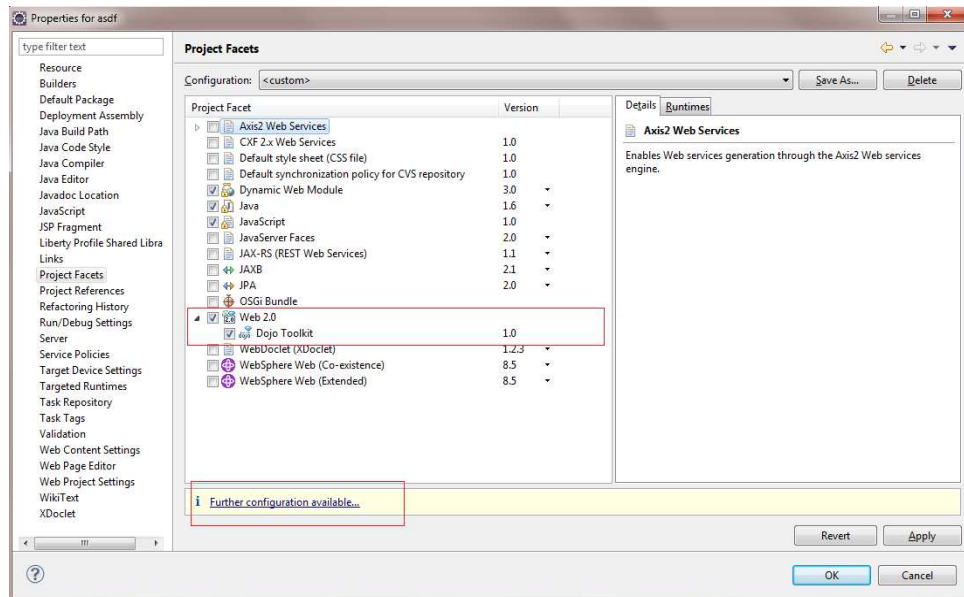
Additional Dojo Toolkit information is available in the `ajax-rt_1.X/version.txt` and `ajax-rt_1.X/README.txt`.

Using the Ajax Client Runtime

- Ajax client run time includes
 - Dojo 1.7.2
 - Dojo 1.8 modules - DojoX Calendar, DojoX Gauges, DojoX Mobile, DojoX TreeMap.
 - ibm_ilog – IBM Dojo Diagrammer extension
 - ibm_soap – IBM extension
- Static web content. HTML and JavaScript
- Embed in web application or place Ajax client run time content on web server.
 - Run Dojo enabled applications on WebSphere Application Server Liberty profile
- <http://dojotoolkit.org/>

The Ajax client runtime includes Dojo 1.7.2, the Calendar, Gauges, Mobile, and Treemap DojoX modules from Dojo 1.8. The Ajax client runtime also includes Dojo Diagrammer and ibm_soap Dojo extensions. Additional information about Dojo 1.7.2 is available on dojotoolkit.org and in the Web 2.0 and Mobile Infocenter.

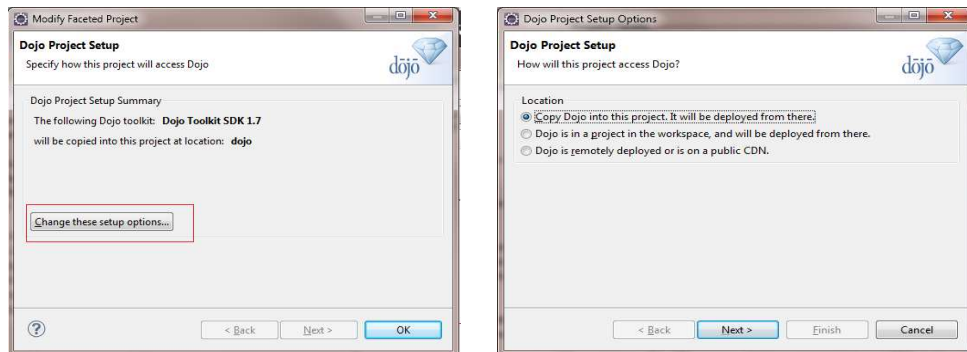
Using the Ajax client run time with WebSphere Application Server Developer Tools for Eclipse (1 of 4)



An integrated development environment is useful when developing web 2.0 and mobile applications. WebSphere Application Server Developer Tools for Eclipse includes support and tools for Dojo 1.7.2 and the `ibm_ilog` and `ibm_soap` Dojo Toolkit extensions.

