

# DEPLOYING PACKAGES TUTORIAL

Paulo Oliveira  
DEI-ISEP

# Microsoft SQL Server Integration Services (SSIS)

- Platform for building high performance data integration solutions, including Extraction, Transformation, and Loading (ETL) packages for Business Intelligence (BI)
- Platform includes:
  - ◆ Graphical tools and wizards for building and debugging packages
  - ◆ Tasks for performing workflow functions such as executing SQL statements, FTP operations and sending e-mail messages
  - ◆ Data sources and destinations for extracting and loading data
  - ◆ Transformations for cleaning, aggregating, merging, and copying data

# Deploy Packages Tutorial

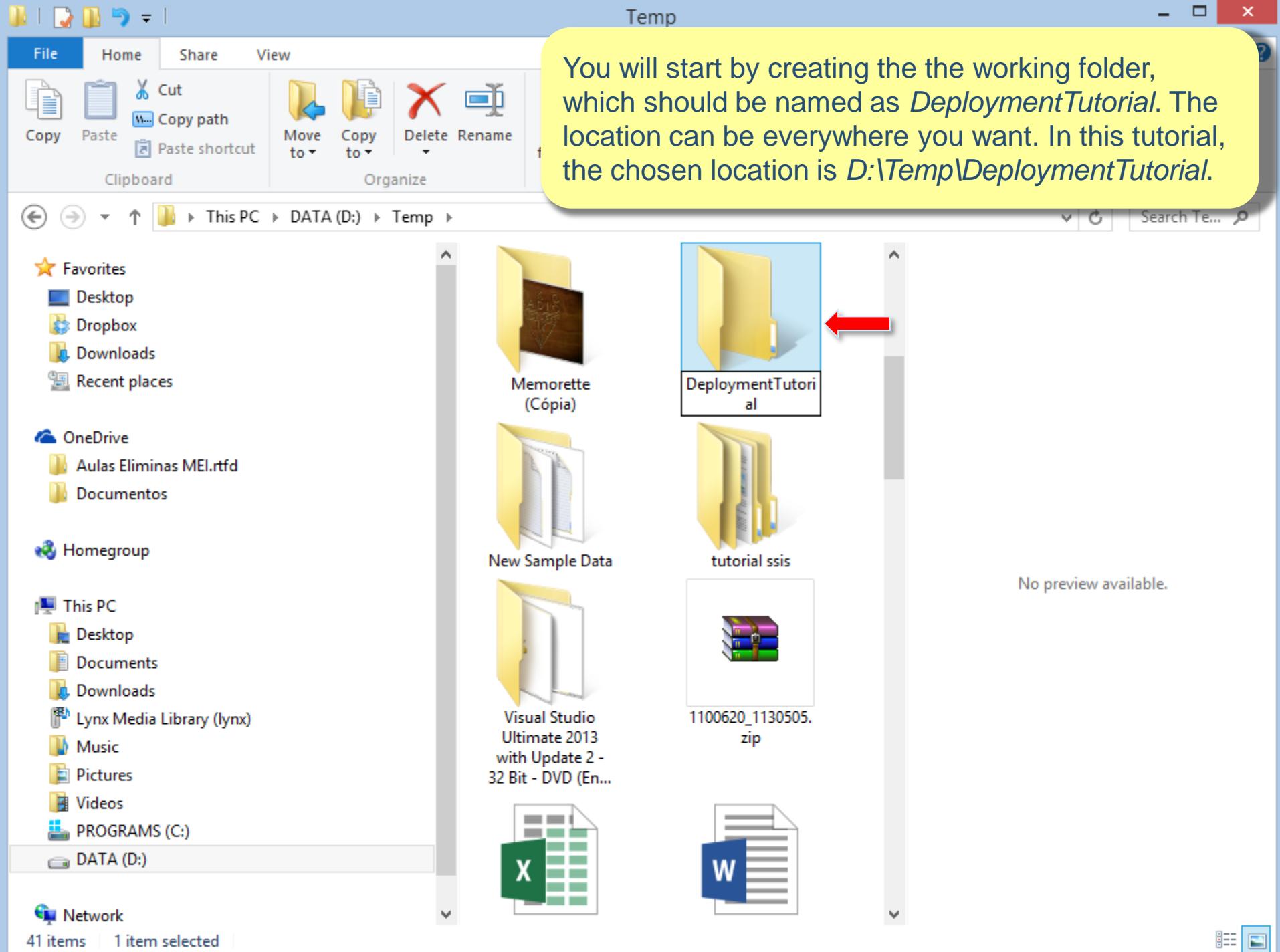
- Microsoft SQL Server Integration Services provides tools that make it easy to deploy packages to another computer.
- The deployment tools also manage any dependencies, such as configurations and files that the package needs.
- In this tutorial, you will learn how to use these tools to install packages and their dependencies on a target computer.
- First, you will perform tasks to prepare for deployment. You will create a new SSIS project in SQL Server Data Tools and add existing packages and data files to the project.
- In preparation for deployment, you will also update the packages to use configurations. Configurations make the properties of packages and package objects updatable at run time.
- In this tutorial, you will use configurations to update the connection strings of log and text files and the locations of the XML and XSD files that the package uses

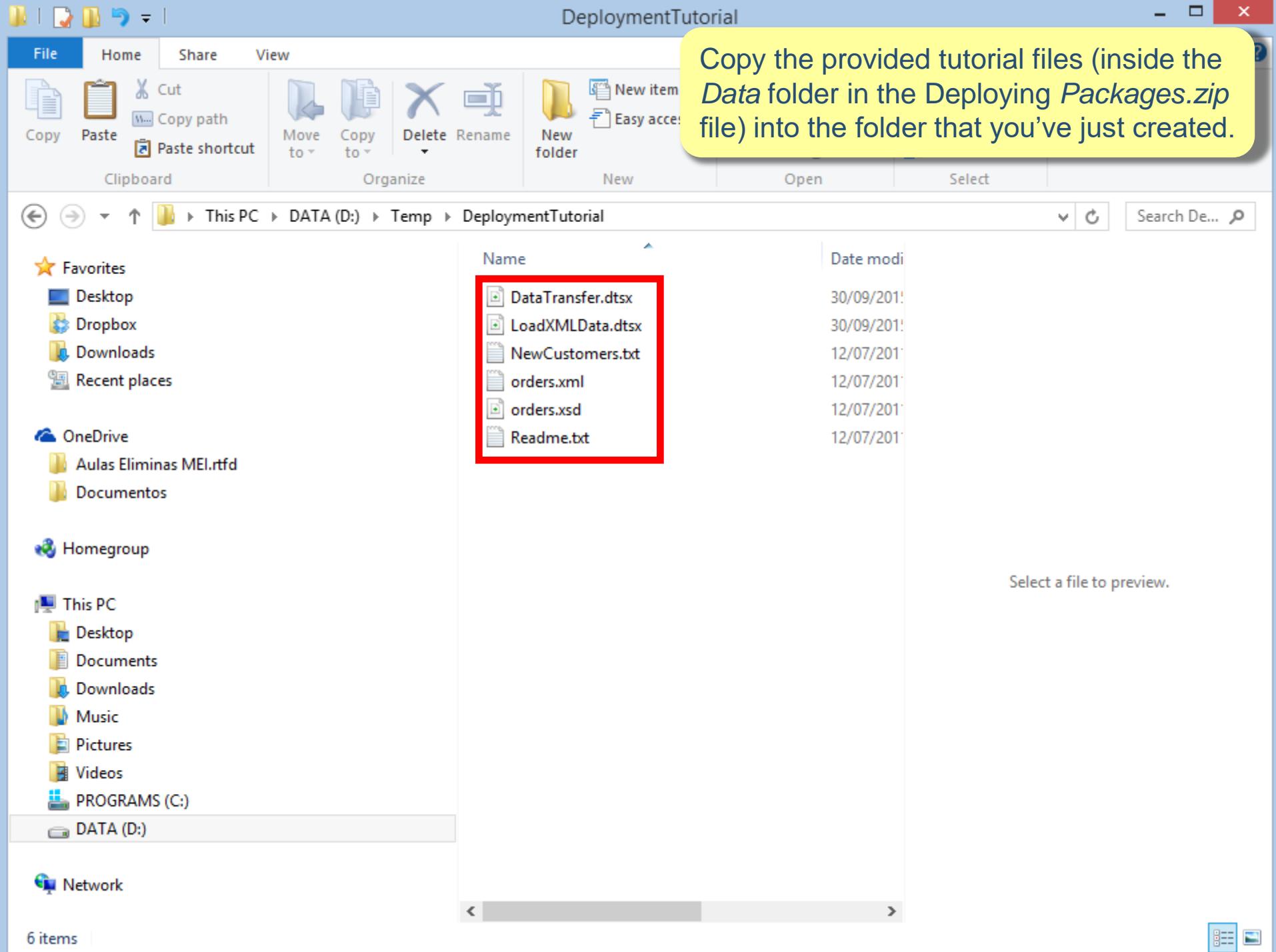
# Deploying Packages Tutorial

- Then, you will create the deployment bundle to use to install the packages. The deployment bundle will consist of the package files and other items that you added to the SSIS project, the package dependencies that Integration Services automatically includes, and the deployment utility that you built.
- You will then copy the deployment bundle to a simulated target computer and run the Package Installation Wizard to install the packages and package dependencies.
- Because the deployed packages use configurations, you will update the configuration to use new values that enable packages to run successfully in the new environment.
- Finally, you will run the packages in SQL Server Management Studio by using the Execute Package Utility.
- Based on the “Deploy Packages with SSIS” available at “<https://learn.microsoft.com/en-us/sql/integration-services/deploy-packages-with-ssis?view=sql-server-ver16>”

# Creating the Deployment Bundle

- You will create the working folders and environment variables that support the tutorial, create an Integration Services project, add several packages and their supporting files to the project, and implement configurations in packages.
- As the first step in creating the deployment bundle, you must collect all the packages and package dependencies into one Integration Services project.
- Frequently it is useful to include other information with the deployed packages: for example, you will also add to the project a Readme file that provides basic documentation for this group of packages.
- After you have added the packages and files, you will add configurations to packages. The configurations update properties of packages and package objects at run time.
- Later, you will modify the values of these configurations during package deployment to support the packages in the deployed-to environment.





Next, you'll create two system environment variables (*DataTransfer* and *LoadXMLData*) which you'll use later in the tutorial.

On Windows Search type *environment variables* and execute *Edit the system environment variables*.

