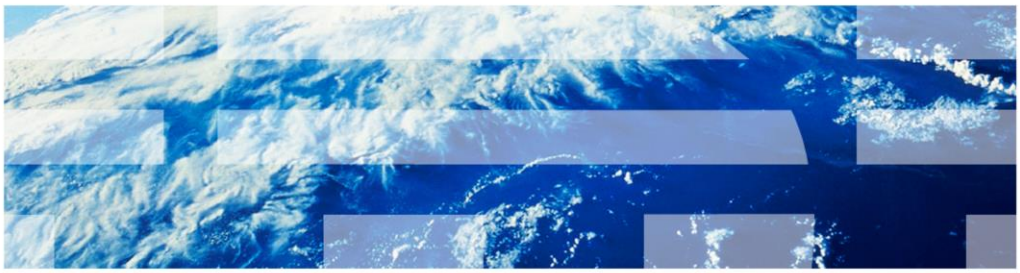
IBM

InfoSphere Information Server

Processing web services as a target with InfoSphere DataStage



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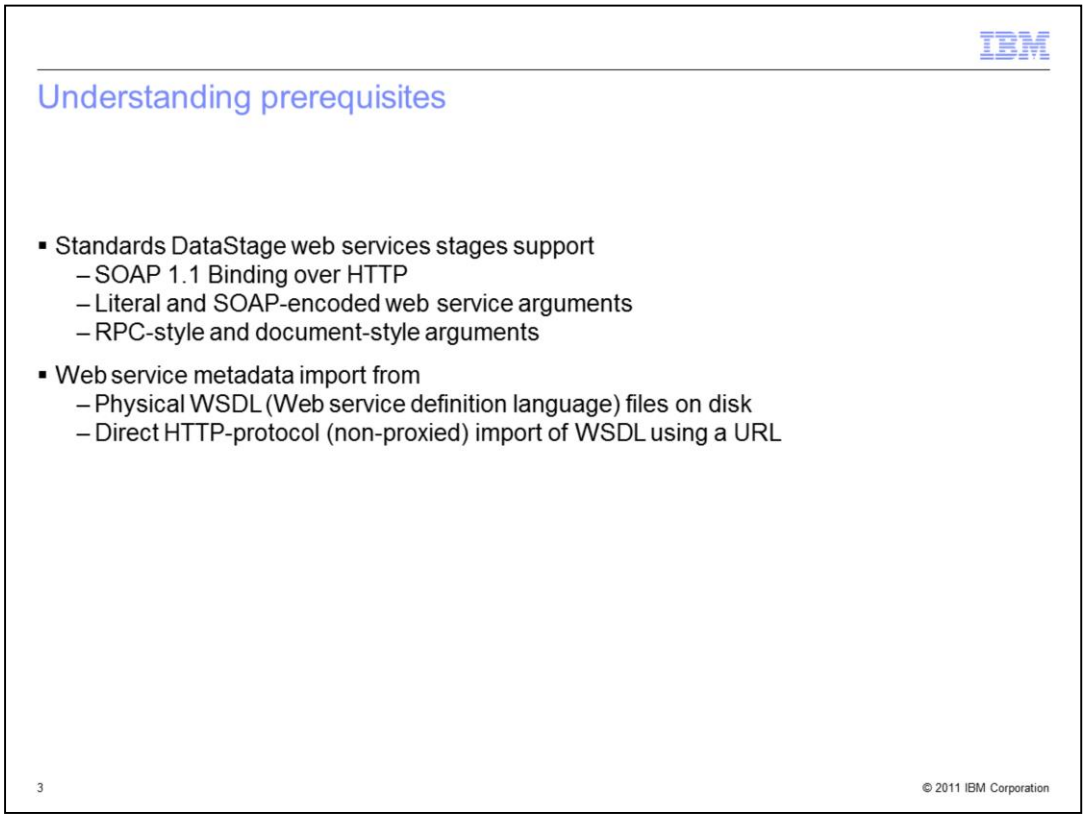
This presentation describes how to create a web services job with InfoSphere™ DataStage® using web services as a target. The example in this module is based on DataStage 8.5 but the principles are the same for all versions of DataStage.

