

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

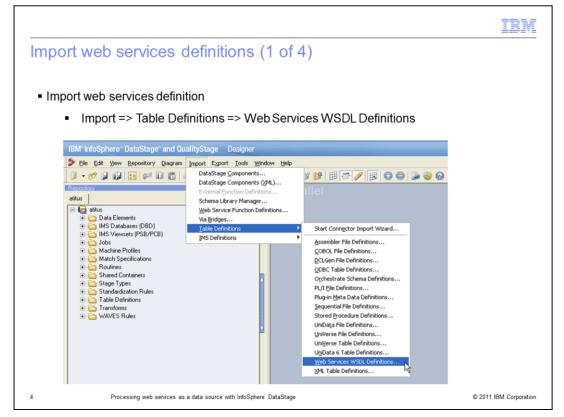
	IBM
Objectives	
 Understanding prerequisites 	
 Import web services definitions 	
 Build job that uses web service as data source 	
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The objectives of this presentation, are to introduce you to the basic concepts of creating DataStage jobs that can access published web services as a source. This presentation will cover the prerequisites for using the web service stages. To demonstrate this functionality, this presentation also provides step by step processes necessary to create DataStage jobs.

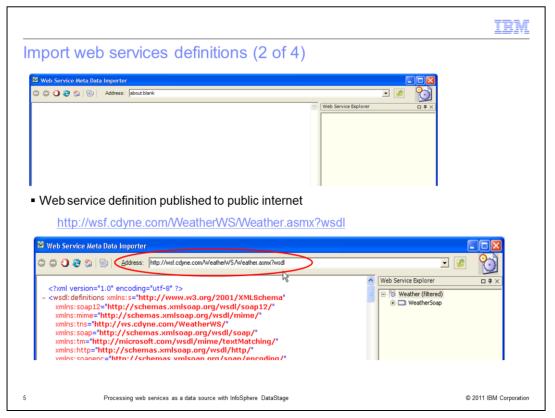
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Understanding prerequisites	
 Standards DataStage web services stages support SOAP 1.1 binding over HTTP Literal and SOAP-encoded web service arguments RPC-style and document-style arguments 	
 Web service metadata import from Physical WSDL (web service definition language) files on disk Direct HTTP-protocol (non-proxied) import of WSDL using URL 	
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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 example in this presentation is based on DataStage version 8.5 using a Parallel canvas job. You should be able to complete the module using other versions of DataStage or by using a Server canvas job, however, the screen captures and exact steps may vary slightly.



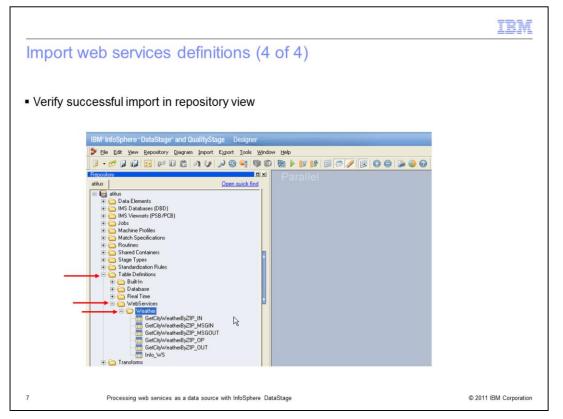
The first step in any web services job is to import the web services definition. Start the Web service metadata importer in the DataStage Designer (or DataStage Manager in version 7) and click Import from the main menu. Next, expand Table Definitions and then click Web Services WSDL Definitions.



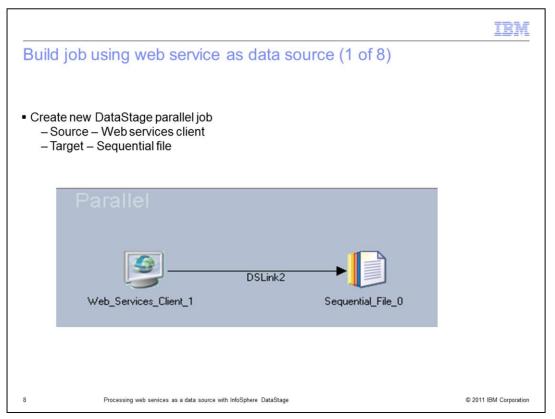
The web service metadata importer should open as a new window. In this module, you will use a web service that returns weather forecast information. The URL for the web service is provided on this slide. To browse the web service, enter the URL for the web service WSDL document into the Address field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

	IBM
mport web services definitions (3 of 4)	
 Import GetCityWeatherByZIP 	
2 Web Service Meta Data Importer	
C C C C C C Address: http://wsl.cdyne.com/Weather/WS/Weather.asmx?wsd	Web Service Explorer
<pre><?xml version="1.0" encoding="utf-8" ?> - <wsdl:definitions <="" pre="" targetnamespace="http://ws.cdyne.com/WeatherWS/" xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/" xmlns:s="http://www.w3.org/2001/XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/" xmlns:tn="http://schemas.xmlsoap.org/wsdl/http/"></wsdl:definitions></pre>	Weather (filtered) WeatherSoap GetWeatherInformation GetChyForecastByZIP GetChyForecastByZIP Import Import Using Will. Meta Data Import
Import Progress	
2 task(s) out of 2 completed successfully.	© 2011 IBM Corporation

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 it. Locate the GetCityWeatherByZIP operation with the 'gears' icon next to it. Right-click this and select 'Import'. When the import finishes, click the Close button on the dialog box and then click the Close button on the bottom right side of the Web Services Metadata Importer window.