## Search

Everywhere ▾

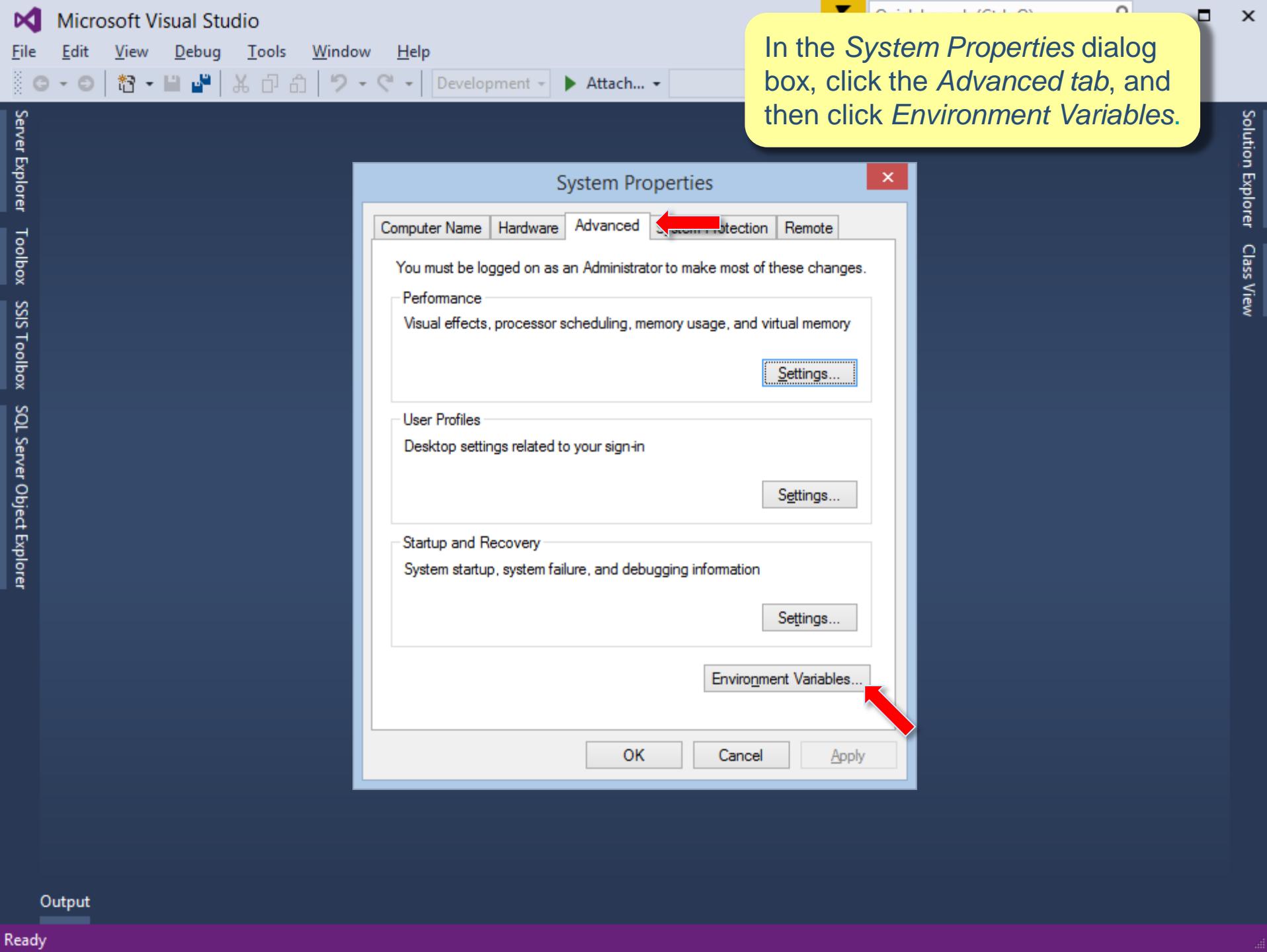
environment variables

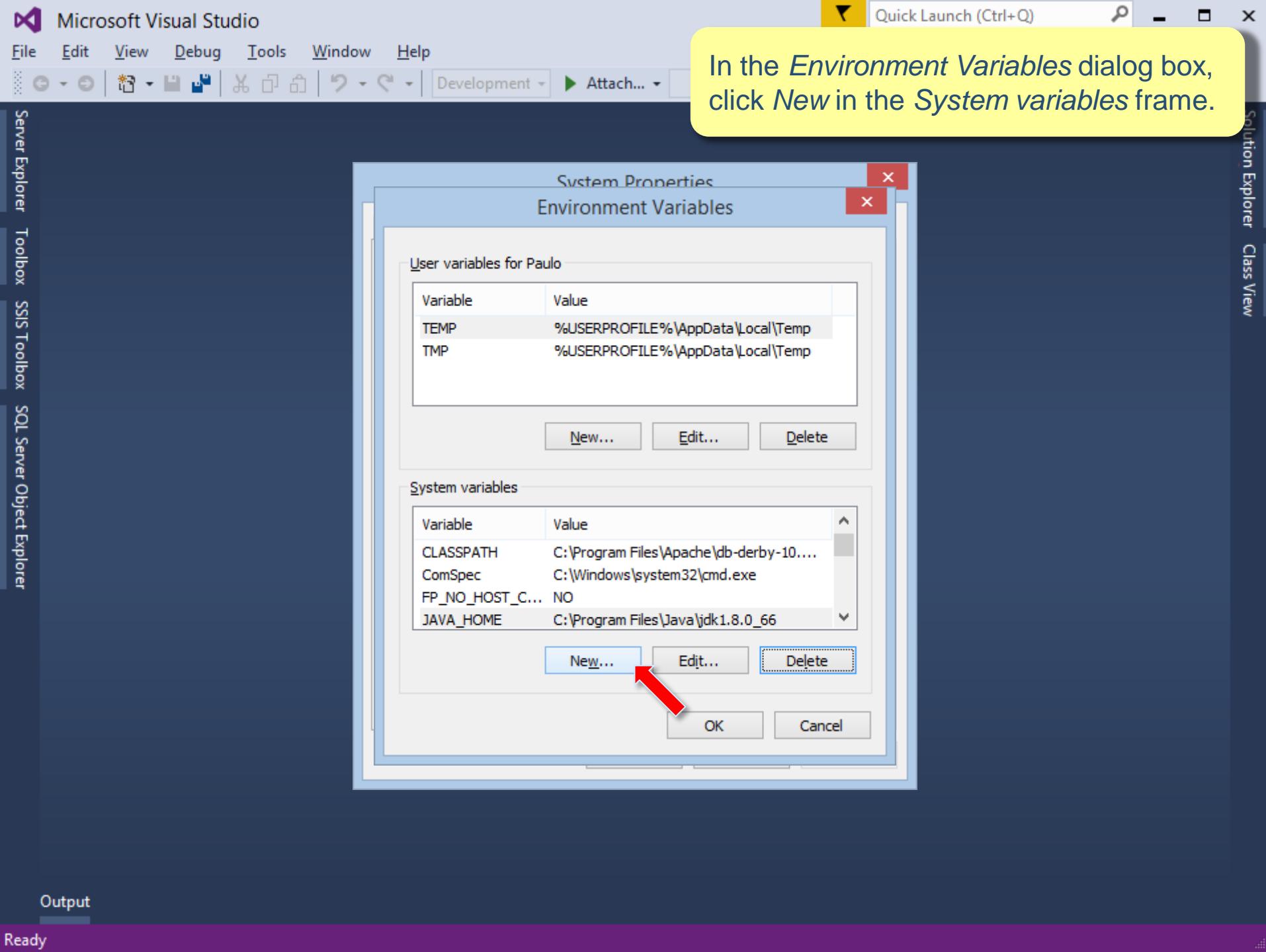


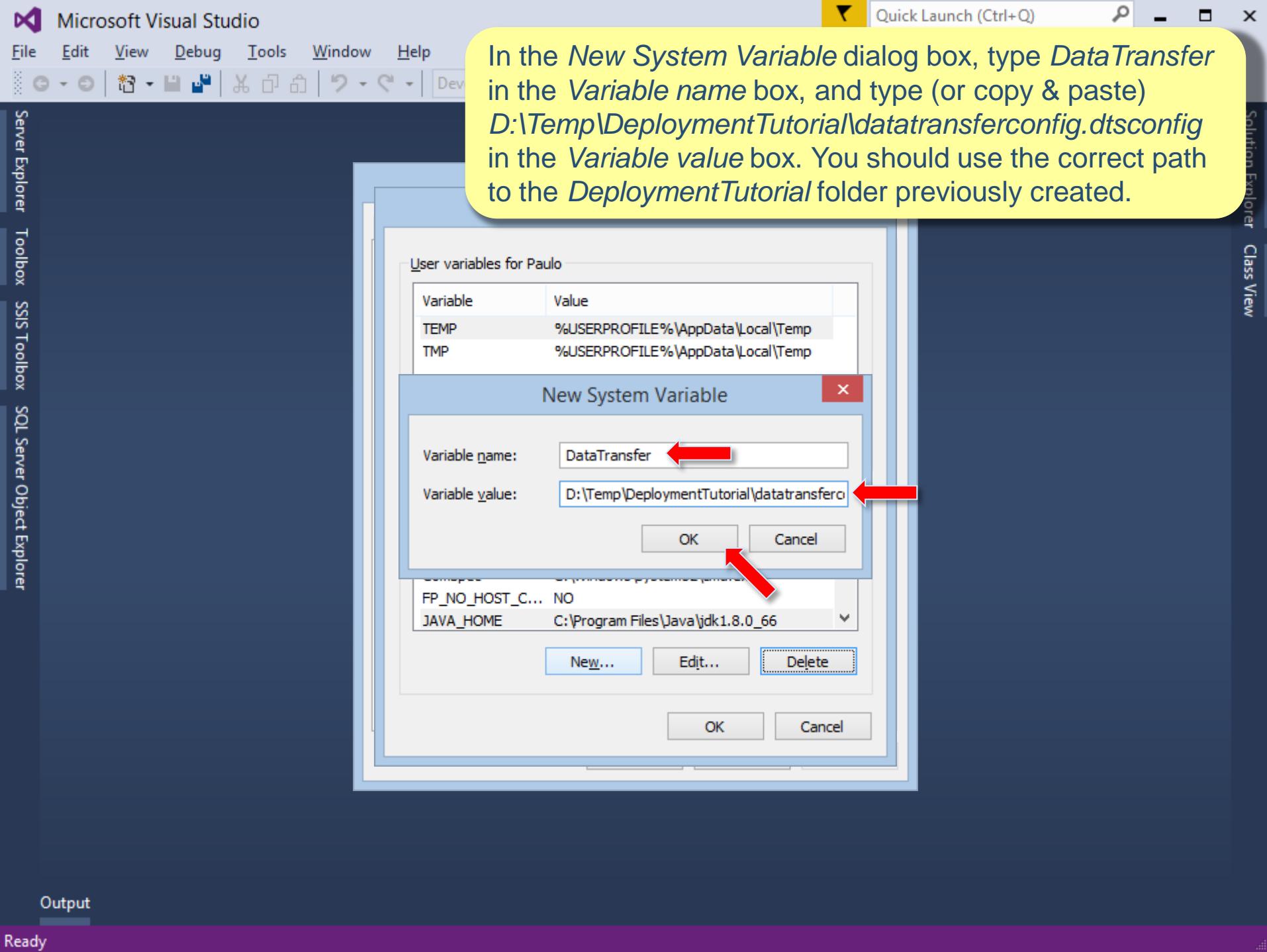
Edit the system environment variables

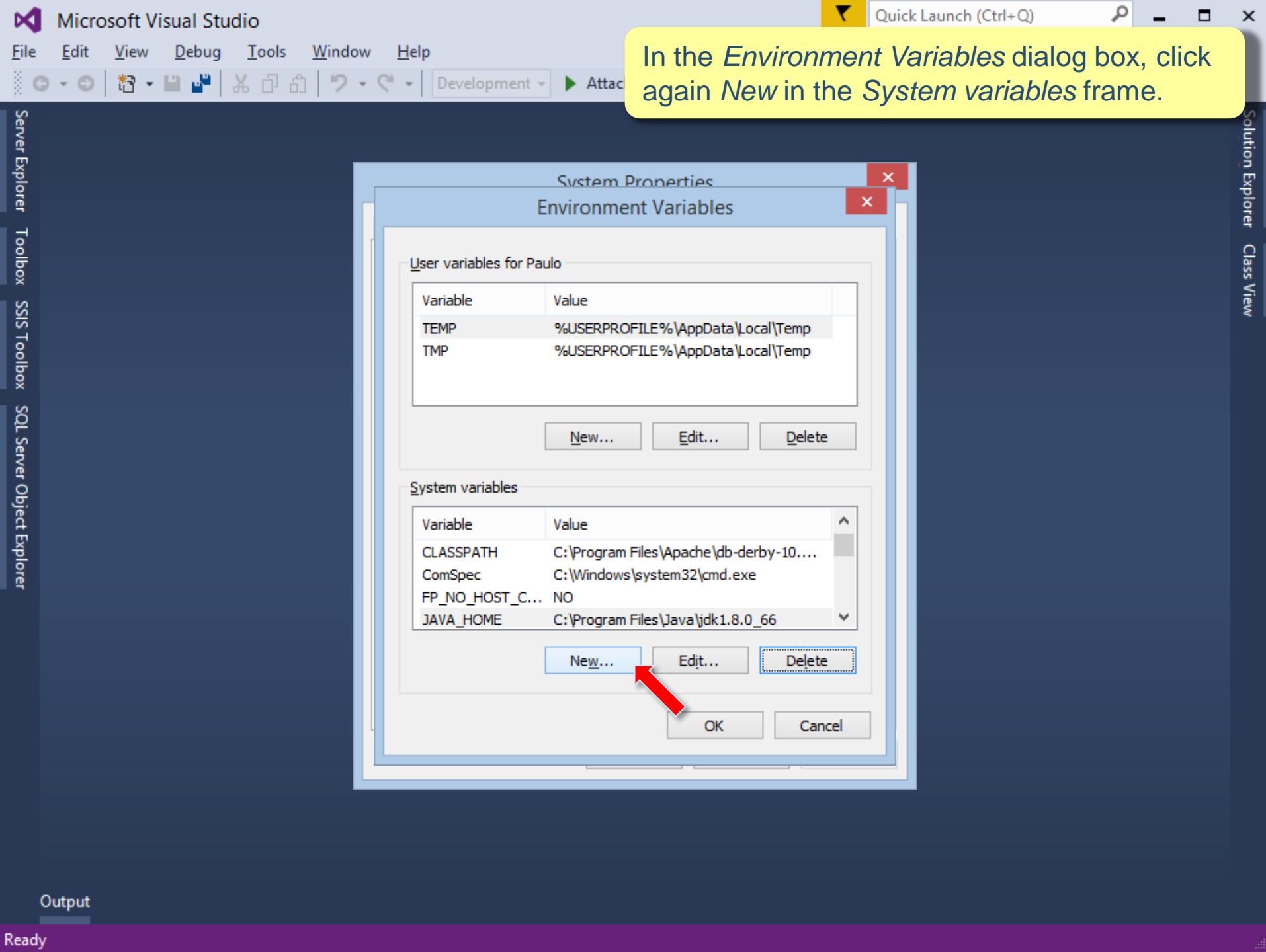


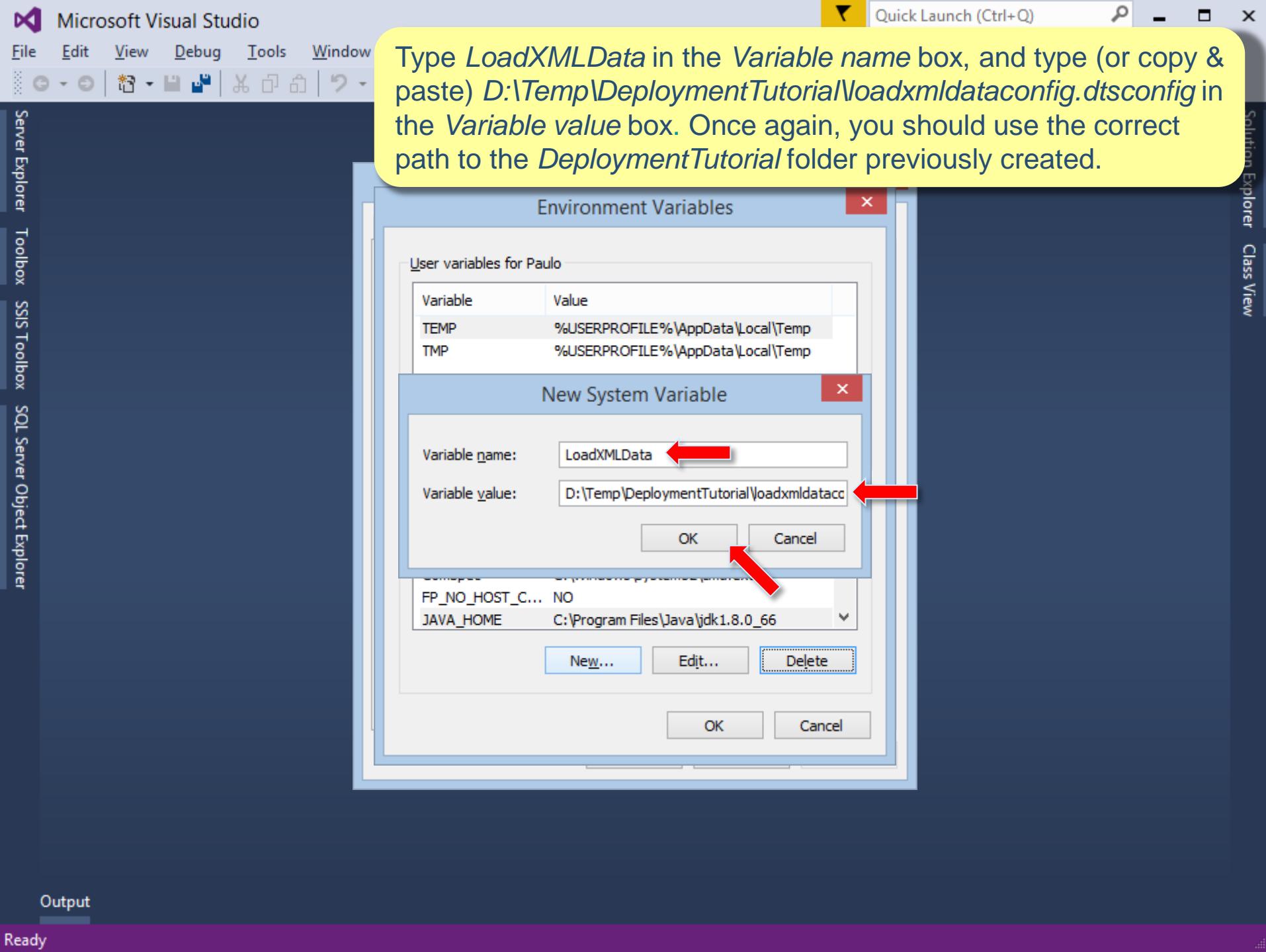
Edit environment variables for your account

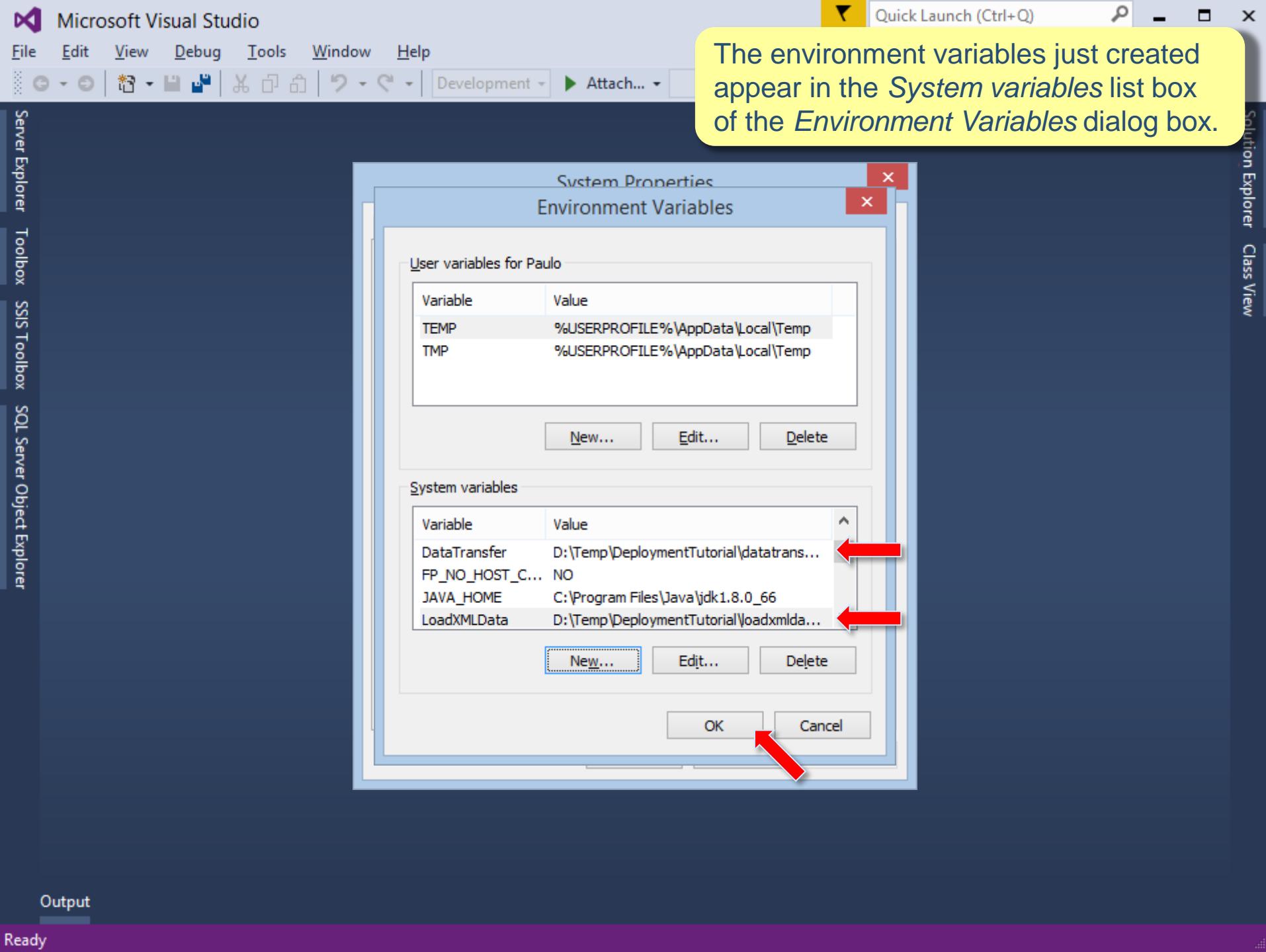






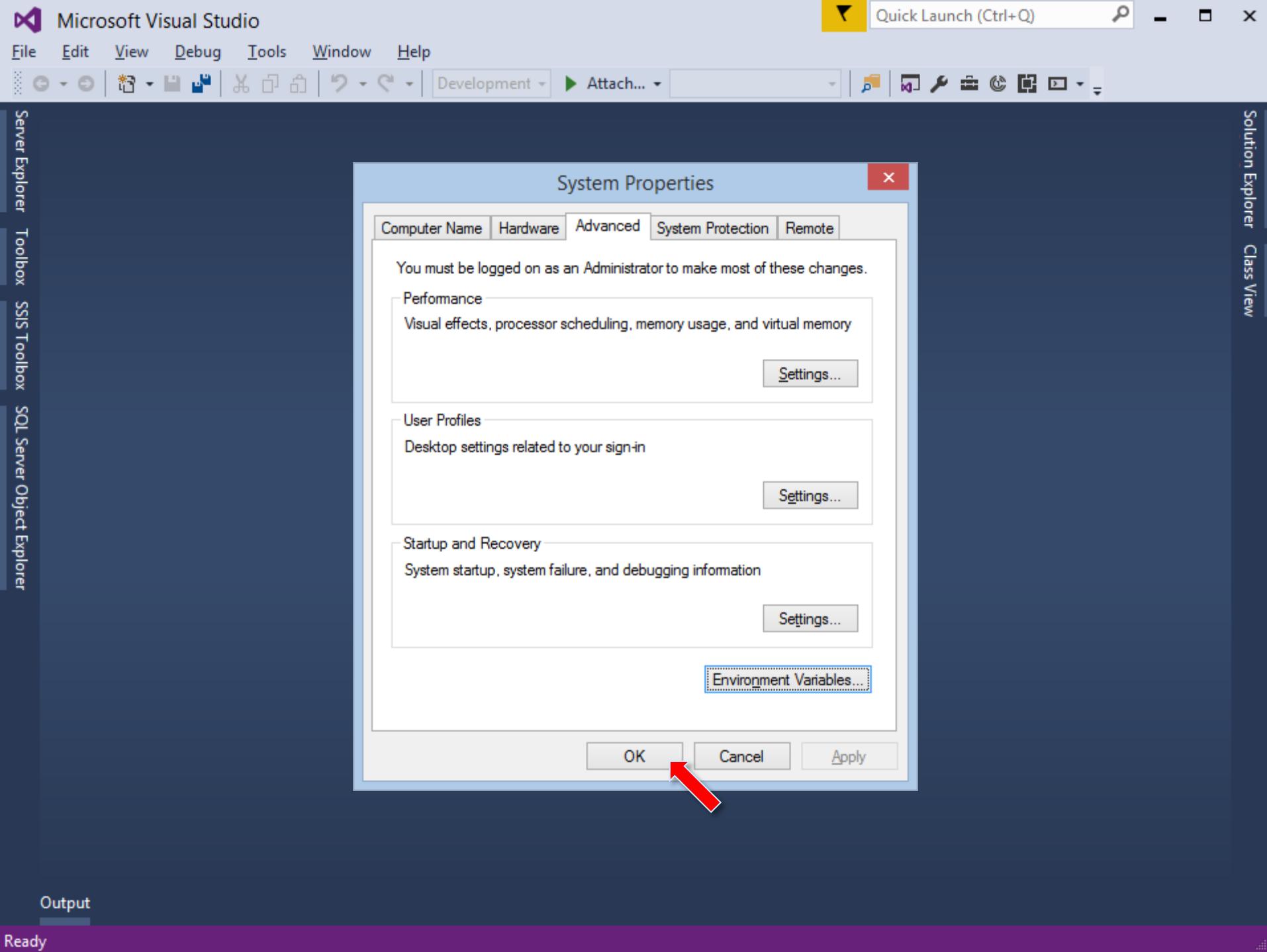


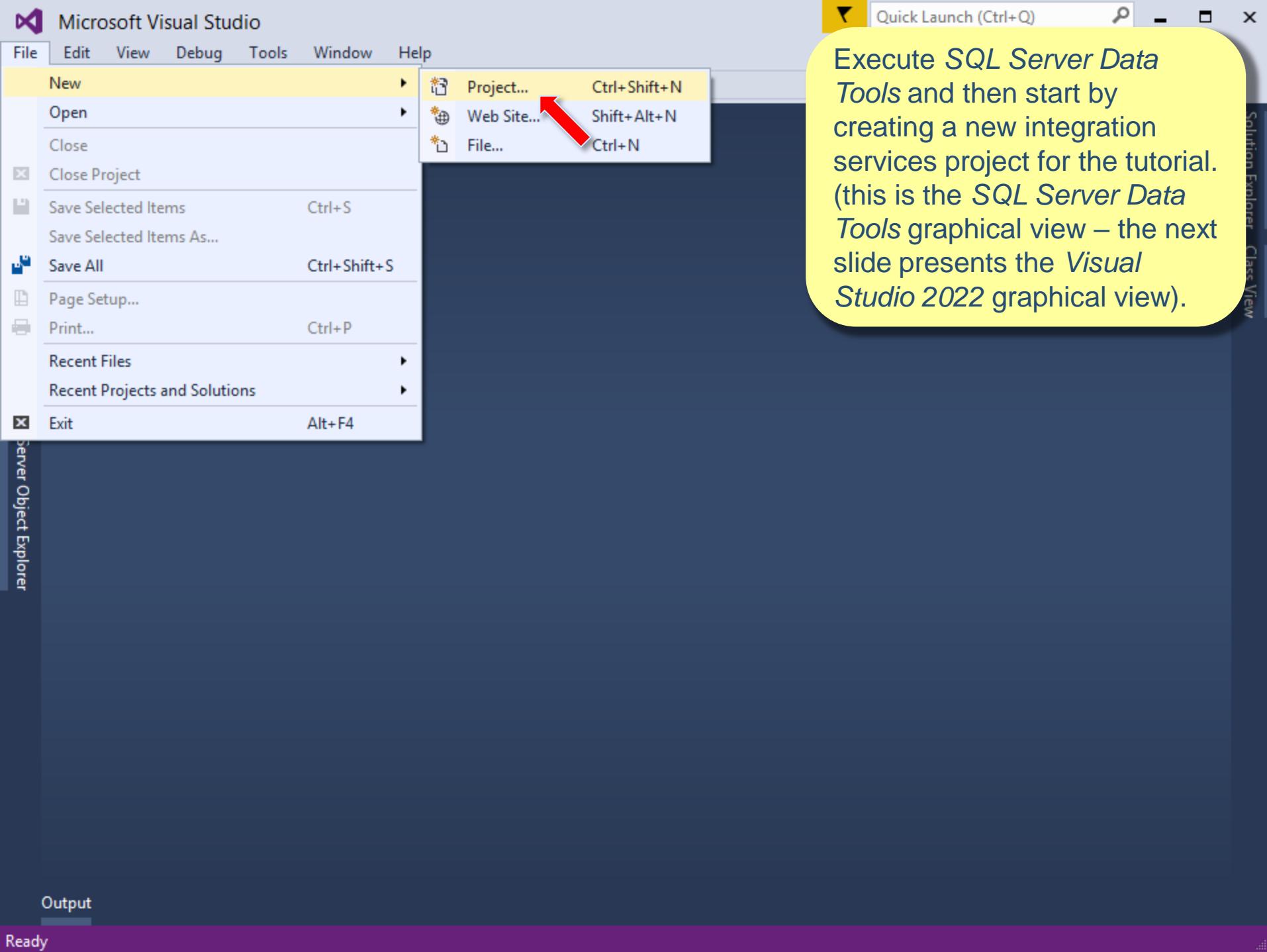




Output

Ready





Output

Ready

SQL Server Import and Export Tutorial - Microsoft Visual Studio

File Edit View Project Build Debug Format SSIS Tools Window Help

Server Explorer Toolbox SSIS Toolbox SQL Server Object Explorer

Quick Launch (Ctrl+Q)

Create a new project

Recent project templates

Integration Services Project

Analysis Services Multidimensional and Data Mining Project

Blank Solution

Search for templates (Alt+S)

All languages All platforms All project types

from an existing multidimensional and data mining database on an Analysis Services server.

Integration Services Project (Azure-Enabled)

This project may be used for building high performance data integration and workflow solutions that can also be run/debugged on SSIS Platform-as-a-Service (PaaS) in Azure Data Factory.

Integration Services Project

This project may be used for building high performance data integration and workflow solutions that can be run on SSIS catalog, including extraction, transformation, and loading (ETL) operations for data warehousing.

Integration Services Import Project Wizard

A wizard that assists you in creating a new Integration Services (SSIS) project that is based on an existing one. Import from a project deployment file (.ispac extension) or from an Integration Services catalog on an instance of SQL Server.

Analysis Services Tabular Project

An Analysis Services project for creating tabular models.

Import from Server (Tabular)

Creates a tabular project by extracting the metadata from an existing tabular database on an Analysis Services server.

Right-click here to add a new connection manager to the SSIS package.

Next

Execute *Visual Studio* and then start by creating a new *Integration Services Project* for the tutorial.



# Configure your new project

Integration Services Project

Project name

Deployment Tutorial 

Location

C:\Temp\Tutorial 3\  

Solution name 

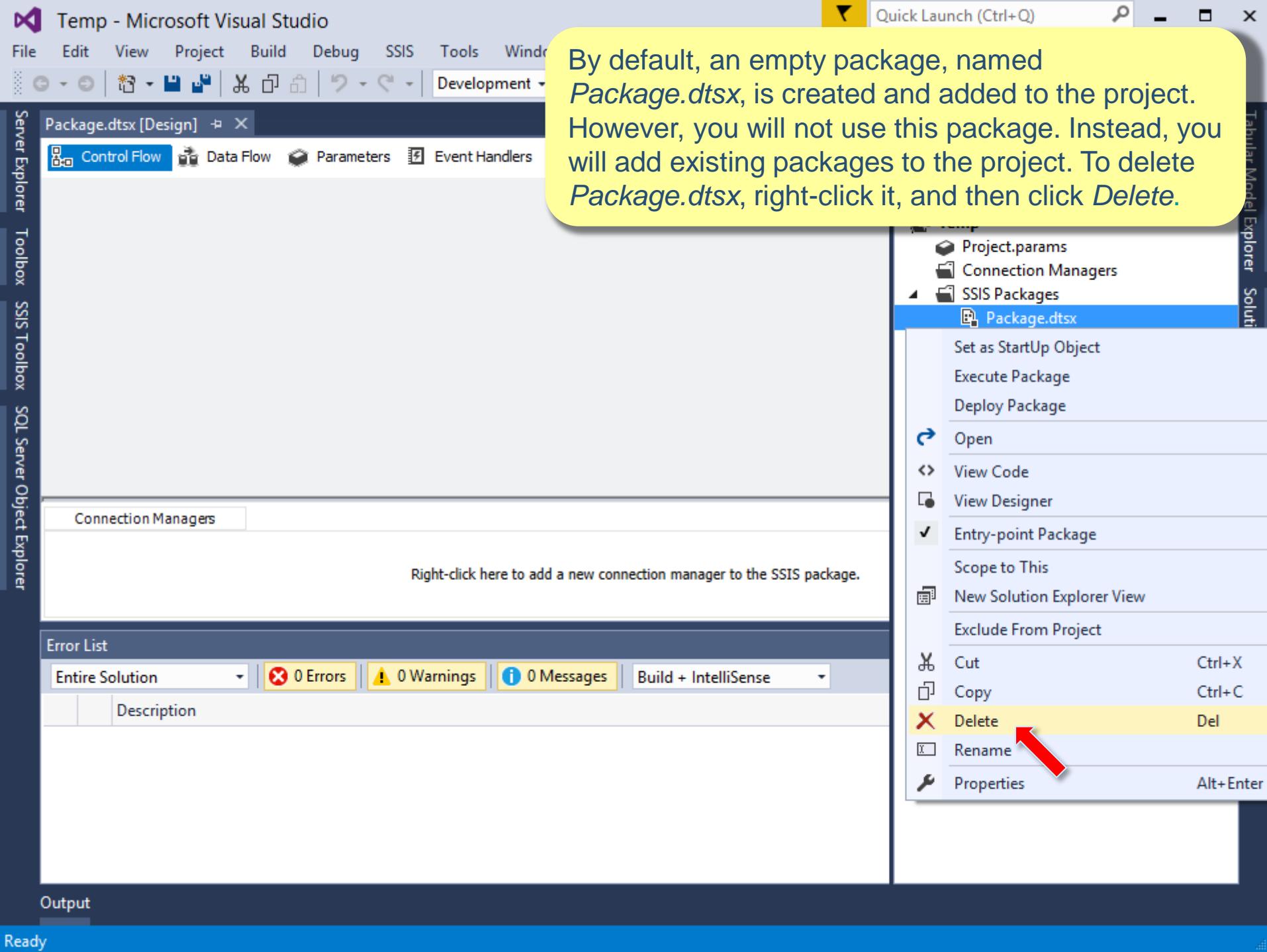
Deployment Tutorial

Place solution and project in the same directory

[Back](#)

[Create](#)

Select *Integration Services* as the template for the project and name it as *Deployment Tutorial*. The location can be anywhere you want.