The objectives of this presentation are to introduce you to the basic concepts of creating DataStage jobs that can access published web services as a target. This presentation describes the prerequisites for using the web service stages. To demonstrate this functionality, this presentation also includes step by step processes necessary to create DataStage jobs.

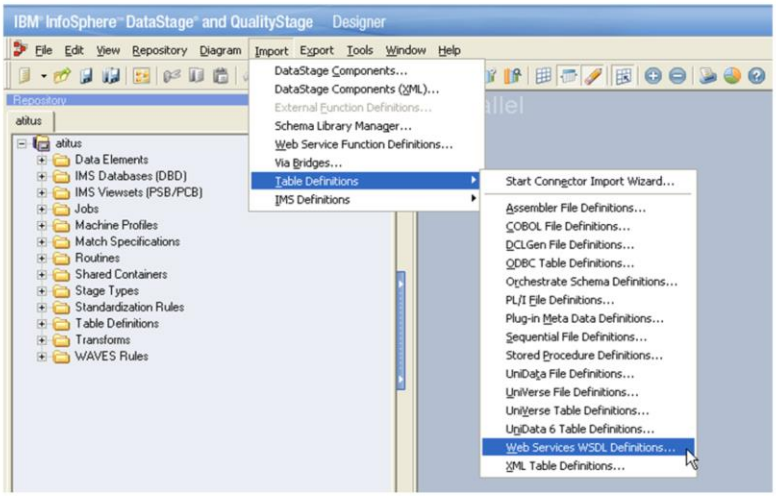


This slide displays the web standards that are supported by the DataStage web services stages and the methods available for importing web service definitions. The steps in this module will use web services published on the public internet. To complete these steps, your local DataStage client AND your DataStage server will both need to have access to the public internet.

The examples in this presentation are based on DataStage version 8.5 using Parallel canvas jobs. You can complete the module using other versions of DataStage or by using server canvas jobs. However, the screen captures and exact steps may vary slightly.

Import web services definitions (1 of 4)

- Import web services definition
  - Import => Table Definitions => Web Services WSDL Definitions



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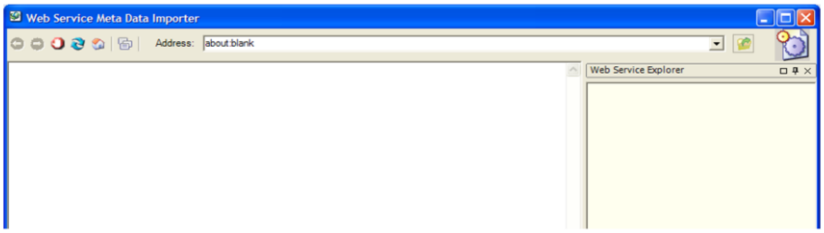
To start the web service metadata importer, open the DataStage Designer (or DataStage Manager in version 7) and click Import from the main menu. Next, expand Table Definitions and then click Web Services WSDL Definitions.

Import web services definitions (2 of 4)



- Web service definition published to public internet
  - http://wsf.cdyne.com/WeatherWS/Weather.asmx?wsdl

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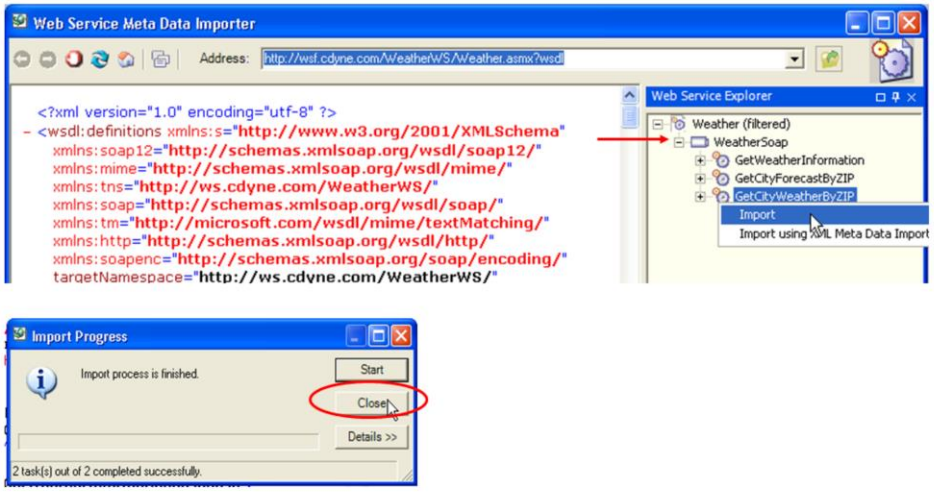
The web service metadata importer will open as a new window. In this module, you will use a web service that returns weather forecast information. The URL for the web service is displayed on this slide. To browse the web service, enter the URL for the web Service WSDL document into the Address field in the web service metadata importer and press Enter.