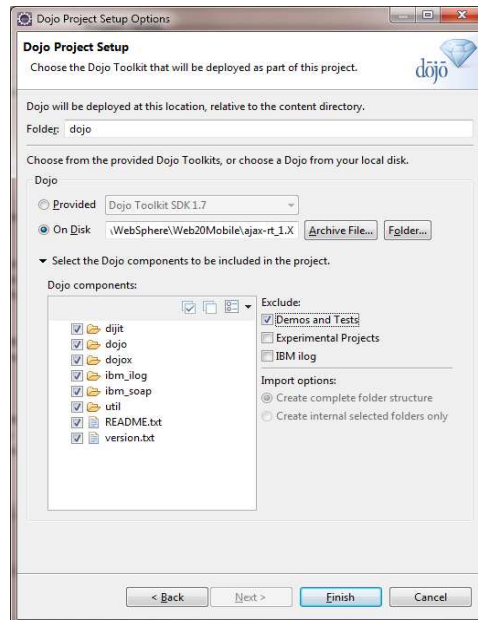
The following four steps should show how to use the Ajax client runtime installed by the Web 2.0 and Mobile Tooling Dojo 1.7.2 with the Developer Tools for Eclipse. The first step is start developer tools and create a new dynamic web project. Once the dynamic web project is created, open the Project facets and select Dojo Toolkit under Web 2.0. Then click further configuration.

Using the Ajax client run time with WebSphere Application Server Developer Tools for Eclipse (2 of 4)



By default the Dojo 1.7.2 installed with the Developer Tools for Eclipse is used. This version of Dojo 1.7.2 does not include the `ibm_ilog` and `ibm_soap` extensions. If you need these extensions, or want to pick up a more recent version of the Ajax client run time installed with the Web 2.0 and Mobile Toolkit, select "Change these setup options." On the next prompt keep the default value and select next.

Using the Ajax client run time with WebSphere Application Server Developer Tools for Eclipse (3 of 4)



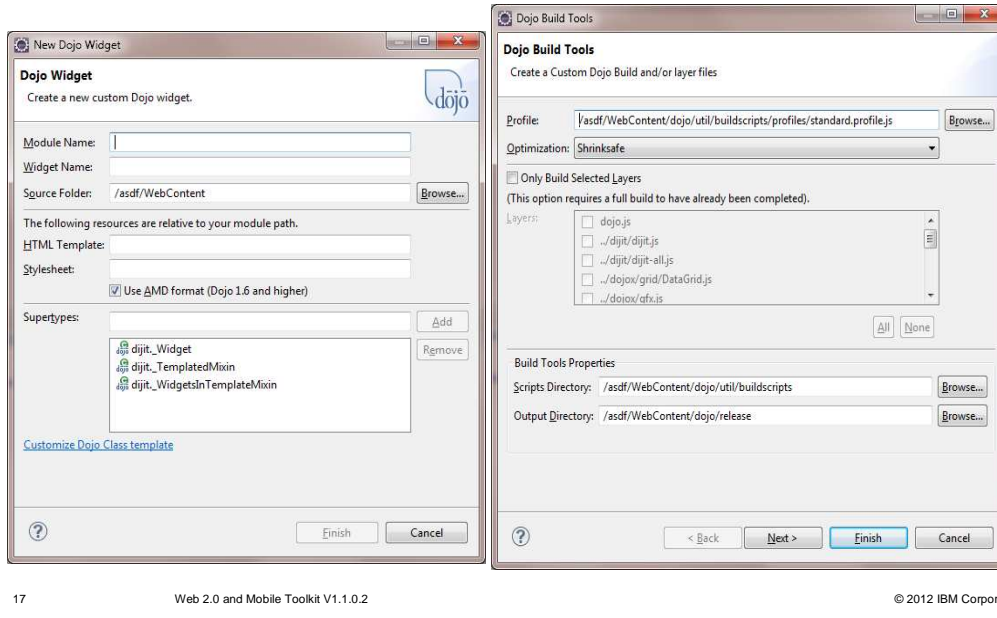
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Web 2.0 and Mobile Toolkit V1.1.0.2