Deployment Tutorial - Microsoft Visual Studio

File Edit View Project Build Debug SSIS Tools Window Help

Development Start

Package.dtsx [Design] X

Control Flow Data Flow Parameters Event Handlers Package Explorer

Server Explorer Toolbox SSIS Toolbox SQL Server Object Explorer

Solution Explorer

Search Solution Explorer (Ctrl+)

Deployment Tutorial

- Project.params
- Connection Managers
- SSIS Packages
  - Package.dtsx
  - Package Parts
  - Control Flow

Microsoft Visual Studio

'Package.dtsx' will be permanently deleted.

OK Cancel

Connection Managers

Right-click here to add a new connection manager to the SSIS packa

Output

This item does not support previewing

A screenshot of Microsoft Visual Studio showing the SSIS Designer interface for a package named "Package.dtsx". The "Control Flow" tab is selected. A confirmation dialog box is displayed in the center, stating "'Package.dtsx' will be permanently deleted." with an exclamation mark icon. The "OK" button is highlighted with a red arrow pointing to it. The "Cancel" button is also visible. In the background, the Solution Explorer shows the project structure under "Deployment Tutorial", including "Project.params", "Connection Managers", "SSIS Packages" (which contains "Package.dtsx"), "Package Parts", and "Control Flow". The "SSIS Toolbox" is open on the left, and the "Properties" window is partially visible on the right. The status bar at the bottom indicates "This item does not support previewing".

Deployment Tutorial - Microsoft Visual Studio

File Edit View Project Build Debug SSIS Tools Window Help

Development Start

Server Explorer Toolbox SSIS Toolbox SQL Server Object Explorer

Solution Explorer

Search Solution Explorer (Ctrl+)

Deployment Tutorial

- Project.params
- Connection Managers
- SSIS Packages

New SSIS Package

SSIS Import and Export Wizard...

Convert Deployment Model

Upgrade All Packages

Add Existing Package

Paste

Ctrl+V

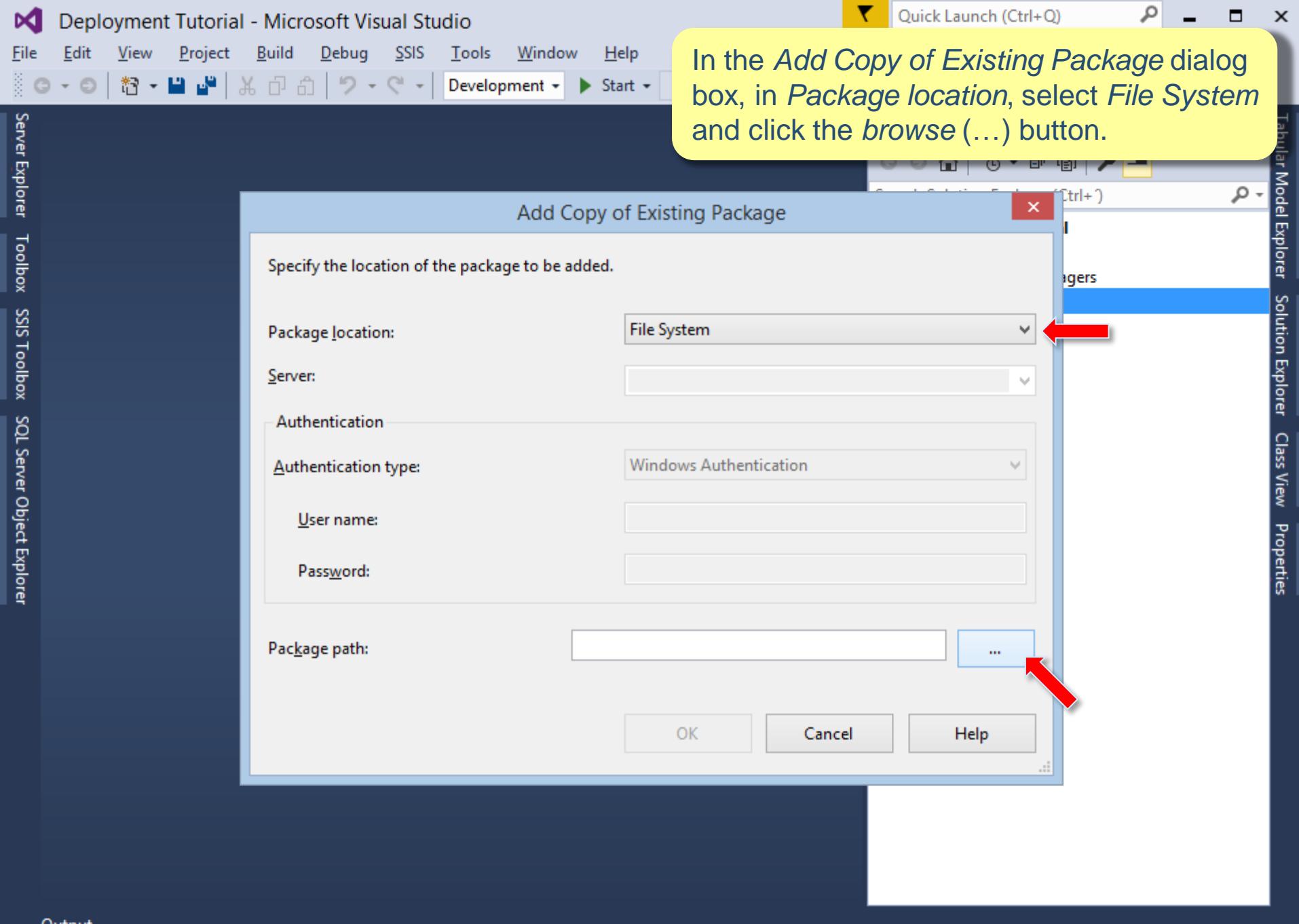
You will add existing packages, ancillary files that support individual packages, and a Readme to the Deployment Tutorial project that you created in the previous task. For example, you will add an XML data file that contains the data for a package and a text file that provides Readme information about all the packages in the project.

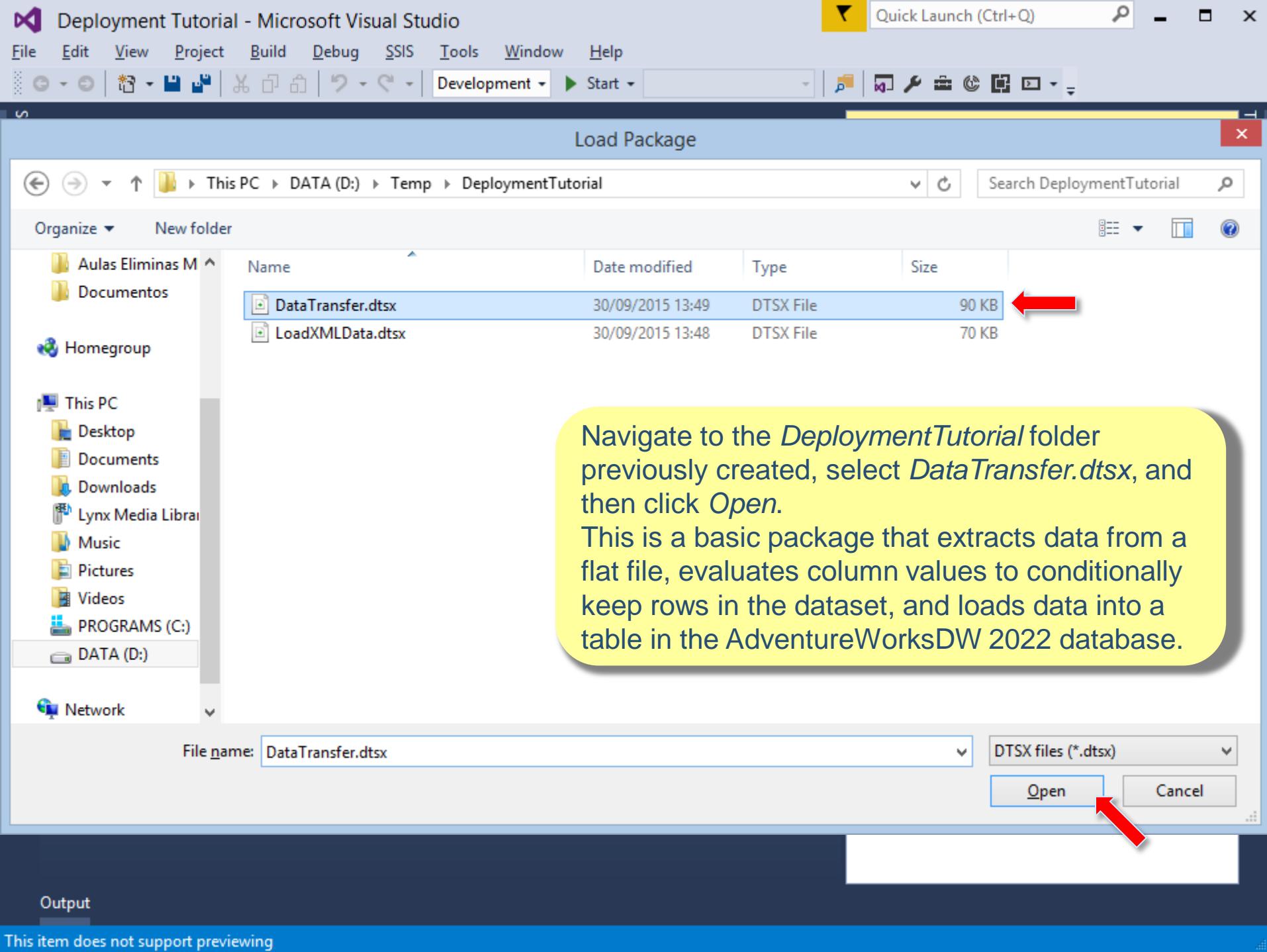
When you deploy packages to a test or production environment, you typically do not include the data files in the deployment, but instead use configurations to update the paths of the data sources to access test or production versions of the data files or databases. For instructional purposes, this tutorial includes data files in the package deployment.

In *Solution Explorer*, right-click *SSIS Packages*, click *Add*, and then click *Existing Package*.