Import web services definitions (3 of 4)

- Import GetCityWeatherByZIP



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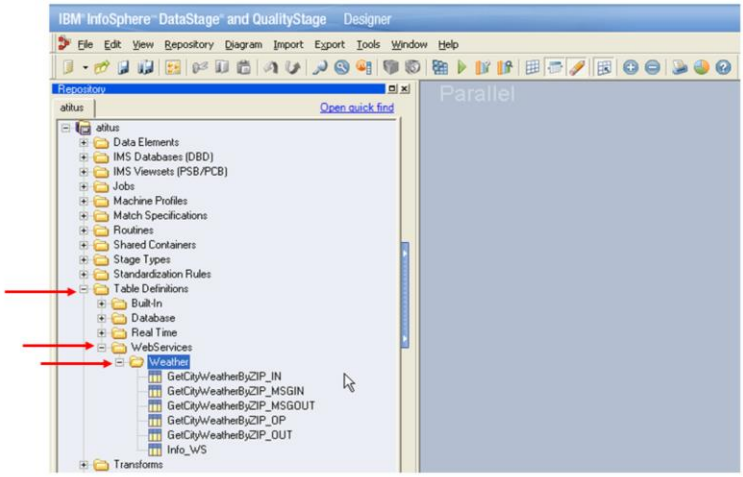
The next step is to import the GetCityWeatherByZIP operation. On the right side of the Web Services Meta Data Importer dialog box, click the [+] next to the entry for “WeatherSoap” in the Web Services Explorer pane to expand the dialog box. Locate the GetCityWeatherByZIP operation with the 'gears' icon next to it. Right-click GetCityWeatherByZIP and select 'Import'. When the import finishes, click the Close button on the dialog box. Next, click the close button on the bottom right side of the Web Services Metadata Importer window.

Import web services definitions (4 of 4)