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 it and then locate the WebServices folder. Expand the WebServices folder. If the import was successful, you will have a Weather folder with the operation that was just imported. Expanding it should show all of the entries labeled with GetCityWeatherByZIP.



In the DataStage Designer, create a new blank job (either server or parallel). On the job canvas, add a web services client as the source and a sequential file as the target. The web services client stage, referred to as WS Client, is located within the Real Time group in the Designer palette.

	IDM
Build job using web service as data source (2 of 8)	
 Define target file for sequential file stage 	
Sequential_File_0 - Sequential File	
Stage Input	
Input name: Columns View Data	
General Properties Partitioning Format Columns Advanced Image: Im	
OK Cancel Help	
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Next, double click the sequential file stage. Click the Input 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 want to write the file. This will be a small file. After typing the path, press the Enter key on the keyboard 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.

	TEM
Build job using web service as data source (3 of 8)	
 Configure web service client stage to call GetCityWeatherByZIP operation 	
😰 Web_Services_Client_3 - WSClientPX stage	
Stage Dutput Stage name: Web_Services_Client_3 General Topions Security Proxy Advanced Select Web Service Operation Web Service Information Web Service Browser Service Name Service Name Operation Name Web Services Advanced Web Services Name Info Description: Weather Tuesday, Septembe GetCityWea	
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Double click the Web Services Client stage. Select the General tab. Click the 'Select Web Service Operation' button. In the Web Service Browser window, click 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.

			IBM
Build job using w	veb service a	as data source (4 of 8)	
 Verify web services i 	nformation is nor	nulated	
- verily web services i	mormation is pop		
Web_Services_Client_3	3 - WSClientPX stage		
Stage Output		1	
Stage name: Web_Services_Client_3			
General) Options Security	Prosv Advanced		
opions occarry		Select Web Service Operation	
Web Service Information			
Service Name	Web service information	×	
Operation Name Advanced	Service Name	Westher	
	Operation Name	GetCityWeatherByZIP	
Description:	Port Address	http://wsf.cdyne.com/WeatherWS/weather.asmx	
	Port Name	WeatherSoap	
	WSDL Address	http://wsf.cdyne.com/Weather/WS/weather.asmx?wsdl	
	SOAP Action	http://ws.cdyne.com/Weather/WS/GetCity/WeatherByZIP	
	Operation Style	Document	
	Input Message Namespace	http://ws.cdyne.com/Weather/WS/	
		OK Cancel	
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Next, to verify that the web service information is populated, click the Advanced button to view the web service Information. If the information is not populated properly, go back and verify the previous steps were completed correctly. Click OK when finished.

			IBM
Build job using w	eb service as data source	(5 of 8)	
 Input arguments – Load input arg 	iments and namespace information	1	
Stabe Output Output name: DSLink2	es_Client_1 - WSClientPX stage	Columns	
Namespace II # Prefix 1 wed	ormation Value http://schemas.xmlioap.org/wsdl/		
2 soapenc 3 ns1 4 xad 5 xsi	http://schemas.xmlsoap.org/soap/encoding/ http://www.cdyne.com/WestherWS/ http://www.gorg/2001/XMLSchema http://www.w3.org/2001/XMLSchema-instance		
12 Processing web	OK Services as a data source with infosphere Latastage	d Arguments Information	© 2011 IBM Corporation

With the Web Services Client stage still open, click the Output tab at the top. Then click the Input Arguments tab. Next, load the Input Arguments and Namespace Information grids by pressing the Load Arguments Information button on the bottom of the dialog box.

Next, add a valid US zip code in the value field of the ZIP input argument. For example, 01460 for Littleton, Massachusetts.

	IBM
Build job using web service as data source (6 of 8)	
 Output messages Load namespace information 	
Web_Services_Client_1 - WSClientPX stage	
Dutput name: DSLink2 General Input Arguments Uutput Message Dutput Header Columns Advanced Namespace Information	
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With the Outputs tab still selected at the top, click the Output Message tab. Next, click the Load Message Information button at the bottom of the dialog box to populate the Namespace Information grid.

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Gene			-				1		
	Column name Success	Derivation	Key	SQL type VarChar	Extended	Length S 255	icale		
	ResponseText		No	VarChar		255			
	State		٩٥	VarChar		255			
	City		٩o	VarChar		255			
	WeatherStationC		lo	VarChar		255			
	WeatherID		No.	Numeric		10			
	Description		No.	VarChar		255			
	Temperature RelativeHumidity		40 40	VarChar VarChar		255			
	Wind		10	VarChar		255			
	Pressure		No	VarChar		255			
	Visibility		No	VarChar		255			
	WindChill	1	No	VarChar		255			
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					Save	Load			
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				OK	Cancel	He	de 🤇		
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With the Outputs tab still selected at the top, click the Columns tab. Validate that the columns have been automatically populated with the return values for the web service. If you do not see column values here, then go back and ensure all of the previous steps were completed.

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🛗 GetWe	atherByCityZIP_Source	Sequential	File_0.DSLin	k2 - Data Browser				
Succe	ss ResponseText City Found	State	City Littleton	WeatherStationCity Bedford	WeatherID De		Temperature R	elativeHumidity
<					Cic	se Find	Display.	> Help

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 and the link should turn green and report one row processed. Right click the Sequential file stage and view data to see the individual column values returned.

Note: You may find that the view data browser displays only one column of data at a time. This is because the maximum lengths for the fields are set to 255. To see more than one column at a time, use the mouse to resize the column widths in the view data browser.

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