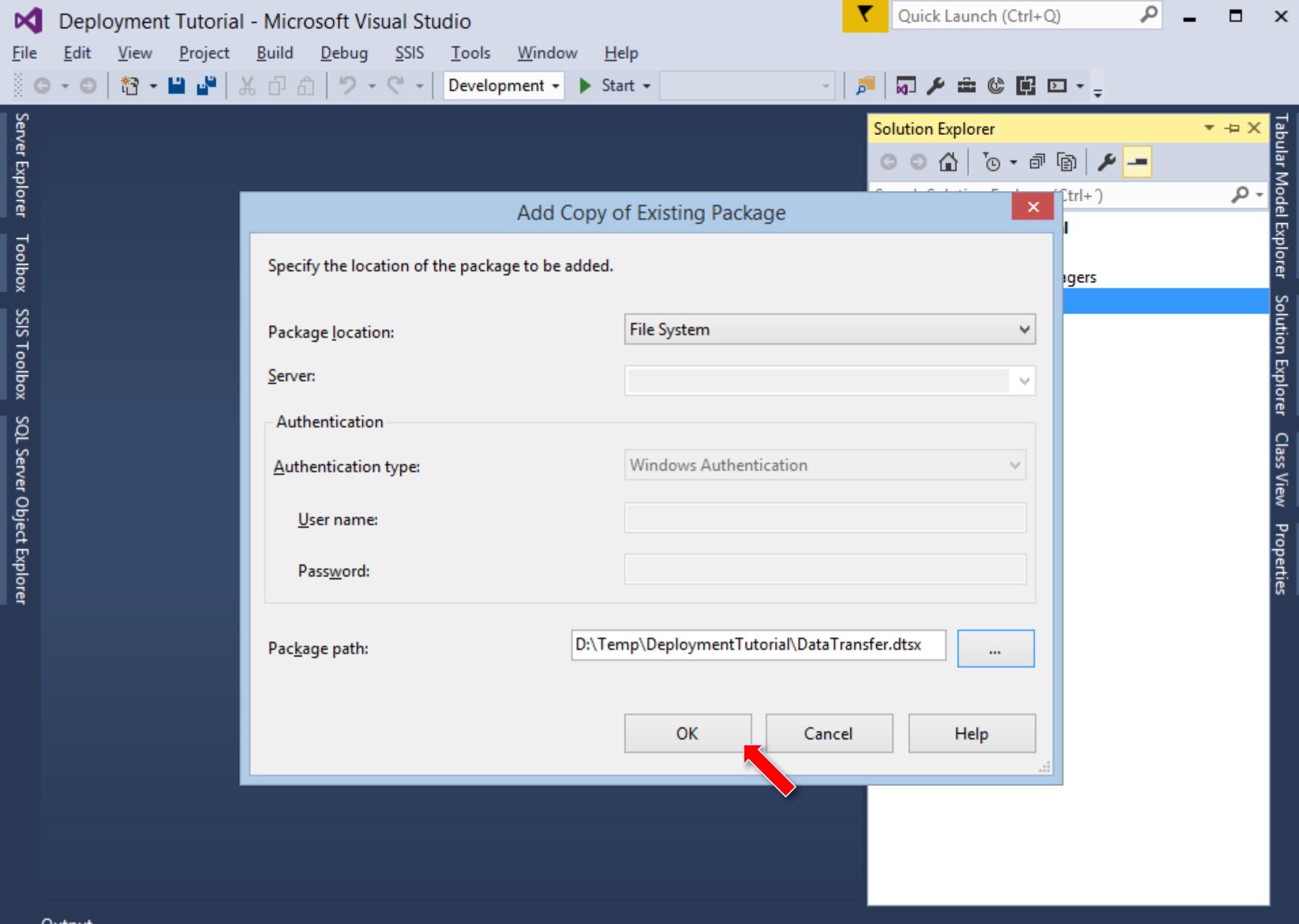
Output

This item does not support previewing

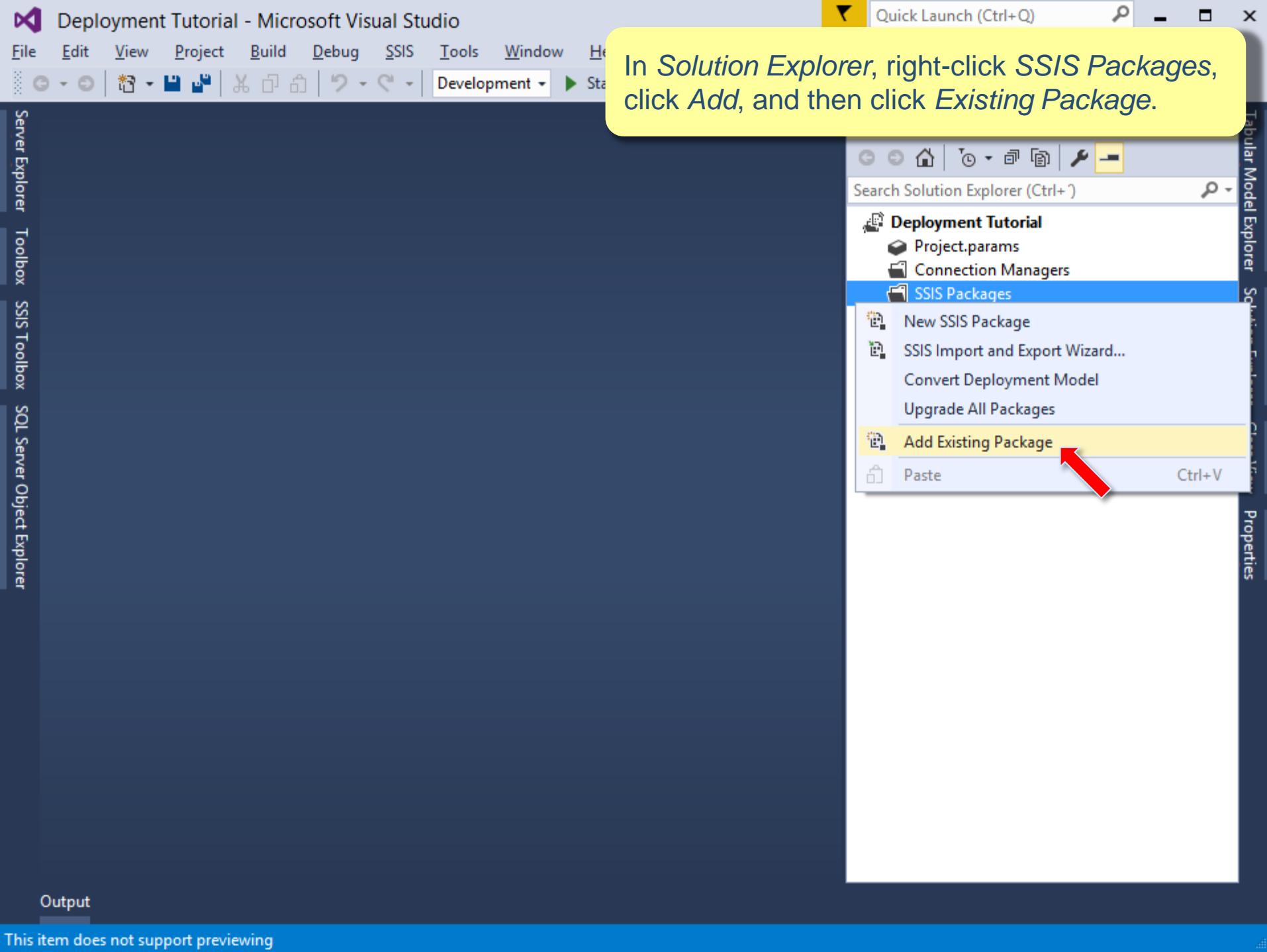


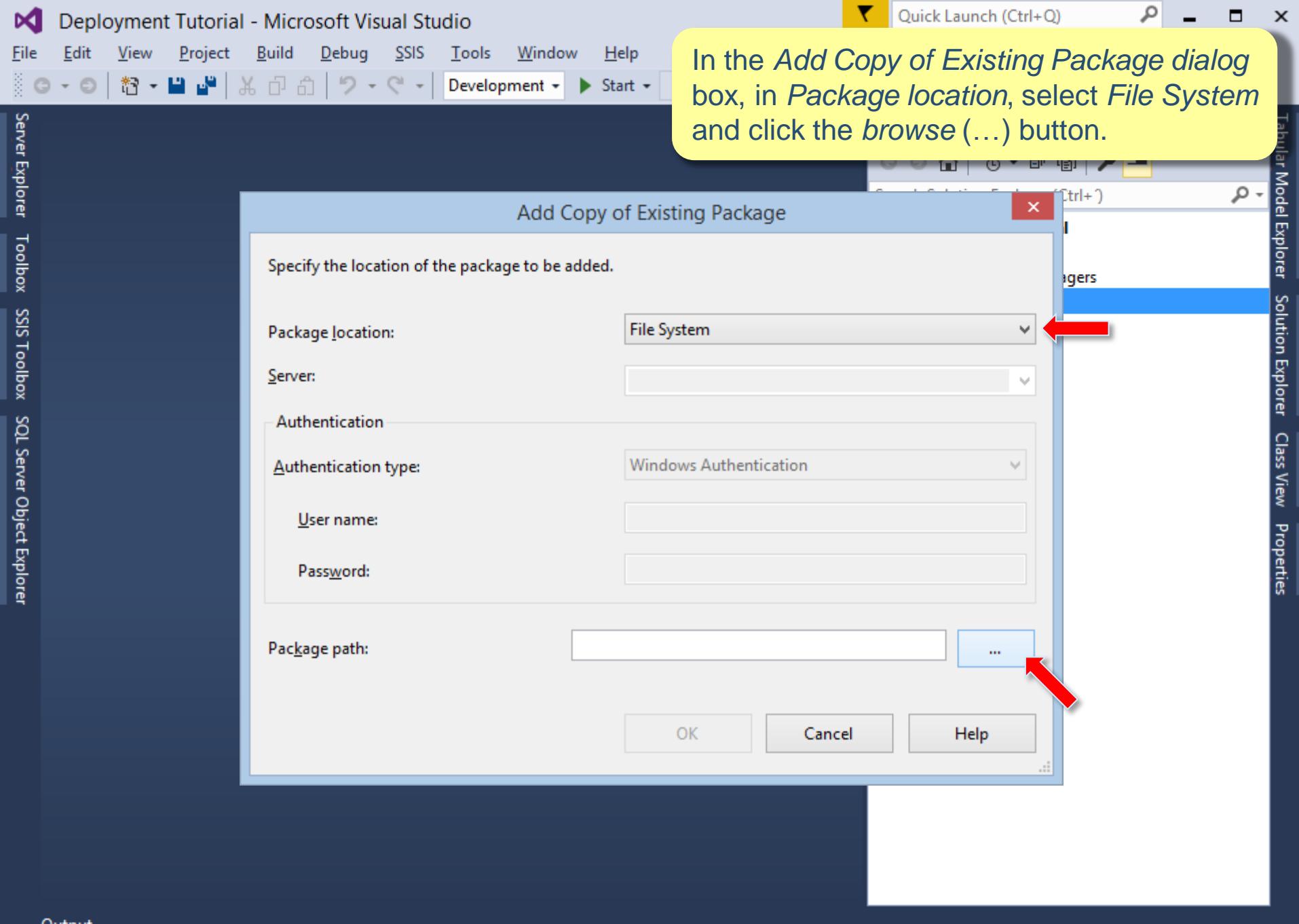


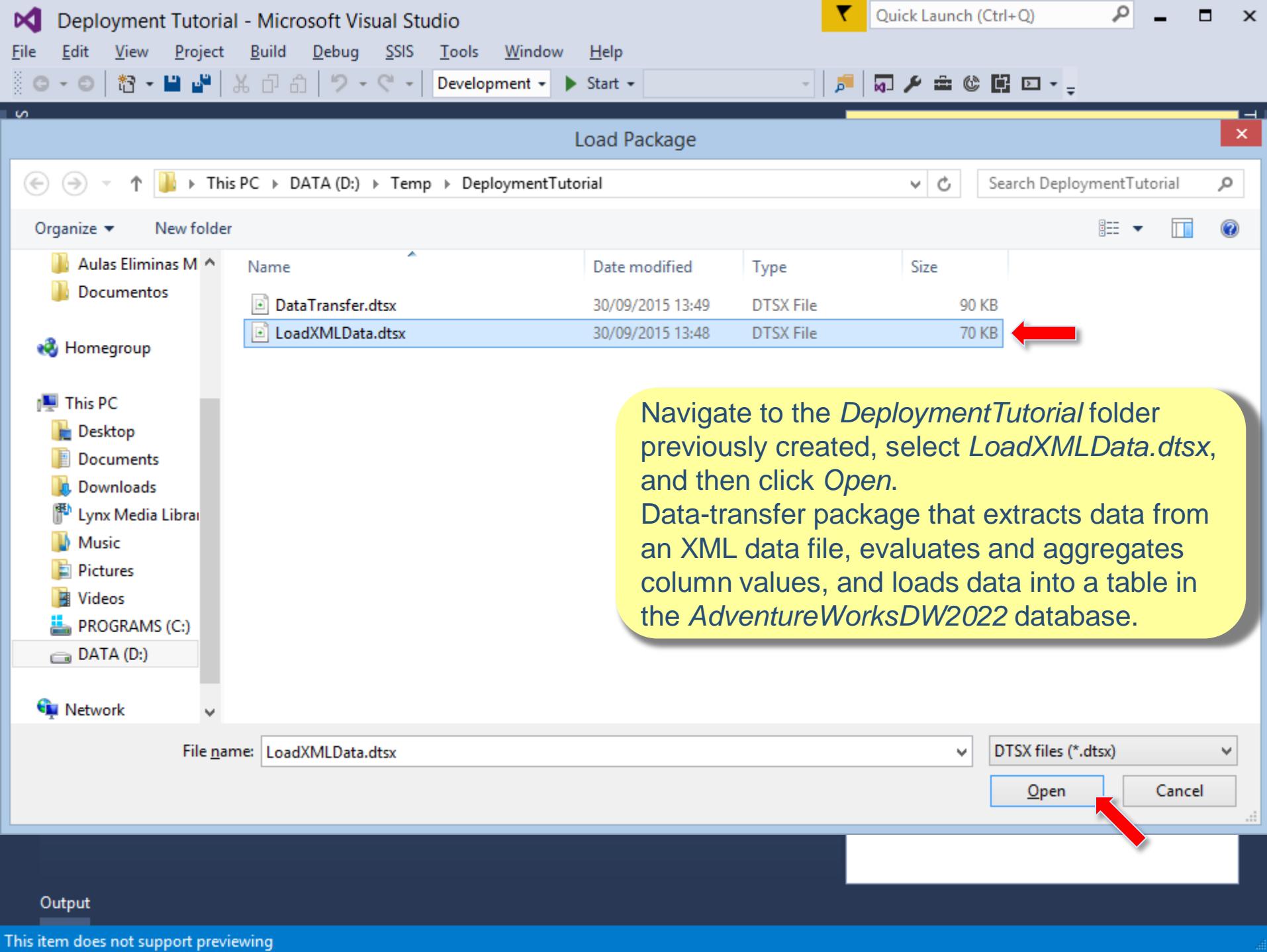
Output

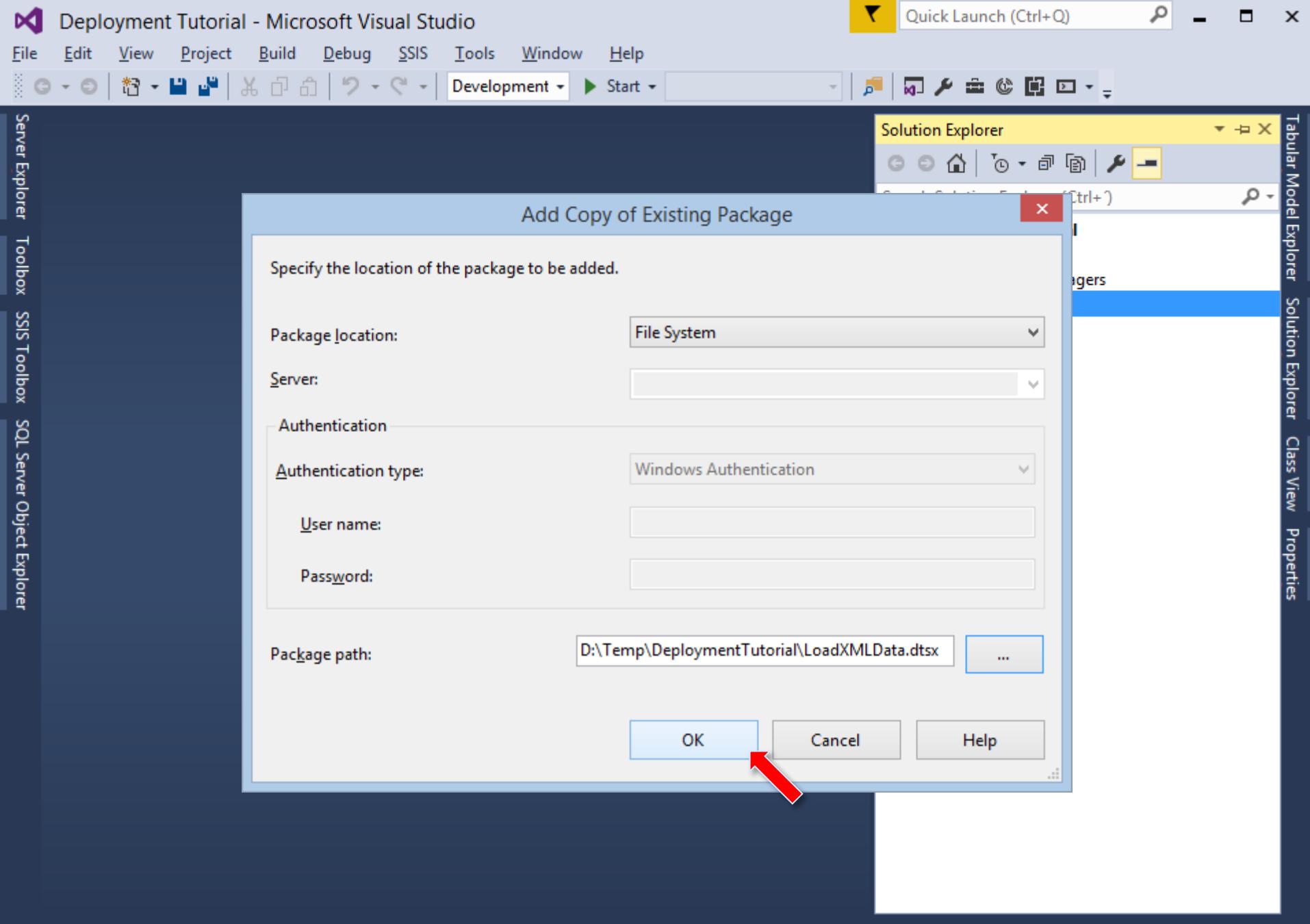


Output

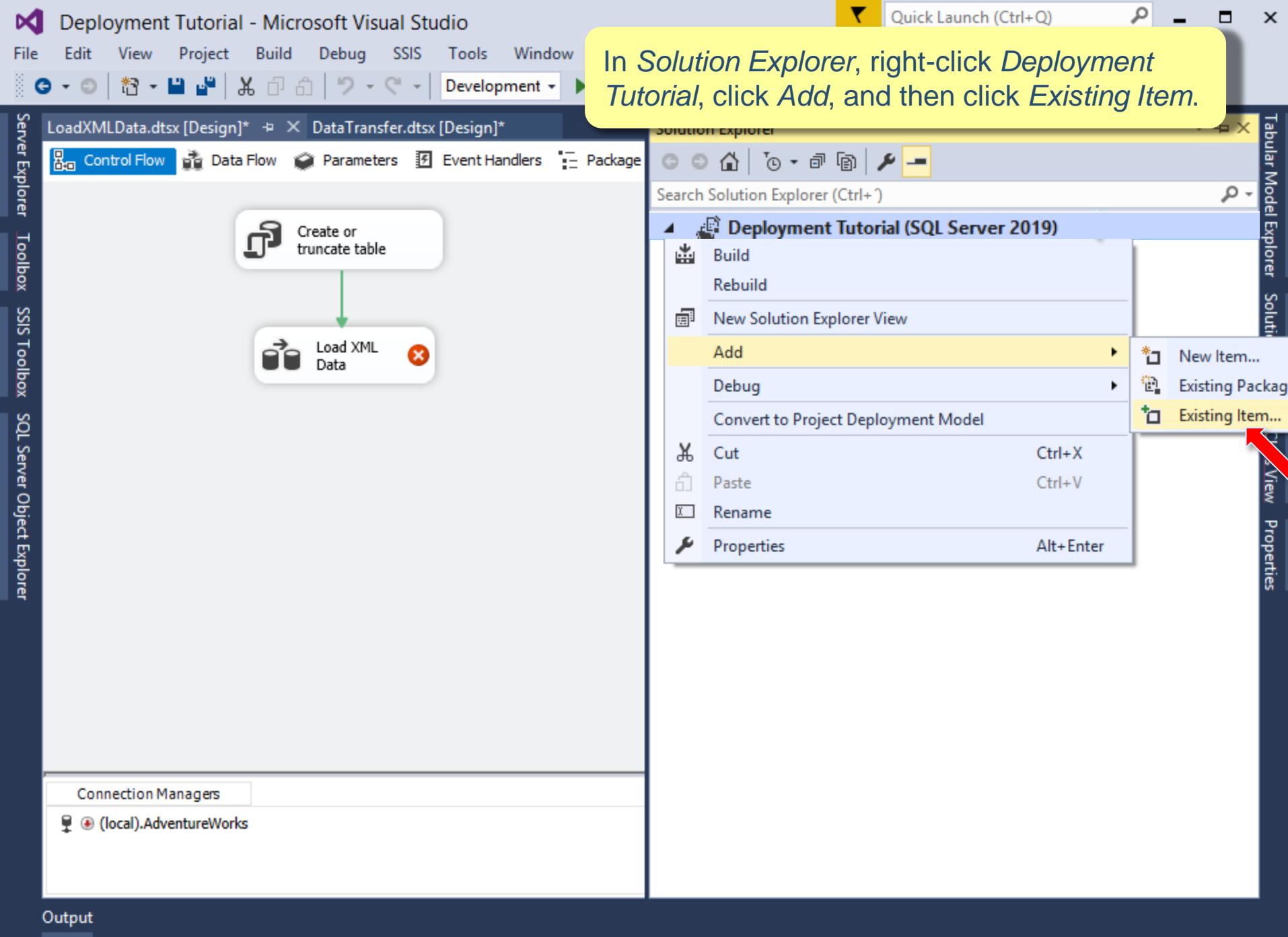