- Verify successful import in repository view



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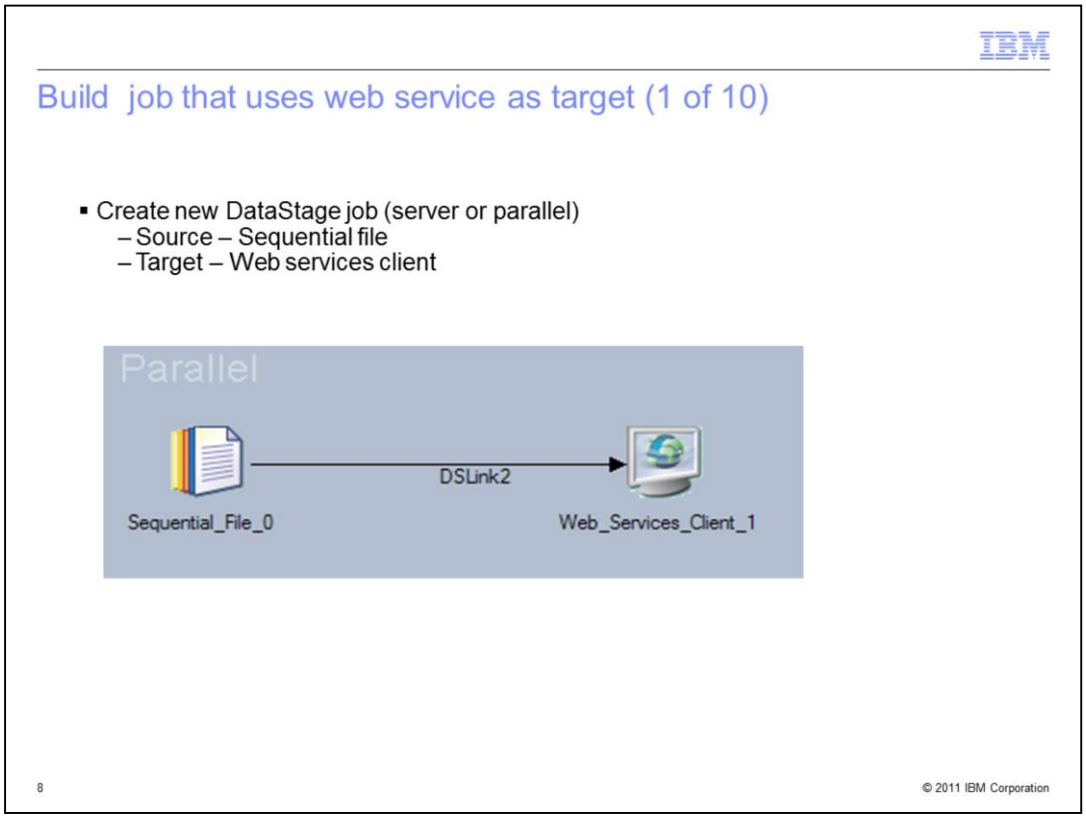
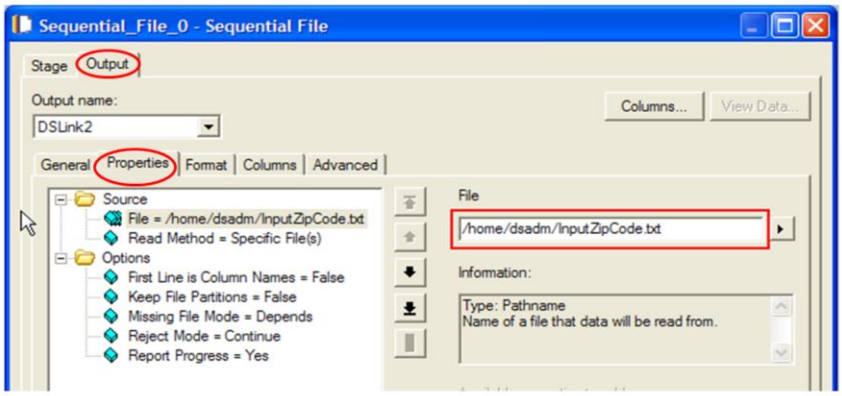
To verify that the import was successful, go to the repository view in the DataStage Designer (or the DataStage Manager in version 7) and locate the Table Definitions folder. Click to expand the folder and then locate the WebServices folder and expand it. If the import was successful, you will have a Weather folder with the operation that was just imported. Expanding the folder will show all of the entries labeled with GetCityWeatherByZIP.



In the DataStage Designer, create a new parallel job. On the job canvas, add a sequential file as the source and a Web Services stage as the target.

Build job that uses web service as target (2 of 10)