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On the next panel, select the “on disk” option and choose the location of the Web 2.0 and Mobile Toolkit ajax-rt_1.X directory. After selecting the directory you are able to select the Dojo 1.7.2 and ibm extension options to include in the application. You will also be able to select other options, such as whether to include demos and tests or experimental files.

Using the Ajax client run time with WebSphere Application Server Developer Tools for Eclipse (4 of 4)



After selecting the Dojo version to use, you will now be able to use the JavaScript and Dojo tools included with the V8.5 DeveloperTools. The examples show a new Dojo widget creation panel and new Dojo Toolkit custom build panel.



Using the Ajax client run time with IBM Rational Application Developer

- Rational Application Developer includes complete Ajax client run time – Dojo 1.7.2 and ibm extensions
- Includes web 2.0 and mobile service side facts
- Same Dojo tools as WebSphere Application Server Developer Tools for Eclipse

The latest version of IBM Rational Application Developer V8.5 also includes Dojo Toolkit tools. Rational Application Developer V8.5 includes the complete Ajax client runtime. Including `ibm_ilog` and `ibm_soap`. You should only need to point to the Web 2.0 and Mobile installed location if you need to pick up a newer Ajax client runtime version provided with the Web 2.0 and Mobile Toolkit. This includes picking up a fix applied to the Web 2.0 and Mobile Toolkit Ajax client runtime.

Rational Application Developer V8.5 also includes project facets for Web 2.0 and Mobile libraries including RPCAdapter, Web messaging, and Ajax Proxy. These libraries are installed with WebSphere Application Server Base, Express, Network Deployment, and Developers Edition.

Dojo Toolkit DojoX content availability

- Only stable and tested DojoX modules are included with Web 2.0 and Mobile Toolkit installation
- Additional DojoX download options are available from:
http://www14.software.ibm.com/webapp/wsbroker/redirect?version=phil&product=was-nd-mp&topic=web20_dojox
- Recommend installing DojoX modules in different directory than the Web 2.0 and Mobile Ajax client run time installation directory

The WebSphere Application Server Feature Pack for Web 2.0 and Mobile includes all Dojo Toolkit DojoX modules. The WebSphere Application Server V8.5 Web 2.0 and Mobile Toolkit includes a limited number of DojoX modules from Dojo Toolkit 1.7.2. Additional DojoX modules are available for download from the link listed here. These DojoX modules are mostly experimental DojoX modules. Additional information about the DojoX download is available on from the link above.