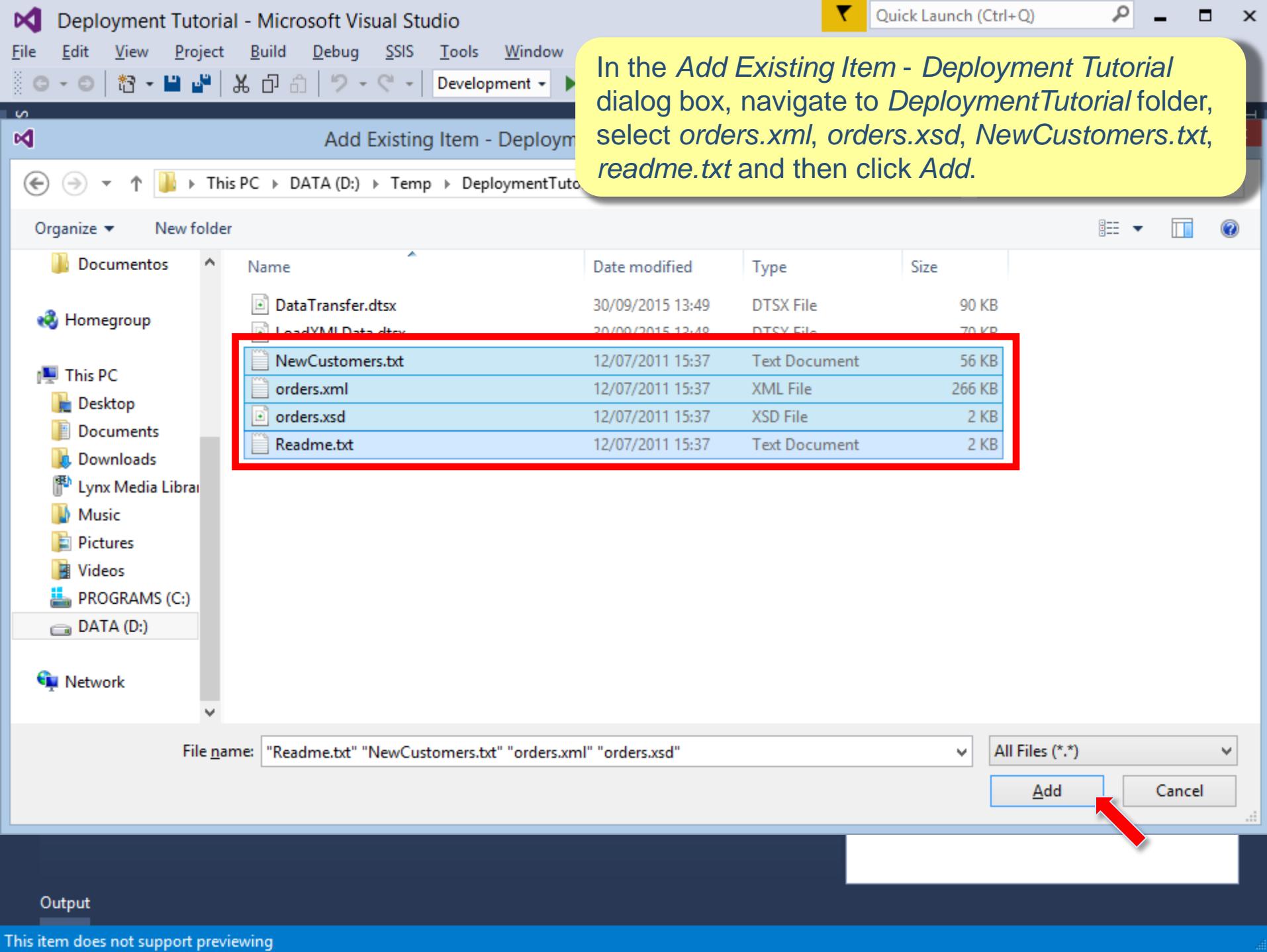


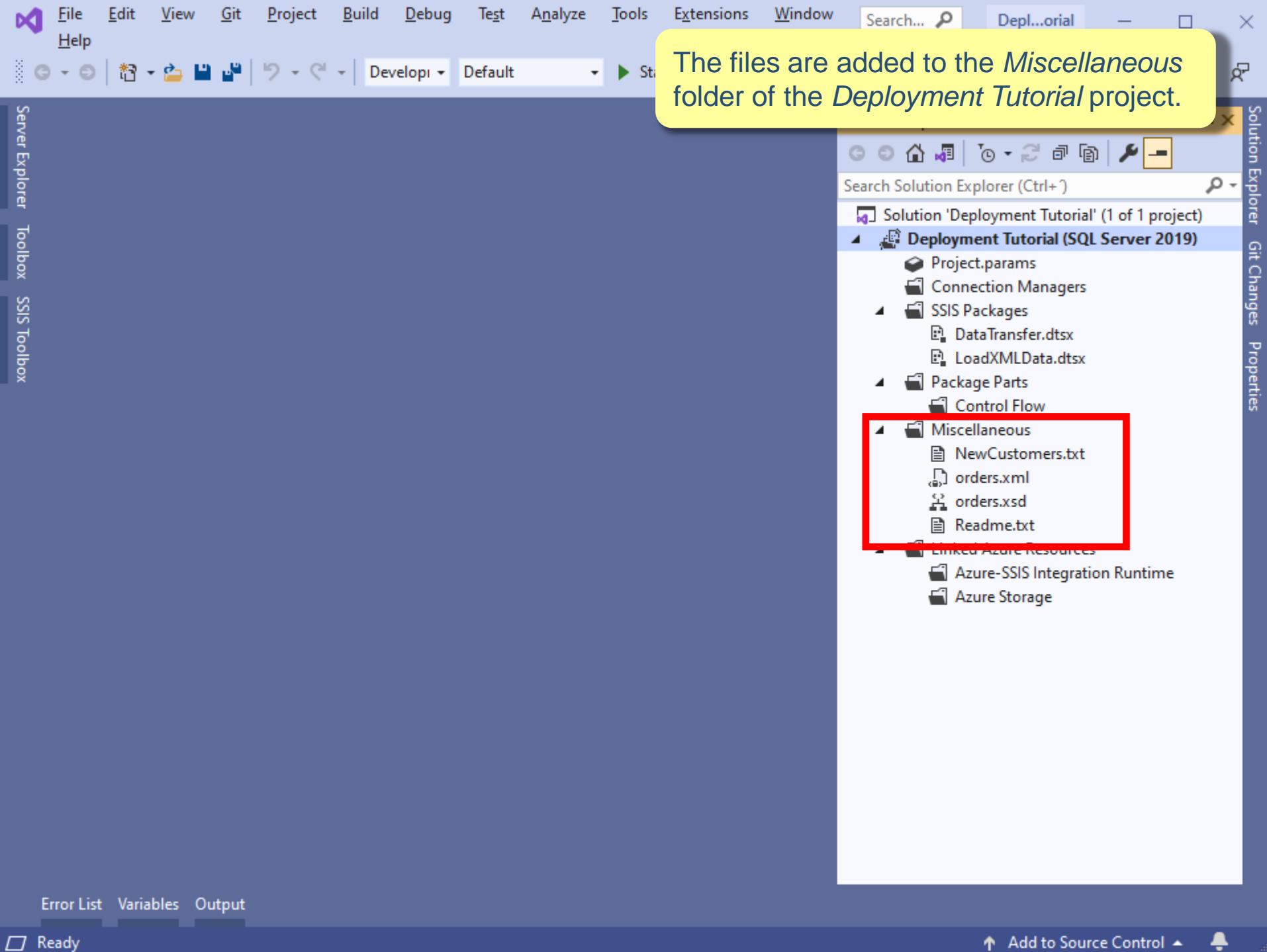


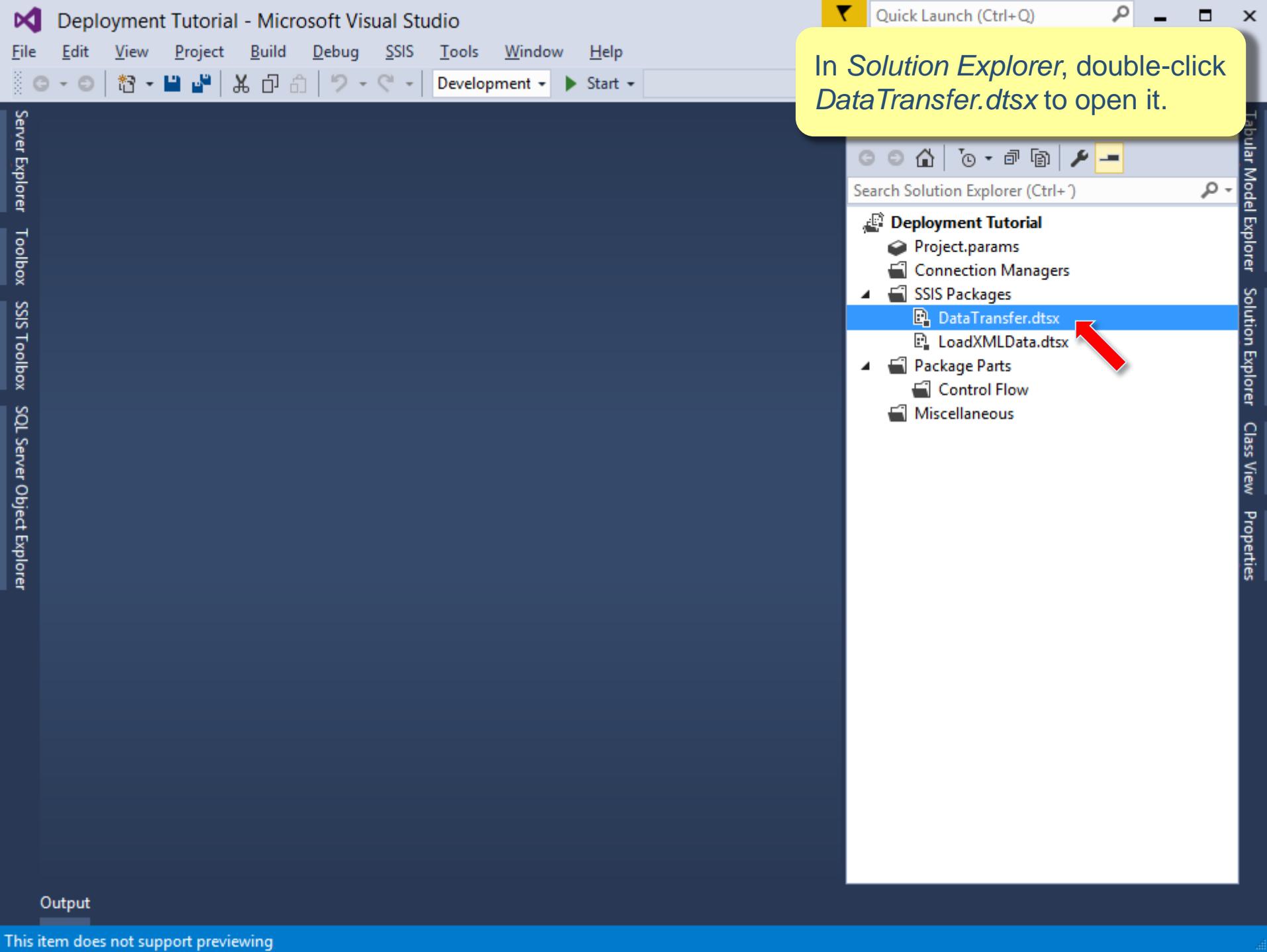
Output

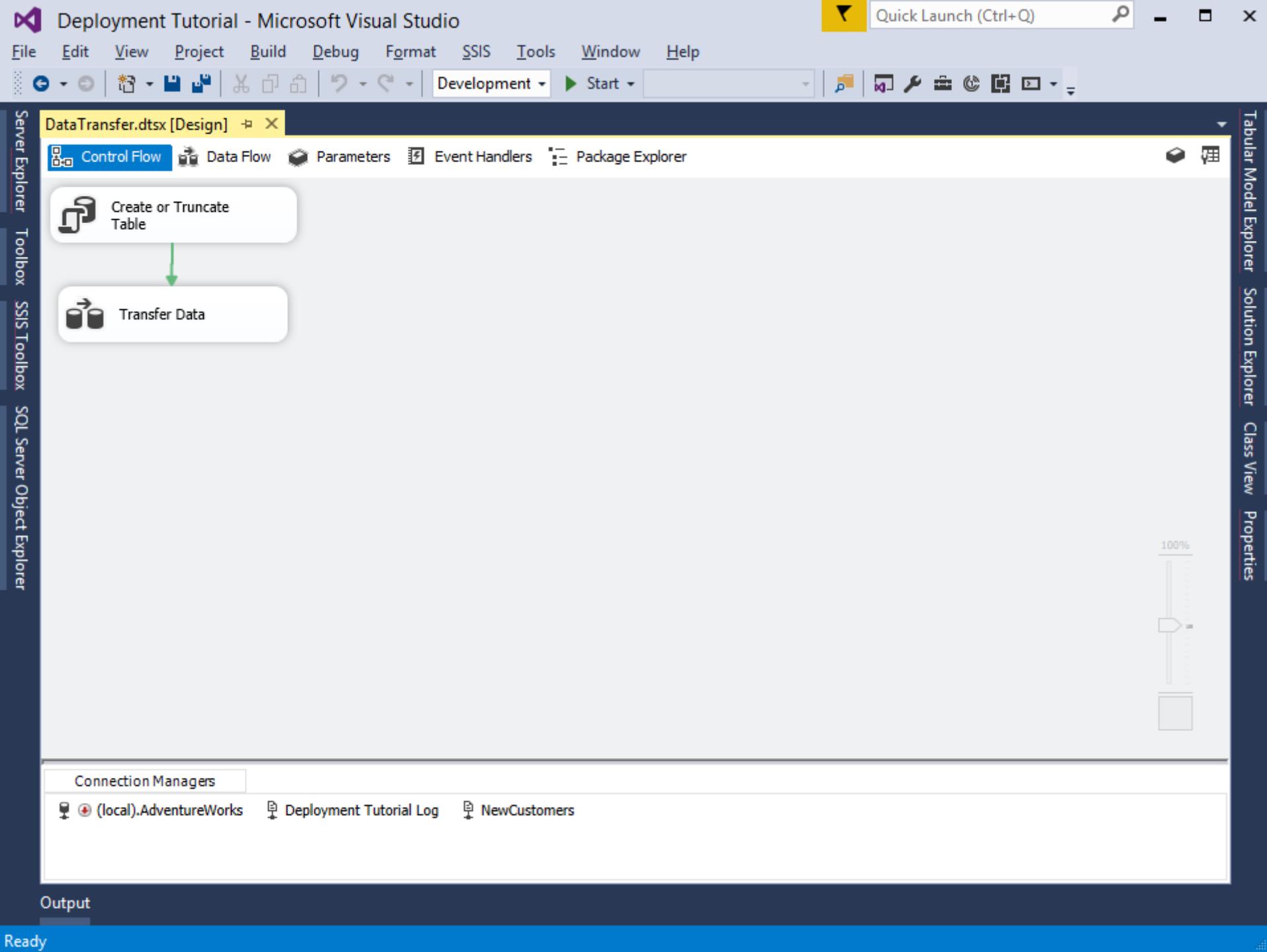


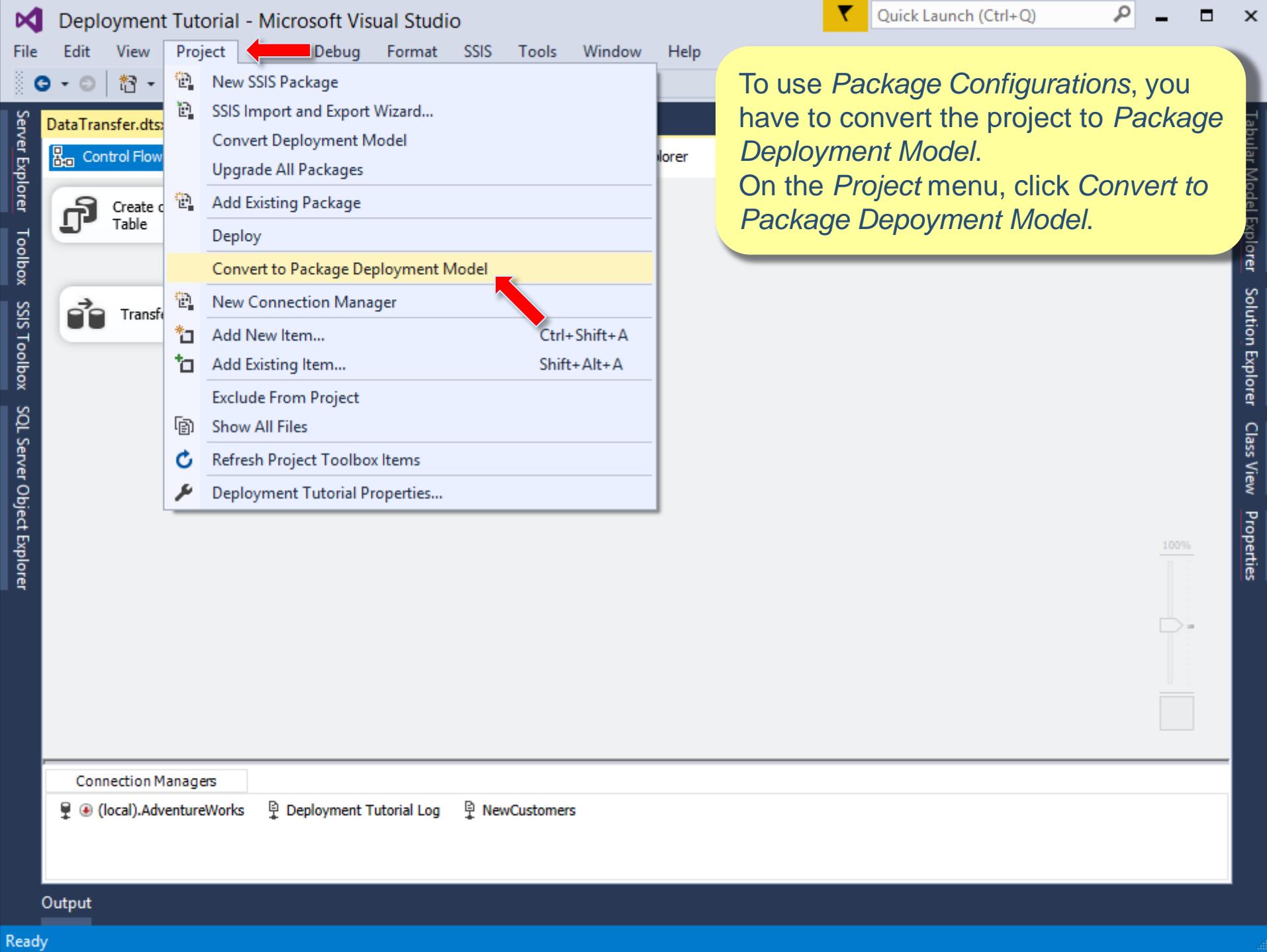
In Solution Explorer, right-click Deployment Tutorial, click Add, and then click Existing Item.