- Define file for source sequential file stage



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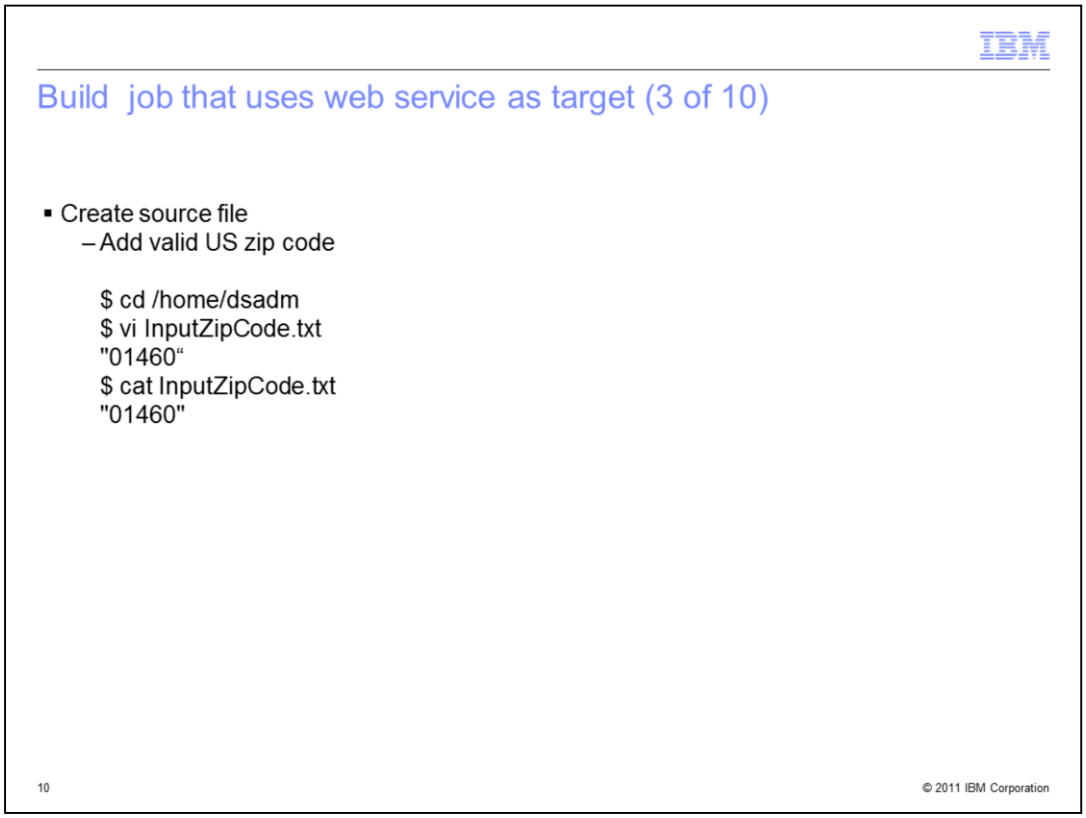
Double click the sequential file stage. Click the Output tab at the top and then click the Properties tab. Edit the path for the File property and provide the full path to the location on your DataStage server where you will create your source sequential file. It is ok that the file does not currently exist; you are going to create it in the next step.

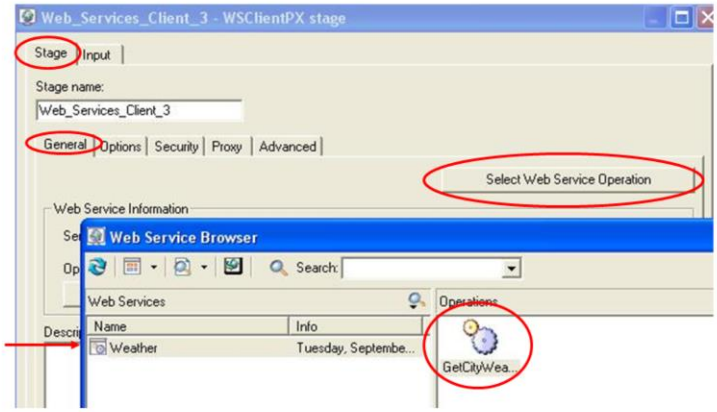
After typing the path, press Enter to submit. It is not necessary to change any other options; the default values should be used. Press OK at the bottom of the dialog box to save the changes.



Using a text editing program, create the input file that you specified in the previous slide. Note that this file must be created on the DataStage Server, not on your local client workstation. Enter a single line into this file, which is a valid US ZIP code, surrounded with double quote characters.

Build job that uses web service as target (4 of 10)