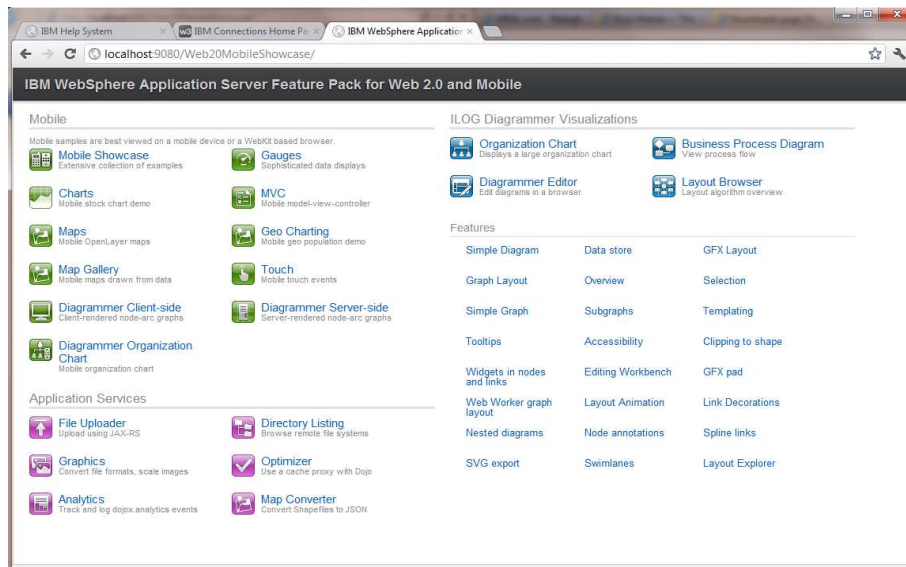
When installing the additional DojoX modules, avoid installed the DojoX extensions in the Web 2.0 and Mobile Toolkit ajax-rt_1.X directory. The DojoX files should be installed in a temporary directory and then combined with Dojo 1.7.2 when creating a web application.

New Locations of Feature Pack server side content

- JSON4J part of WAS run time
- Other content included in main WebSphere Application Server offerings - Base, Network Deployment, Express, Developers Edition, z/OS, etc
 - <app_server_home>/installableApps/AjaxProxy.war
 - <app_server_home>/optionalLibraries/web2mobile/rpcadapter
 - <app_server_home>/optionalLibraries/web2mobile/wink-jaxrs-webdav.jar
 - <app_server_home>/optionalLibraries/web2mobile/webmsg_applib.jar
- Web 2.0 and Mobile Infocenter contains documentation for these components

Some Server-side WebSphere Application Server Web 2.0 and Mobile Feature content has moved in V8.5 and is included in WebSphere Application Server V8.5P: Base, Network Deployment, Express, Developers Edition and z/OS installations. Documentation for these components is included in the Web 2.0 and Mobile Toolkit infocenter.

Showcase Sample



The Showcase sample is a comprehensive sample application that includes multiple samples including Dojo, DojoX mobile, Dojo Diagrammer, and application services samples. The Showcase sample is available from the WebSphere Application Server 8.5 infocenter and not installed with the Web 2.0 and Mobile Toolkit.

Summary

There are many changes to consider when moving from the Web 2.0 and Mobile Feature Pack to the Web 2.0 and Mobile Toolkit. This presentation outlined these changes and summarized how to install and use the Web 2.0 and Mobile Toolkit content. The Web 2.0 and Mobile Toolkit is a valuable WebSphere Application Server addition that can help developers create interactive desktop and mobile applications.

References

- WebSphere Application Server V8.5 Infocenter - <http://www14.software.ibm.com/webapp/wsbroker/redirect?version=phil>
- Dojo Toolkit - <http://dojotoolkit.org/>
- DojoX zip download -
 - http://www14.software.ibm.com/webapp/wsbroker/redirect?version=phil&product=was-nd-mp&topic=web20_dojox
- Developers Edition Download - <http://www.ibm.com/developerworks/downloads/ws/wasdevelopers/index.html>
- Wasdev - <https://www.ibm.com/developerworks/mydeveloperworks/blogs/wasdev/entry/home?lang=en>
- Web 2.0 and Mobile Feature Pack - <http://www-01.ibm.com/software/webservers/appserv/was/featurepacks/web20-mobile/>
- Web 2.0 and Mobile FeP Community - <https://www.ibm.com/developerworks/mydeveloperworks/groups/service/html/communityview?communityUId=94e7fded-7162-445e-8ceb-97a2140866a9>

See these references for additional information about the Web 2.0 and Mobile Toolkit.



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