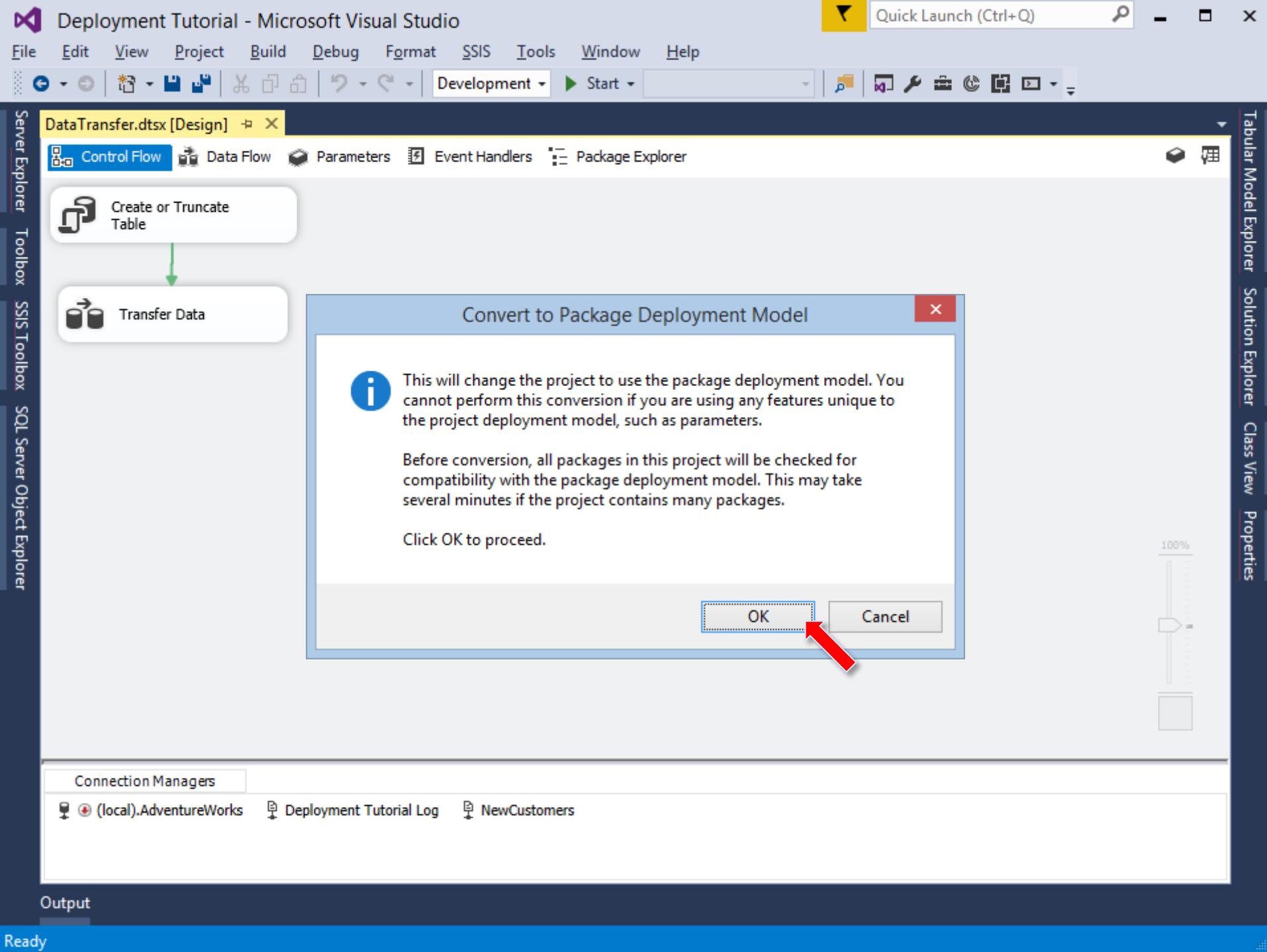


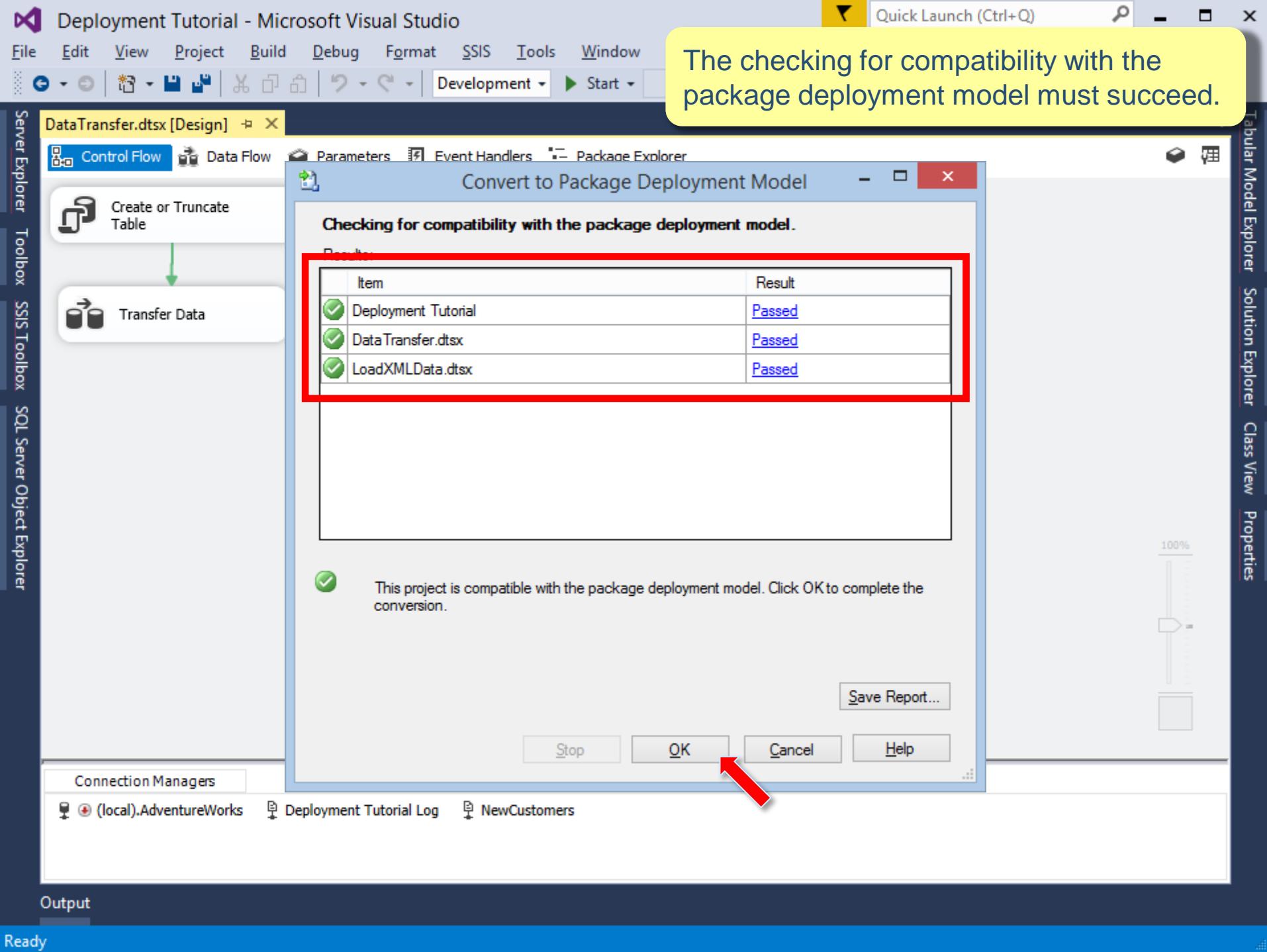


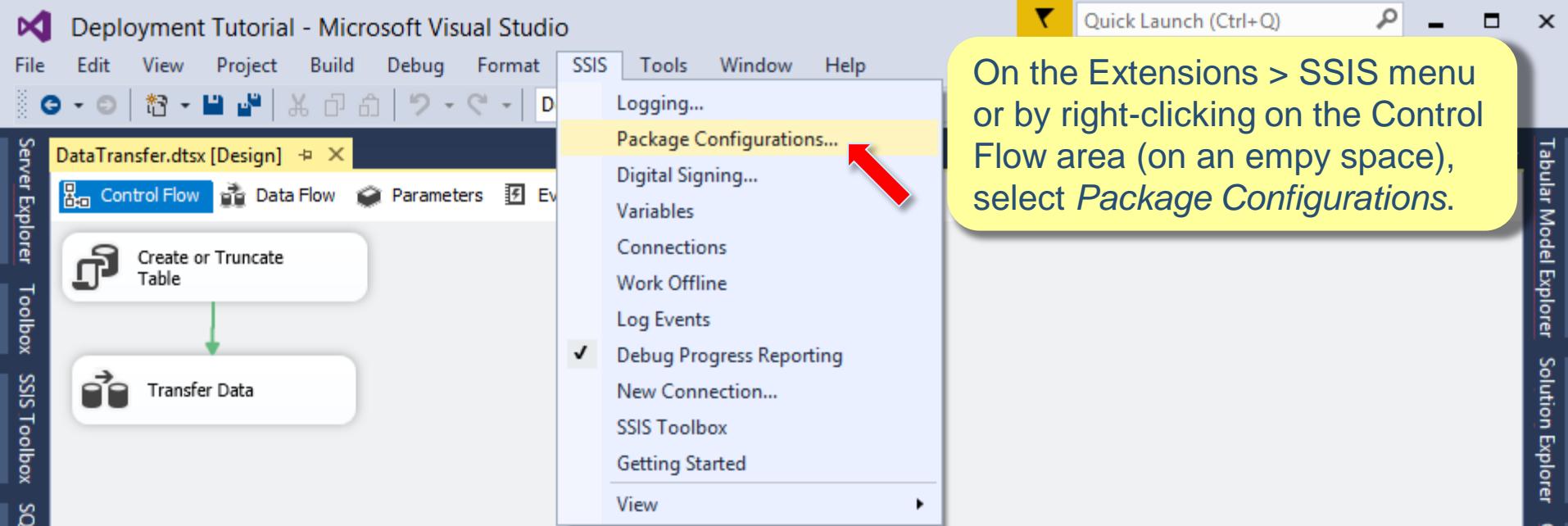






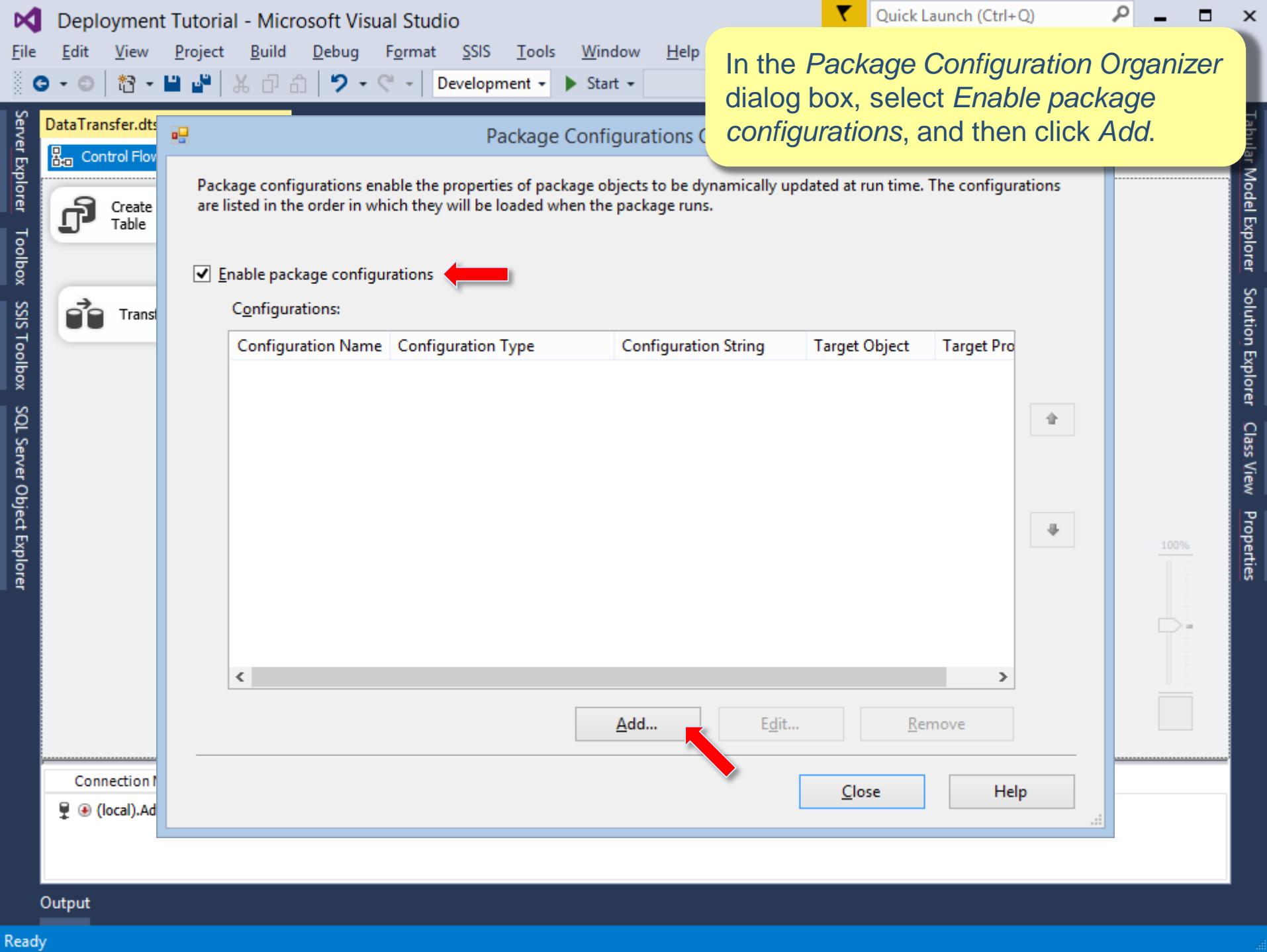


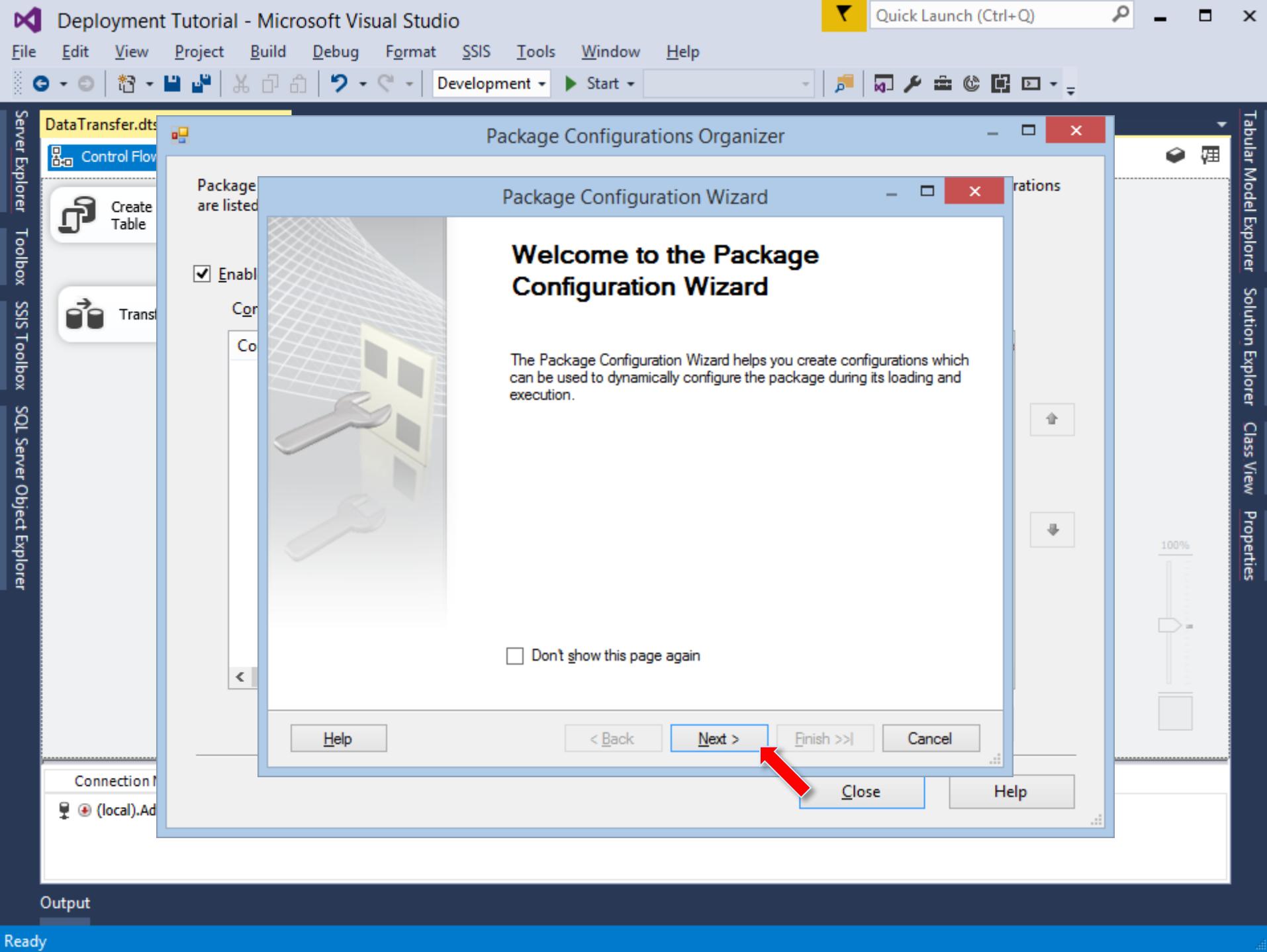


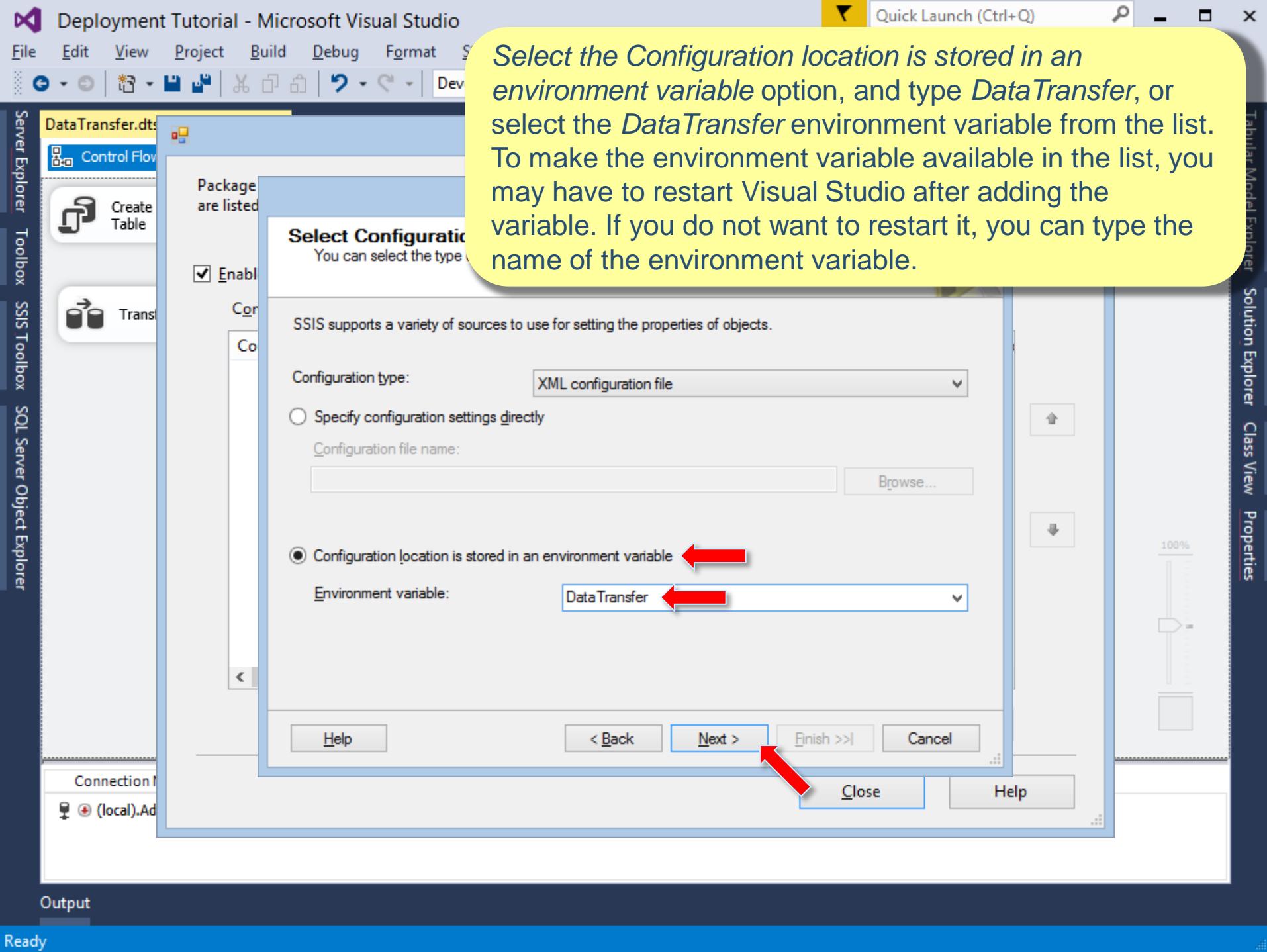


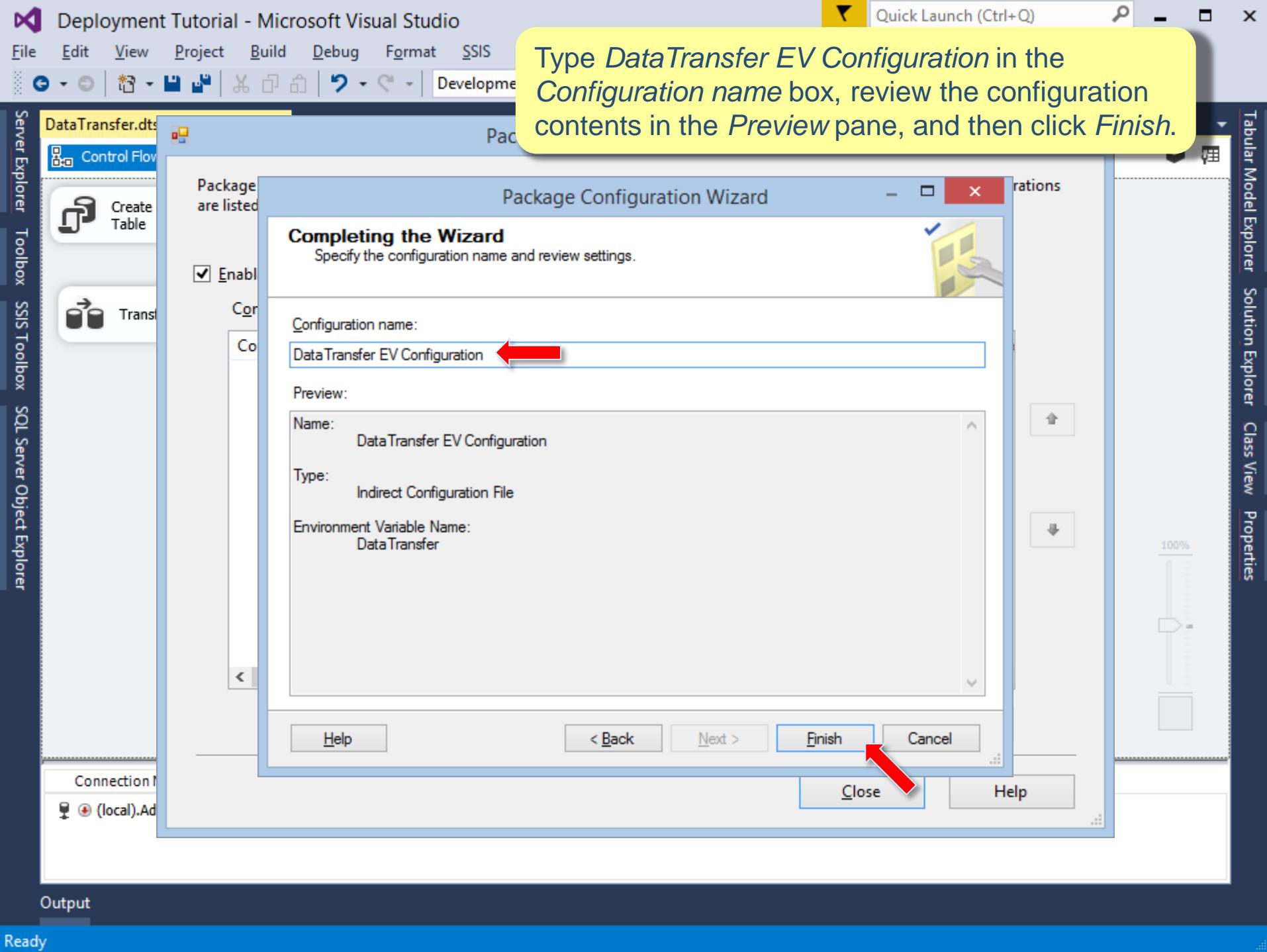
On the Extensions > SSIS menu or by right-clicking on the Control Flow area (on an empty space), select *Package Configurations*.

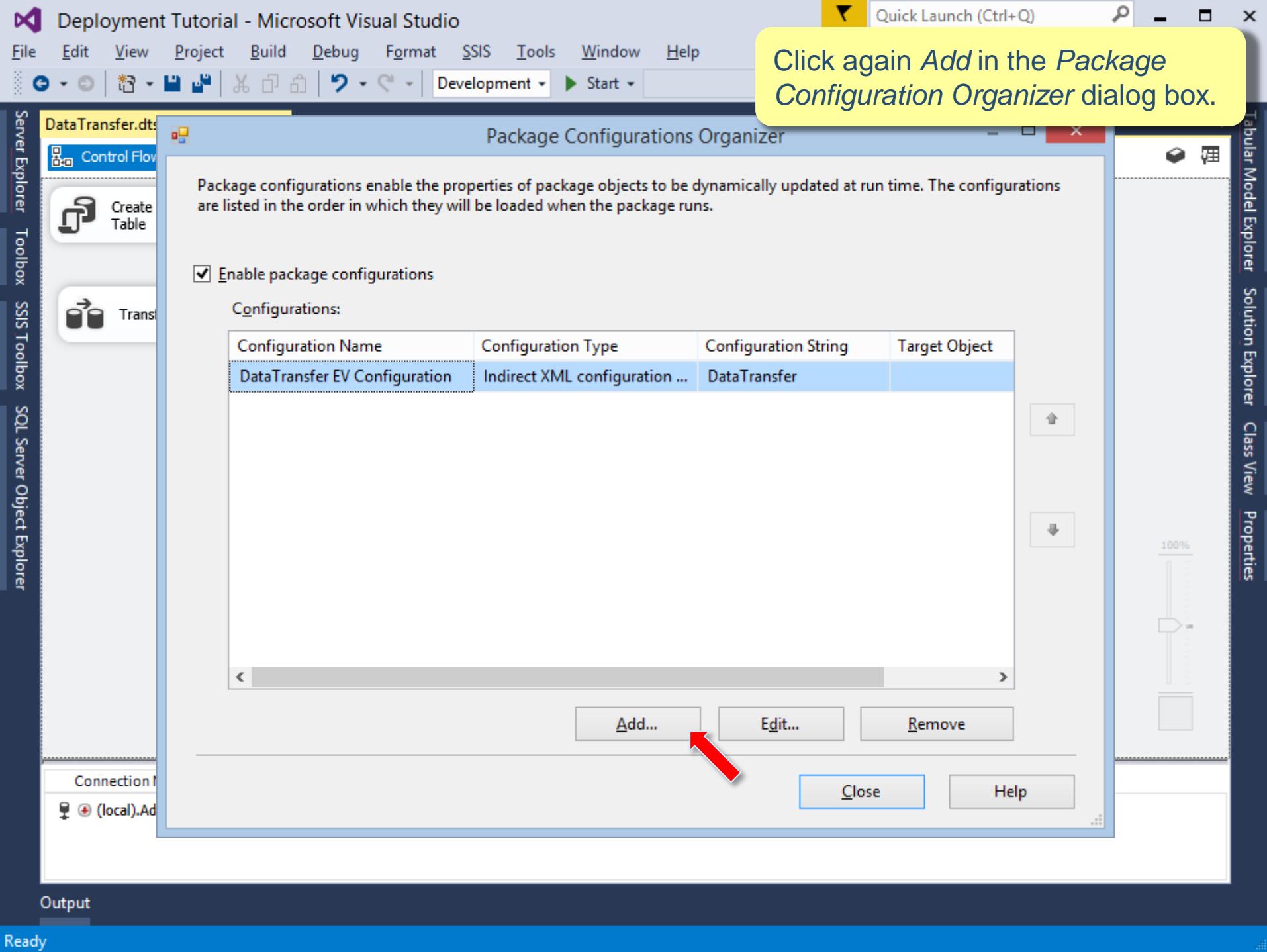
Integration Services provides a variety of configuration types. You can store configurations in environment variables, registry entries, user-defined variables, SQL Server tables, and XML files. To provide additional flexibility, Integration Services supports the use of indirect configurations. This means that you use an environment variable to specify the location of the configuration, which in turn specifies the actual values. The packages in the *Deployment Tutorial* project use a combination of XML configuration files and indirect configurations. An XML configuration file can include configurations for multiple properties, and when appropriate, can be referenced by multiple packages. In this tutorial, you will use a separate configuration file for each package.