- Configure web service client stage to call GetCityWeatherByZIP operation



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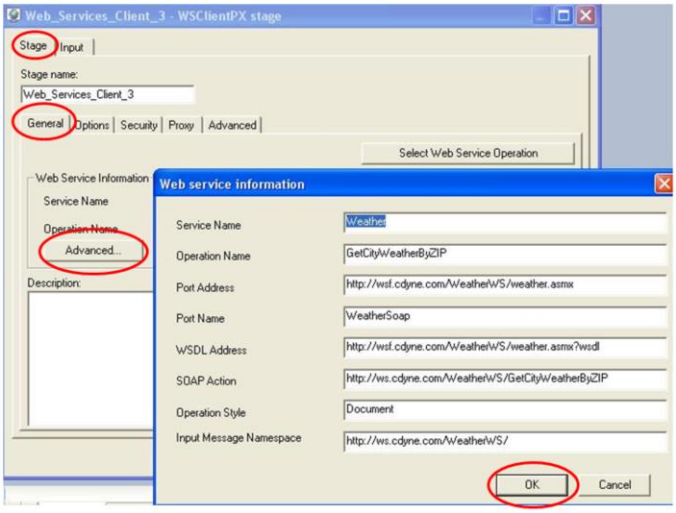
Next, open the Web Services Client stage. Select General tab. Click the 'Select Web Service Operation' button. In the Web Service Browser window, select the 'Weather' web service in the left pane and the operations are listed in the right pane. Double click the 'GetCityWeatherByZIP' operation in the right pane.

Build job that uses web service as target (5 of 10)

- Verify web services properties are populated



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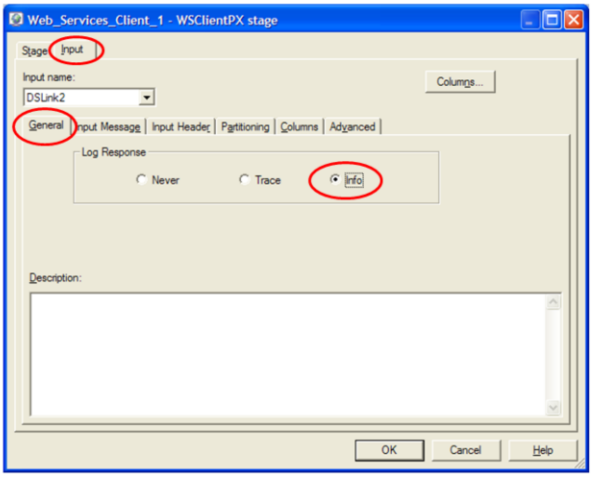
Next, click the Advanced button and verify all of the properties in the Web Service Information are populated. Click OK when finished.

Build job that uses web service as target (6 of 10)

- Configure web service response to be logged



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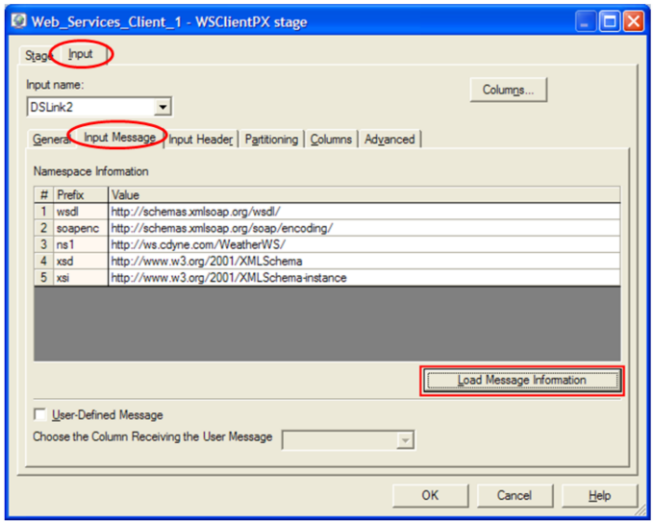
While still in Web Services stage, click the Input tab at the top and then click the General tab. From the Log Response option choices, select 'Info'.

Build job that uses web service as target (7 of 10)

- Load namespace information



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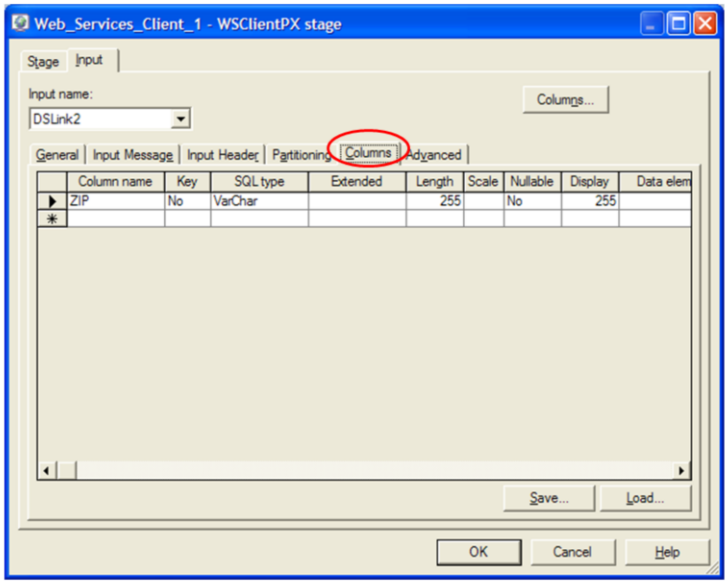
Next, click the Input Message tab. Press the Load Message Information button and the grid for Namespace information is automatically populated.

Build job that uses web service as target (8 of 10)

- Verify column information has automatically loaded



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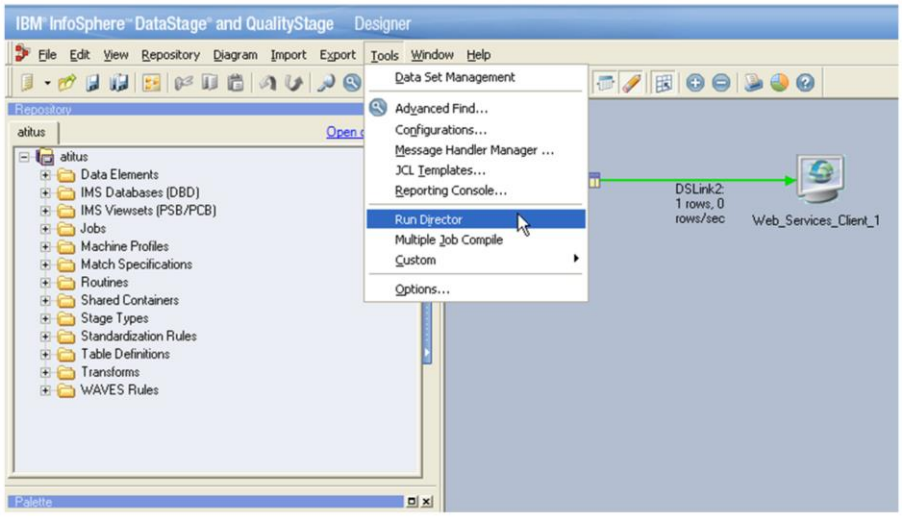
With the Input tab still selected at the top, click the Columns tab. Validate that it has been automatically populated with the input column for the web service. If you do not see a column value here, go back and ensure all of the previous steps were completed.

Build job that uses web service as target (9 of 10)

- Save, compile, and run job



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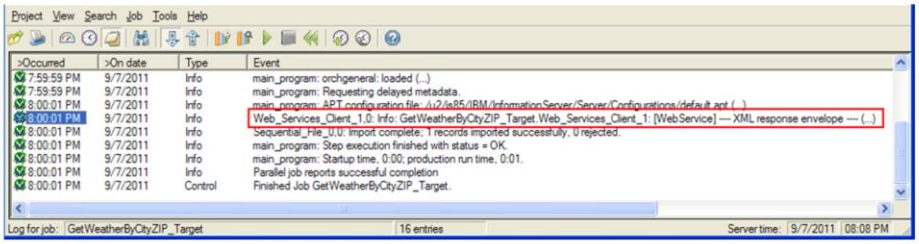
Using the DataStage Designer, save and compile the job. To enable performance statistics, right click anywhere on the blank area of the job canvas and select Show Performance Statistics. Run the job from Designer. The link will turn green and report one row processed. Next, from the Tools menu, choose Run Director to open this specific job in the DataStage Director client.

Build job that uses web service as target (10 of 10)

- Locate XML Response entry in DataStage Director detail log view



- View the response XML document (SOAP Envelope)

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The new job that was created, will automatically be selected in the DataStage Director. From the application menu of the Director, select View > Log to see the detailed log entries for the last job run. Locate the entry with 'XML Response Envelope' shown for the event. This entry is circled in red on this slide. Double click this entry to view the entire message. The XML response from the Web Service is now displayed.

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