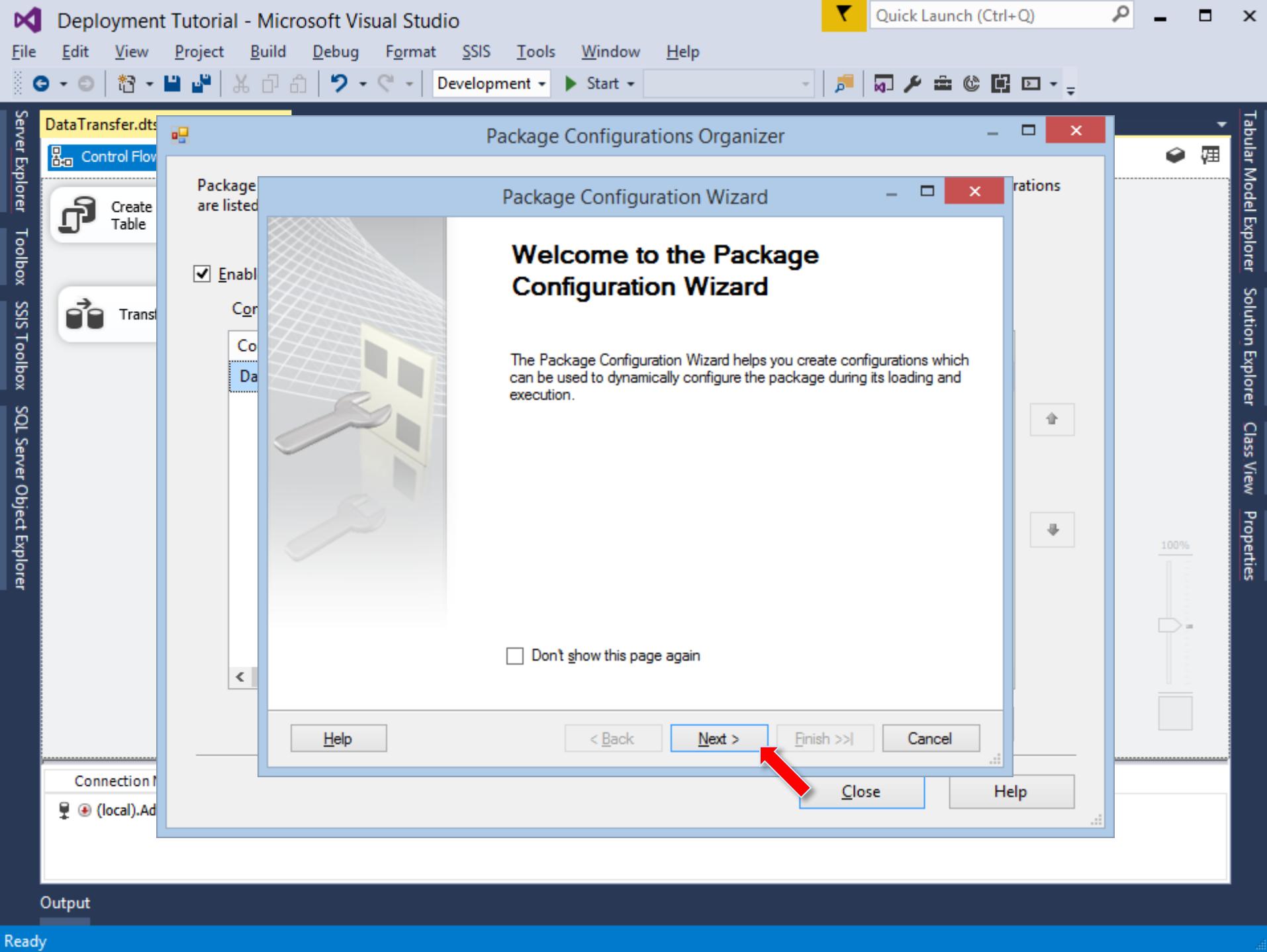


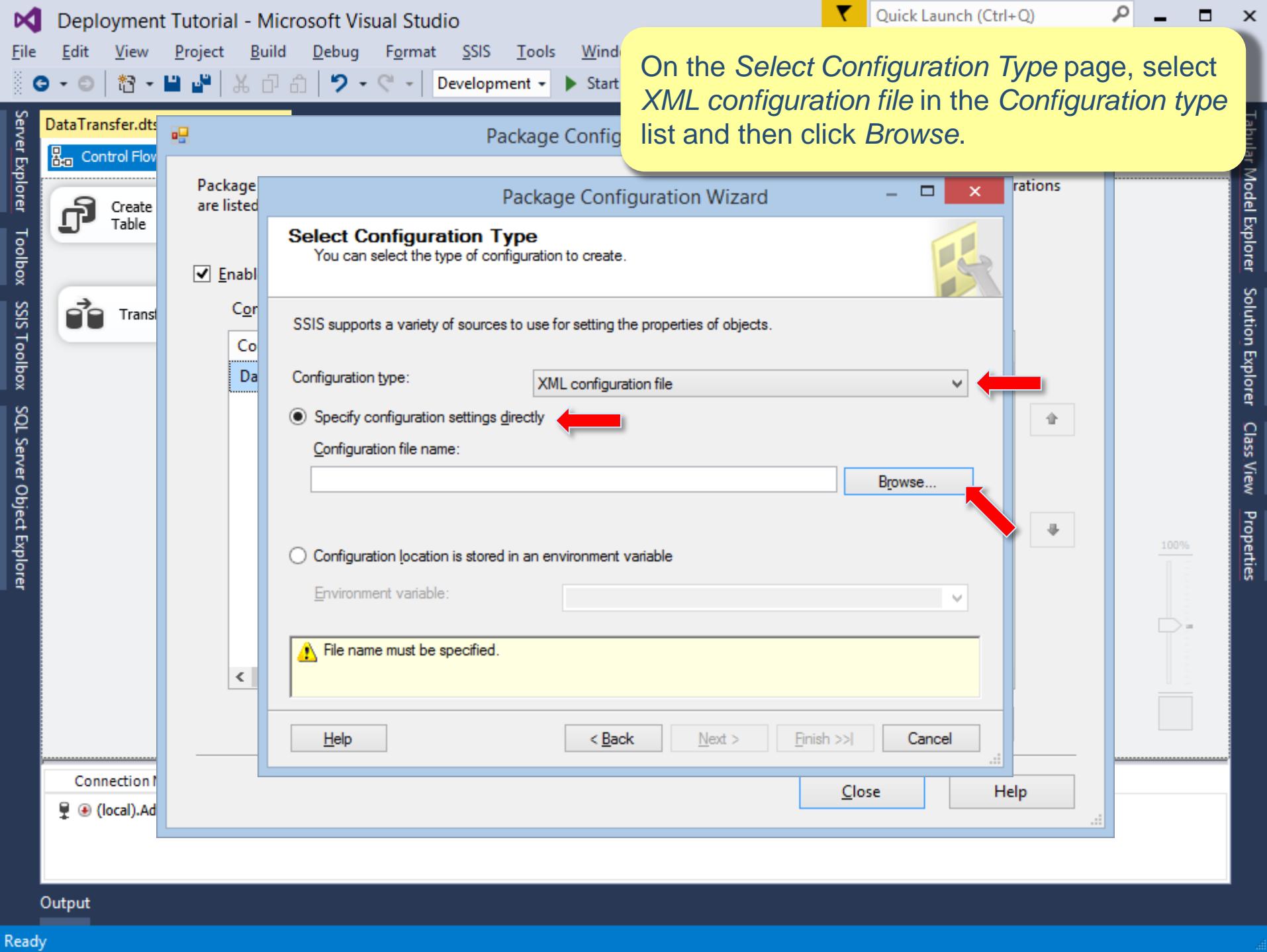


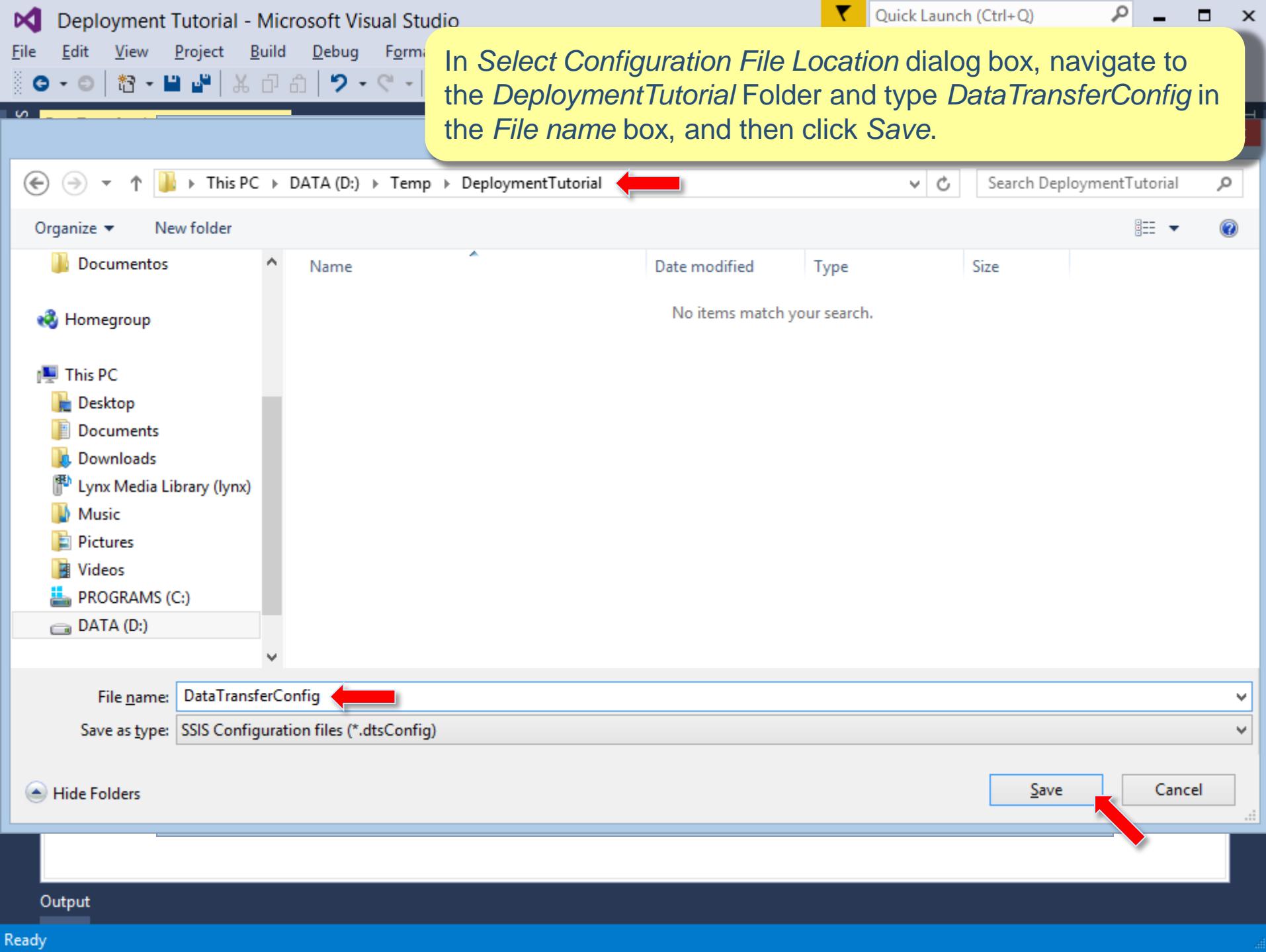


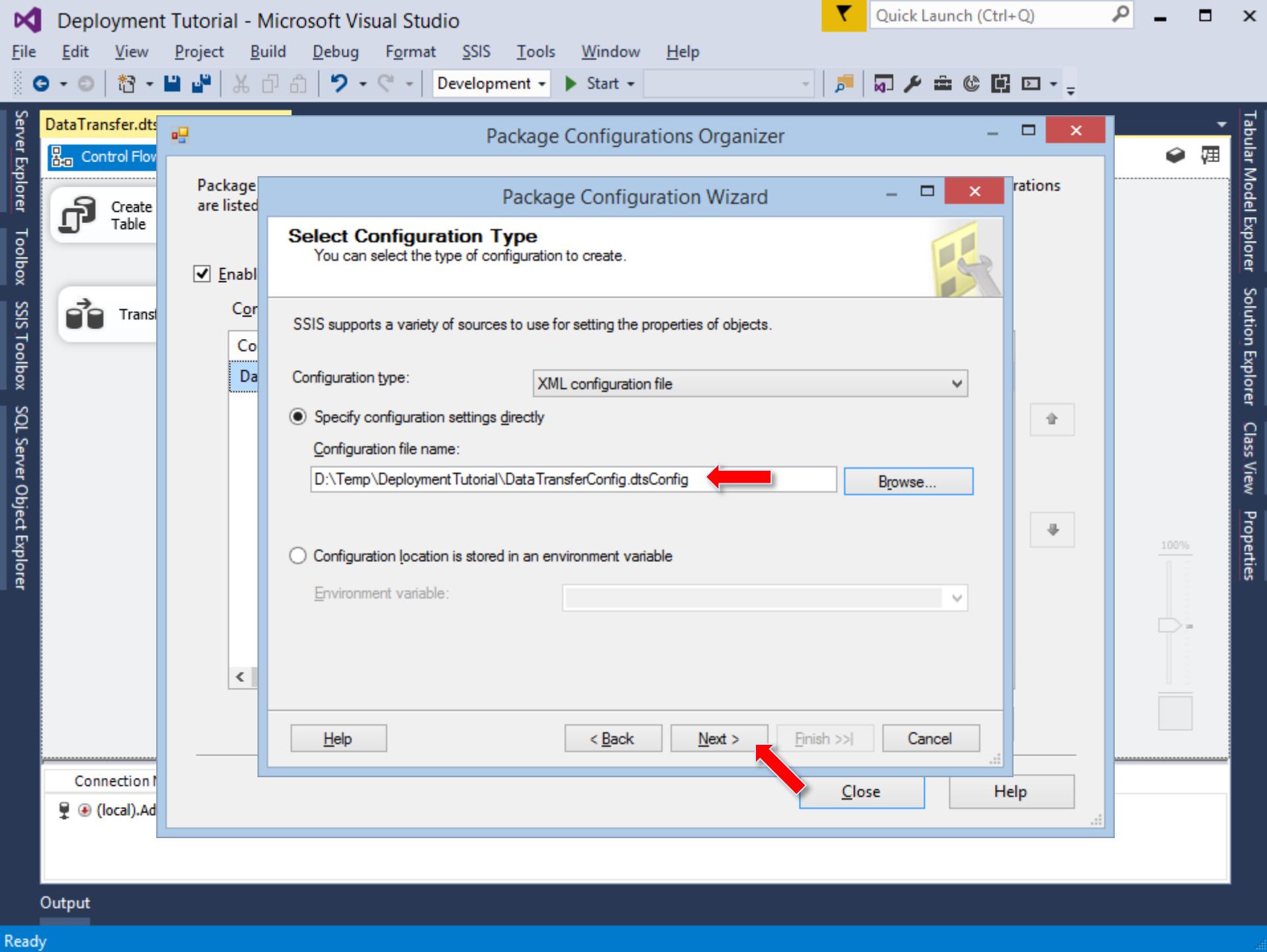


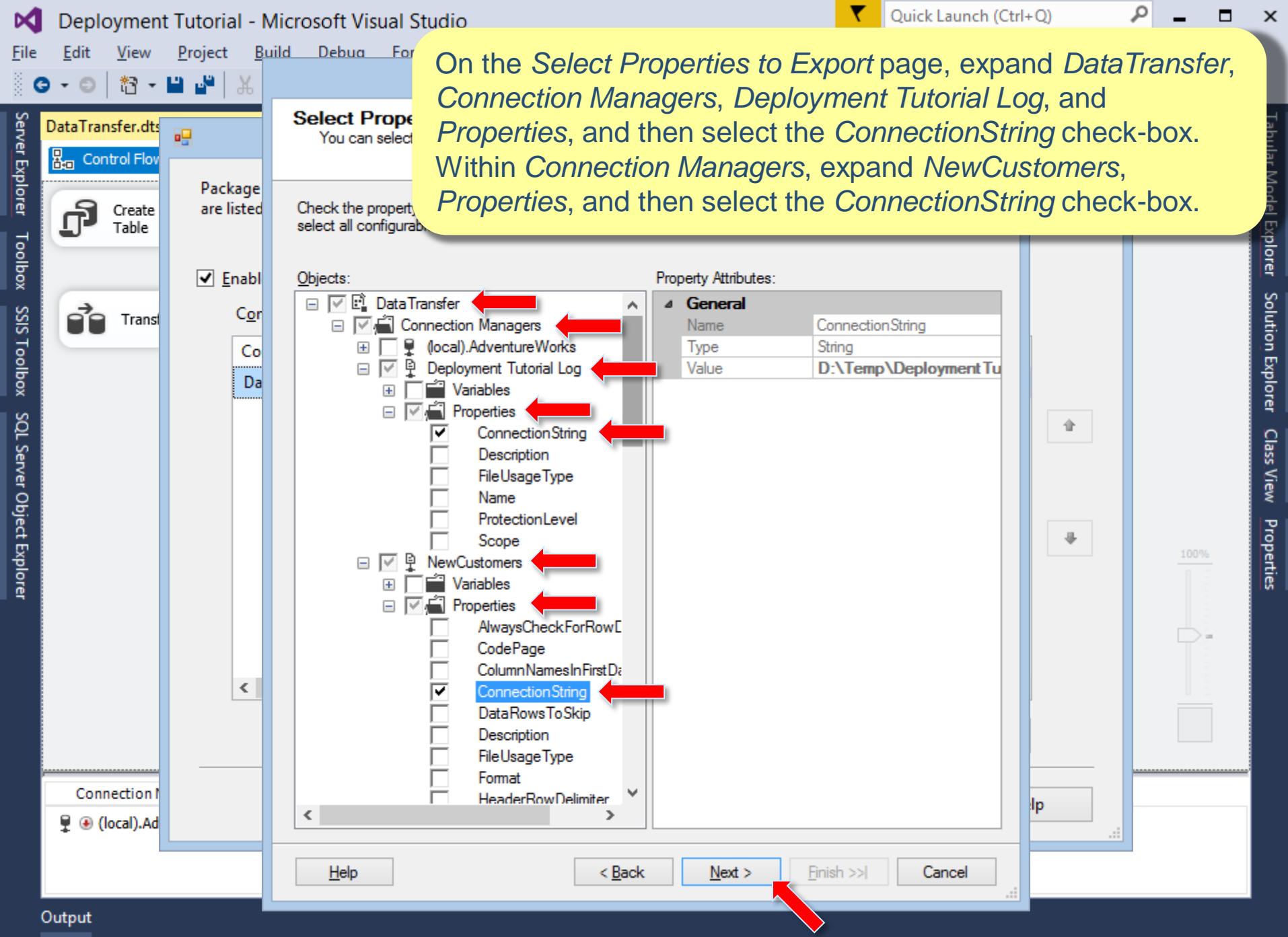












On the *Select Properties to Export* page, expand *DataTransfer*, *Connection Managers*, *Deployment Tutorial Log*, and *Properties*, and then select the *ConnectionString* check-box. Within *Connection Managers*, expand *NewCustomers*, *Properties*, and then select the *ConnectionString* check-box.

Property Attributes:

General

Name	ConnectionString
Type	String
Value	D:\Temp\Deployment Tu

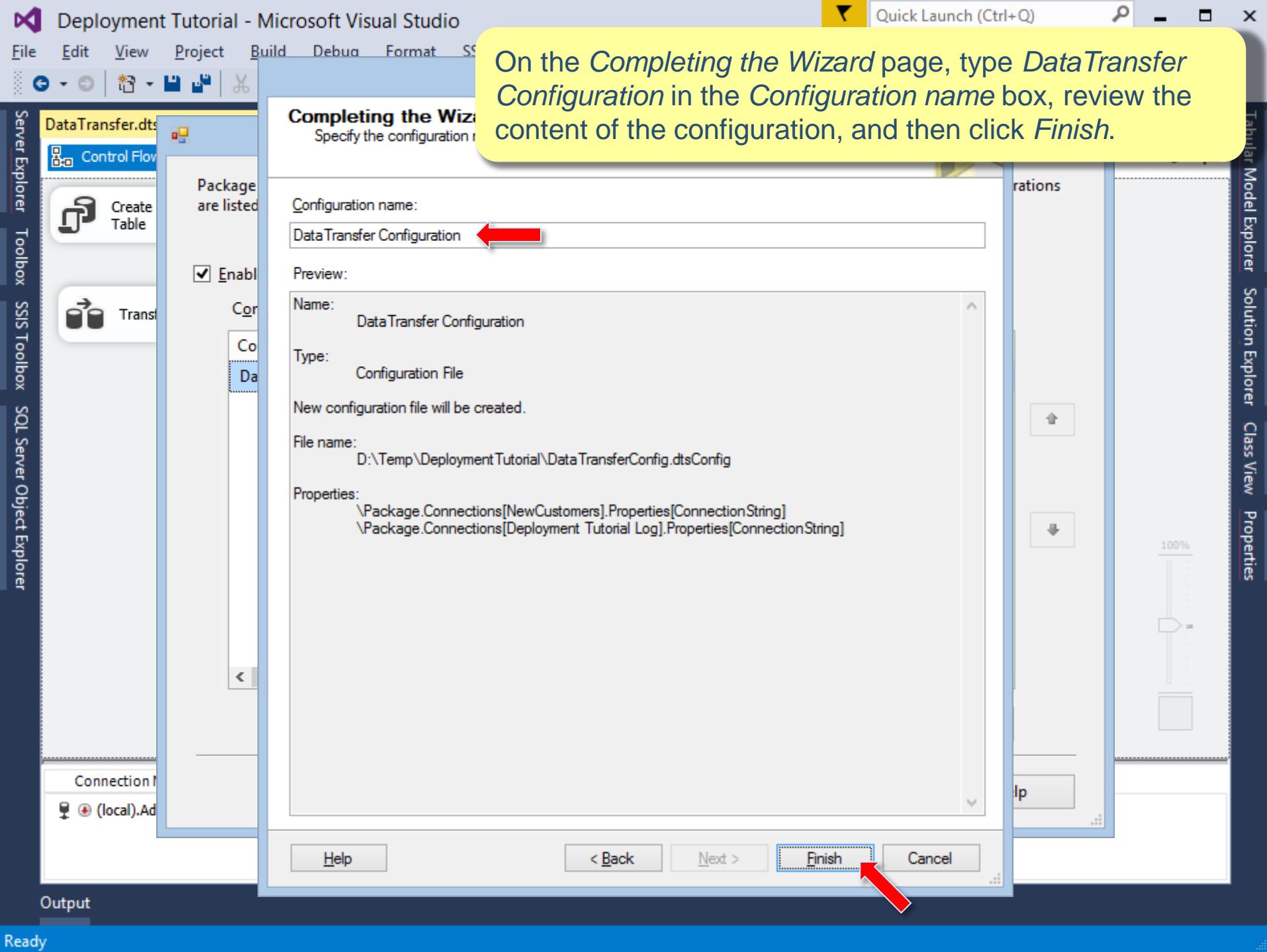
Help

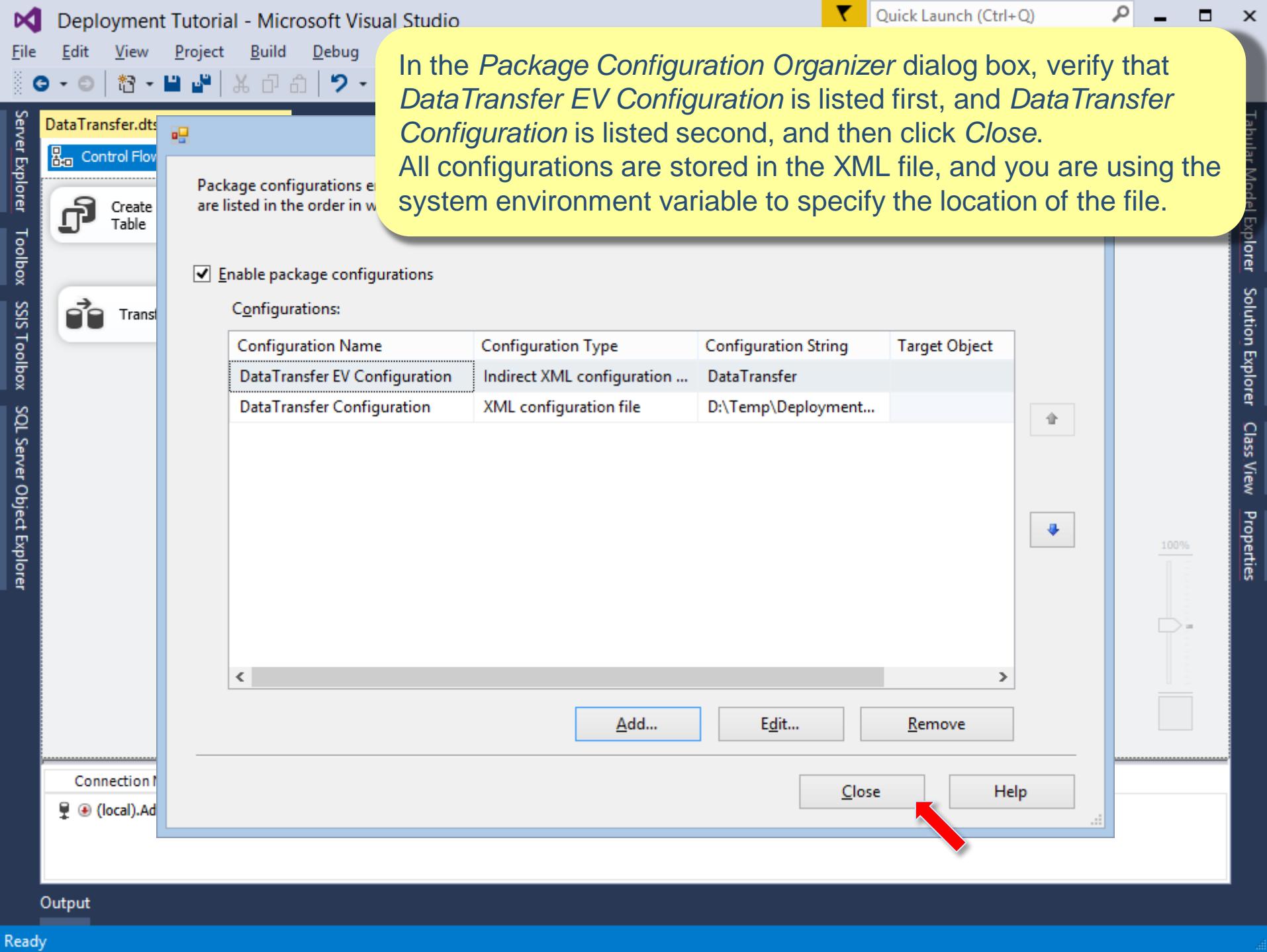
< Back

Next >

Finish >>

Cancel





Deployment Tutorial - Microsoft Visual Studio

File Edit View Project Build Debug SSIS Tools Window Help

Development Start

DataTransfer.dtsx [Design]\*

Control Flow Data Flow Parameters Event Handlers Package Explorer

Create or Truncate Table

Transfer Data

Connection Managers

(local).AdventureWorks Deployment Tutorial Log NewCustomers

Output

Quick Launch (Ctrl+Q)

In Solution Explorer, double-click LoadXMLData.dtsx to open it.

Solution Explorer

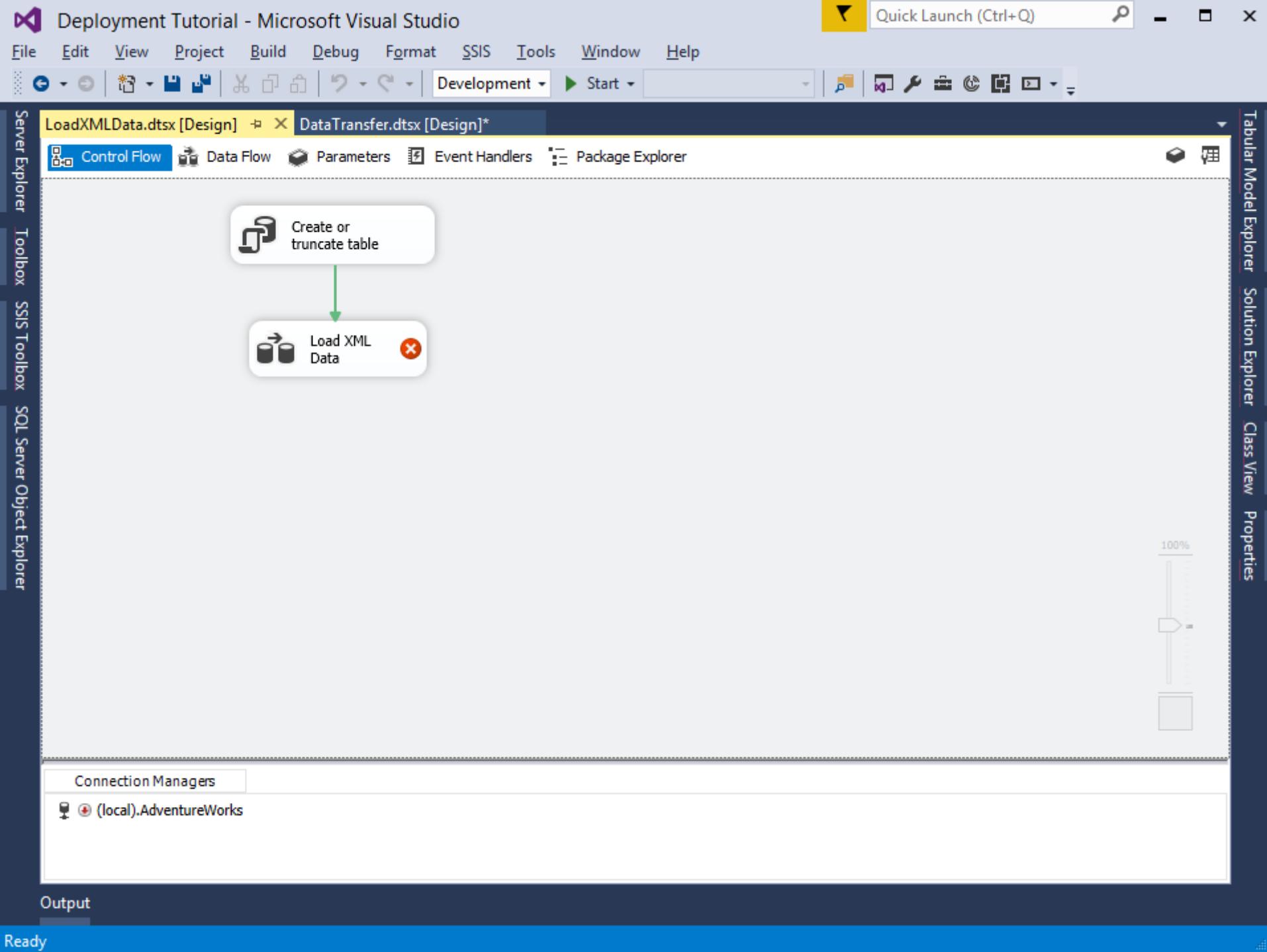
Search Solution Explorer (Ctrl+ )

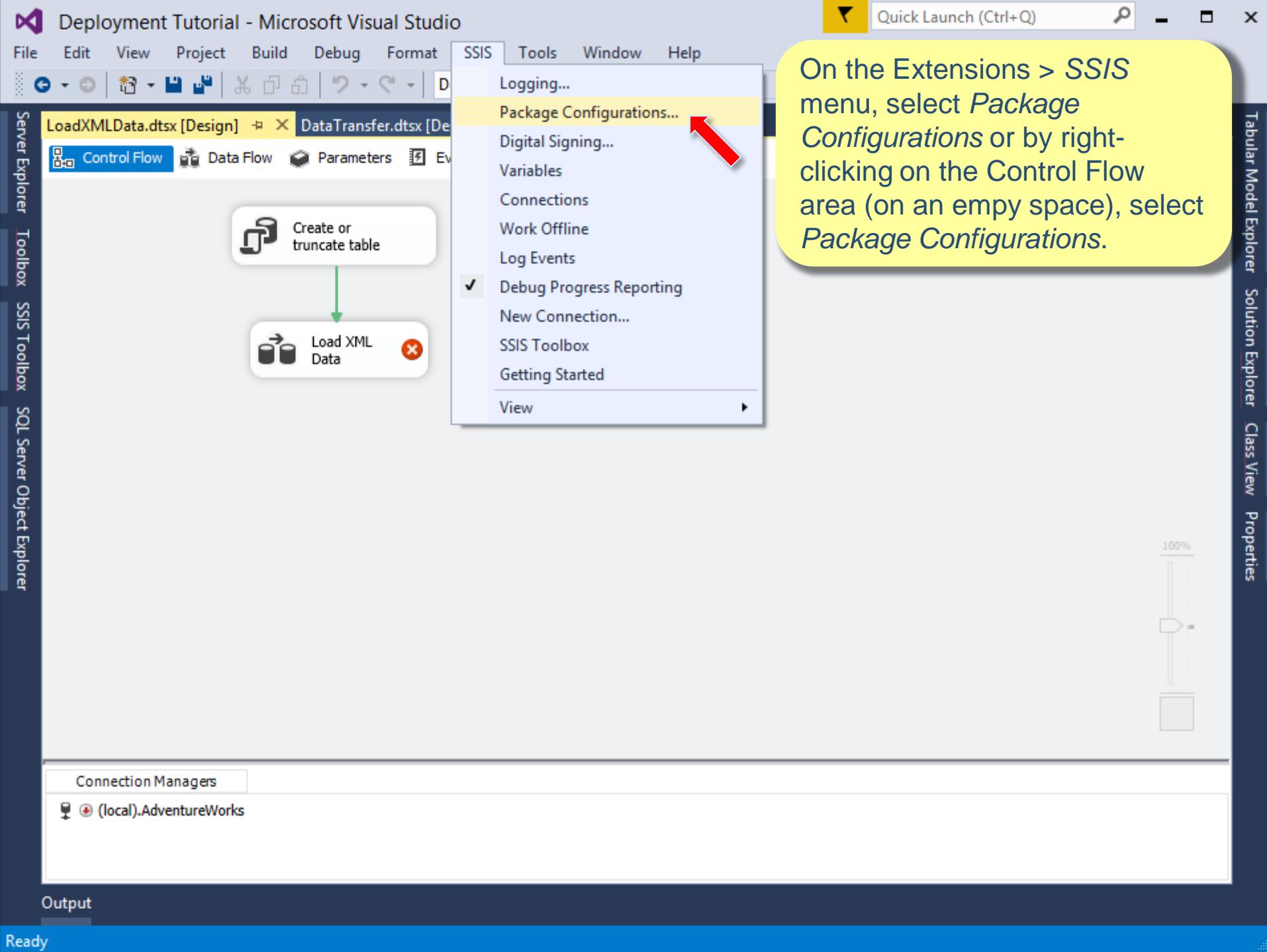
Deployment Tutorial (package deployment mode)

- Data Sources
- Miscellaneous
- Package Parts
  - Control Flow
- SSIS Packages
  - DataTransfer.dtsx
  - LoadXMLData.dtsx

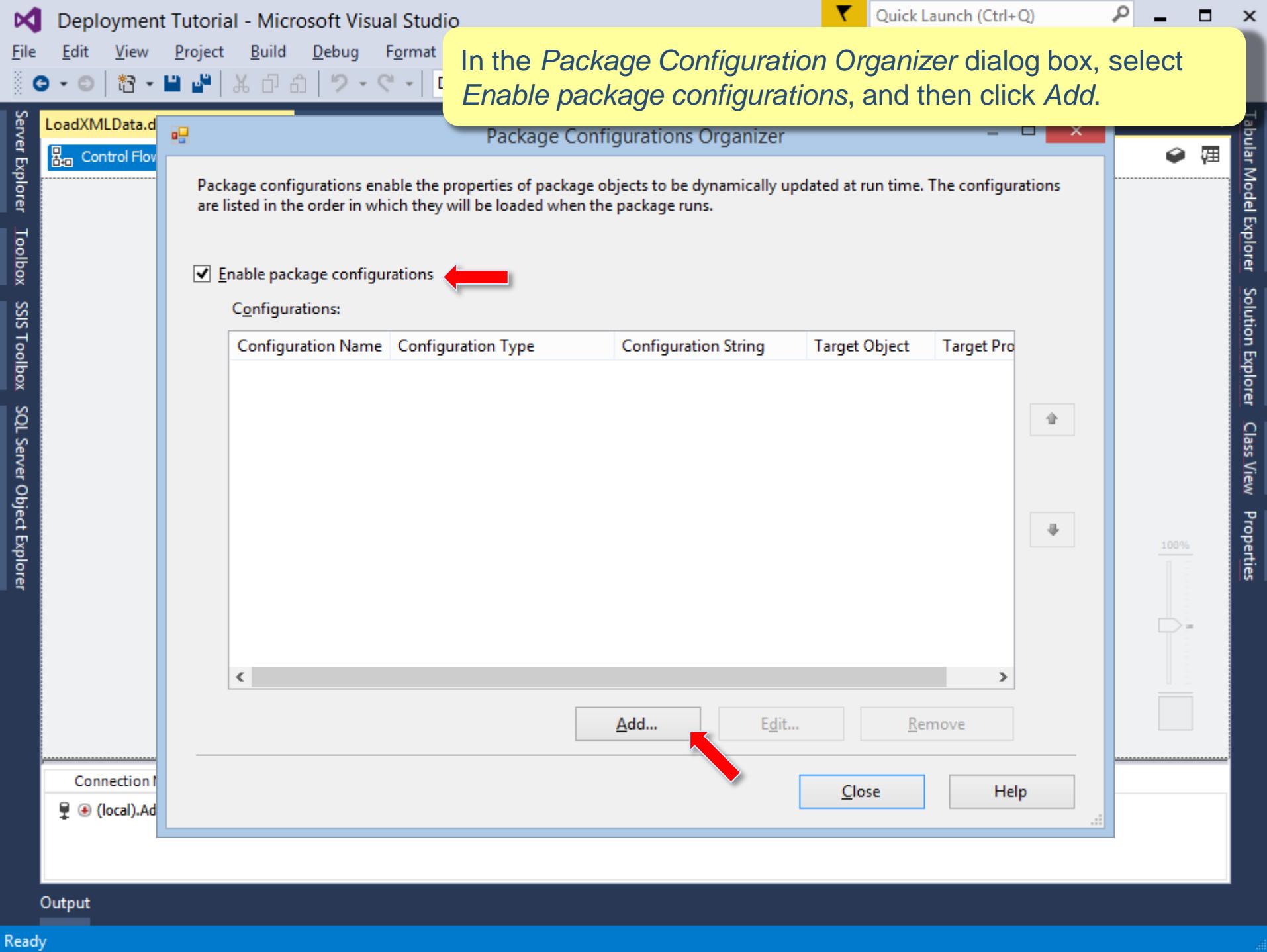
Tabular Model Explorer Solution Explorer Class View Properties

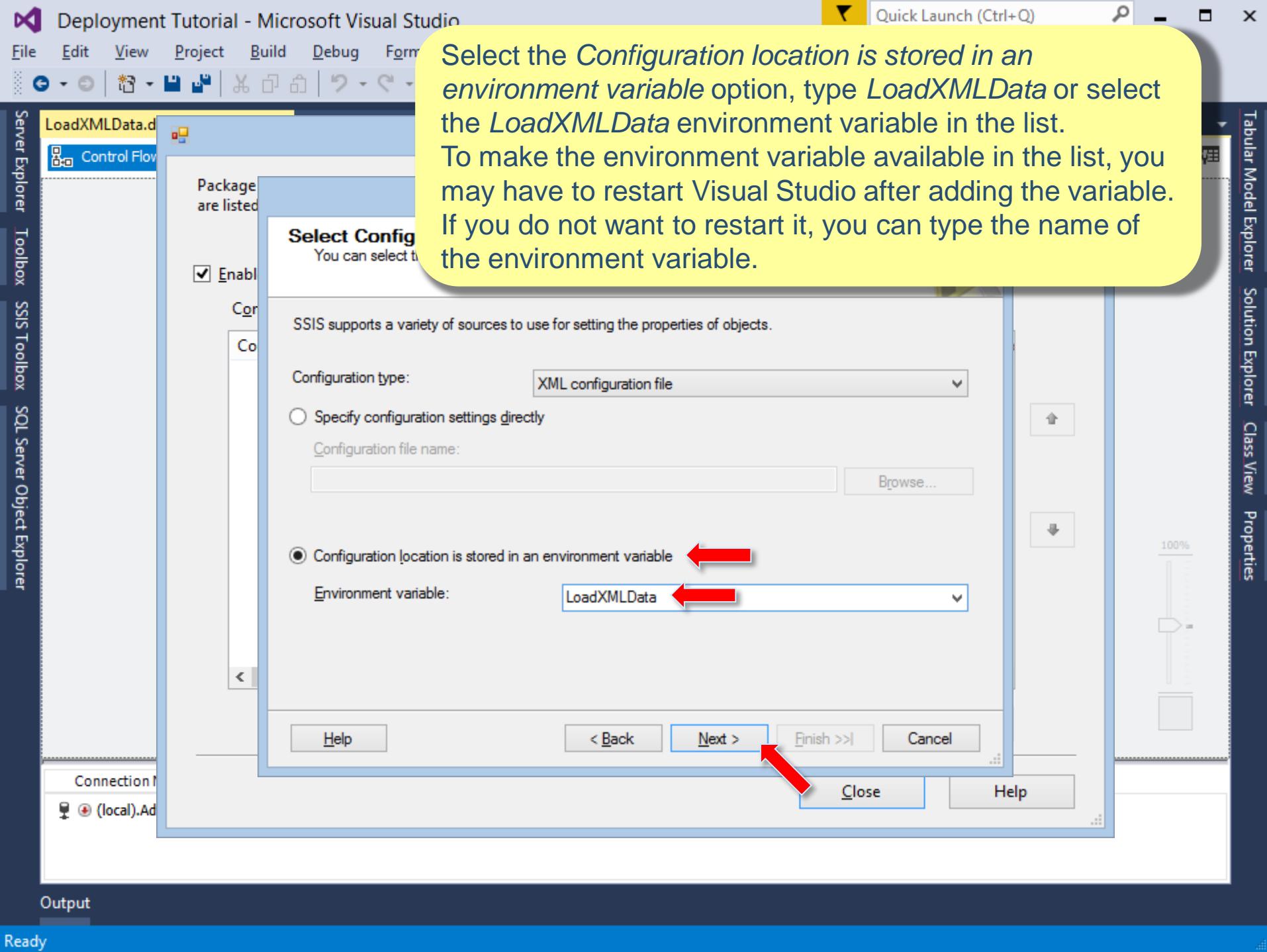
```
graph TD; CreateTable[Create or Truncate Table] --> TransferData[Transfer Data]
```

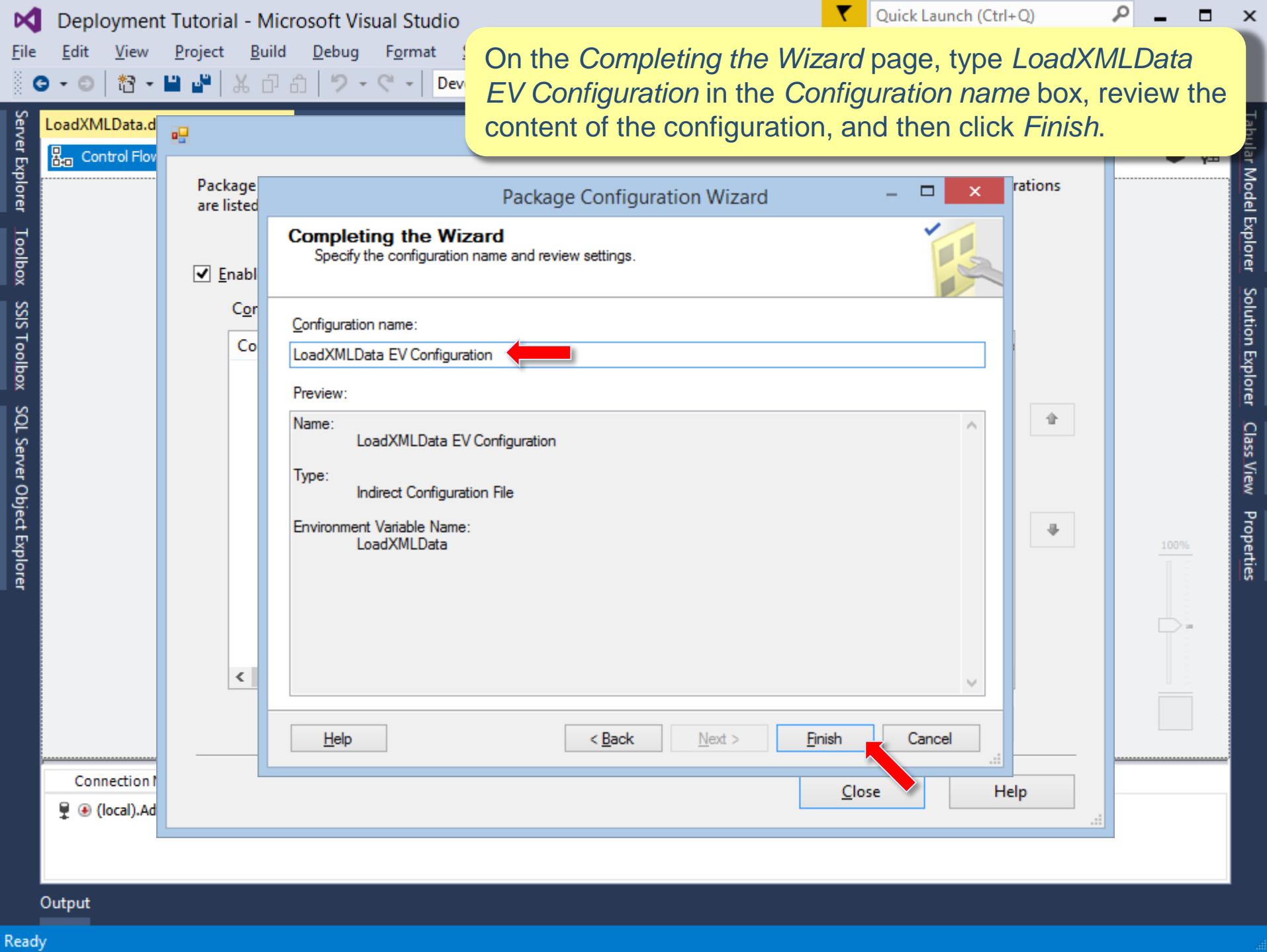


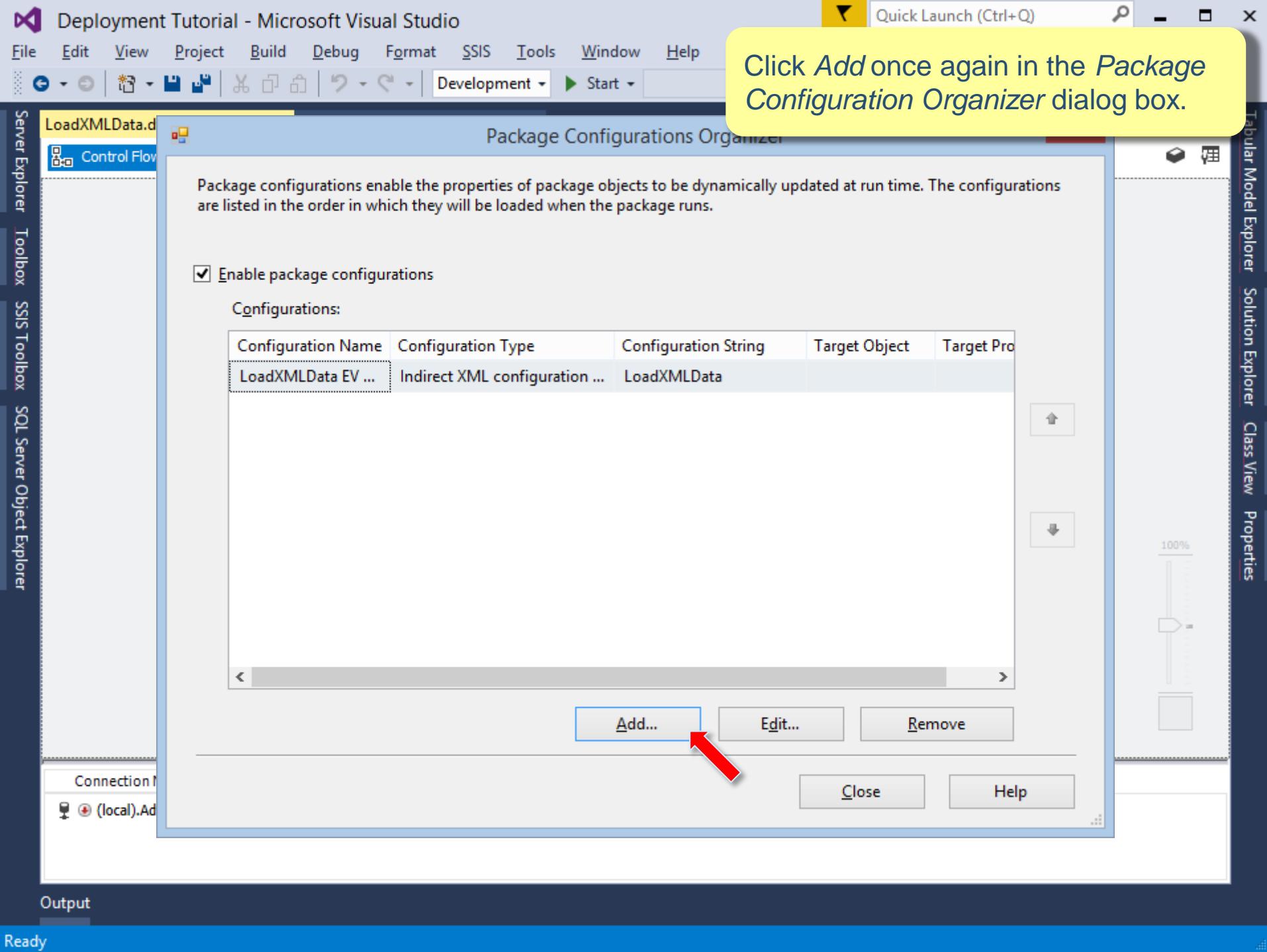


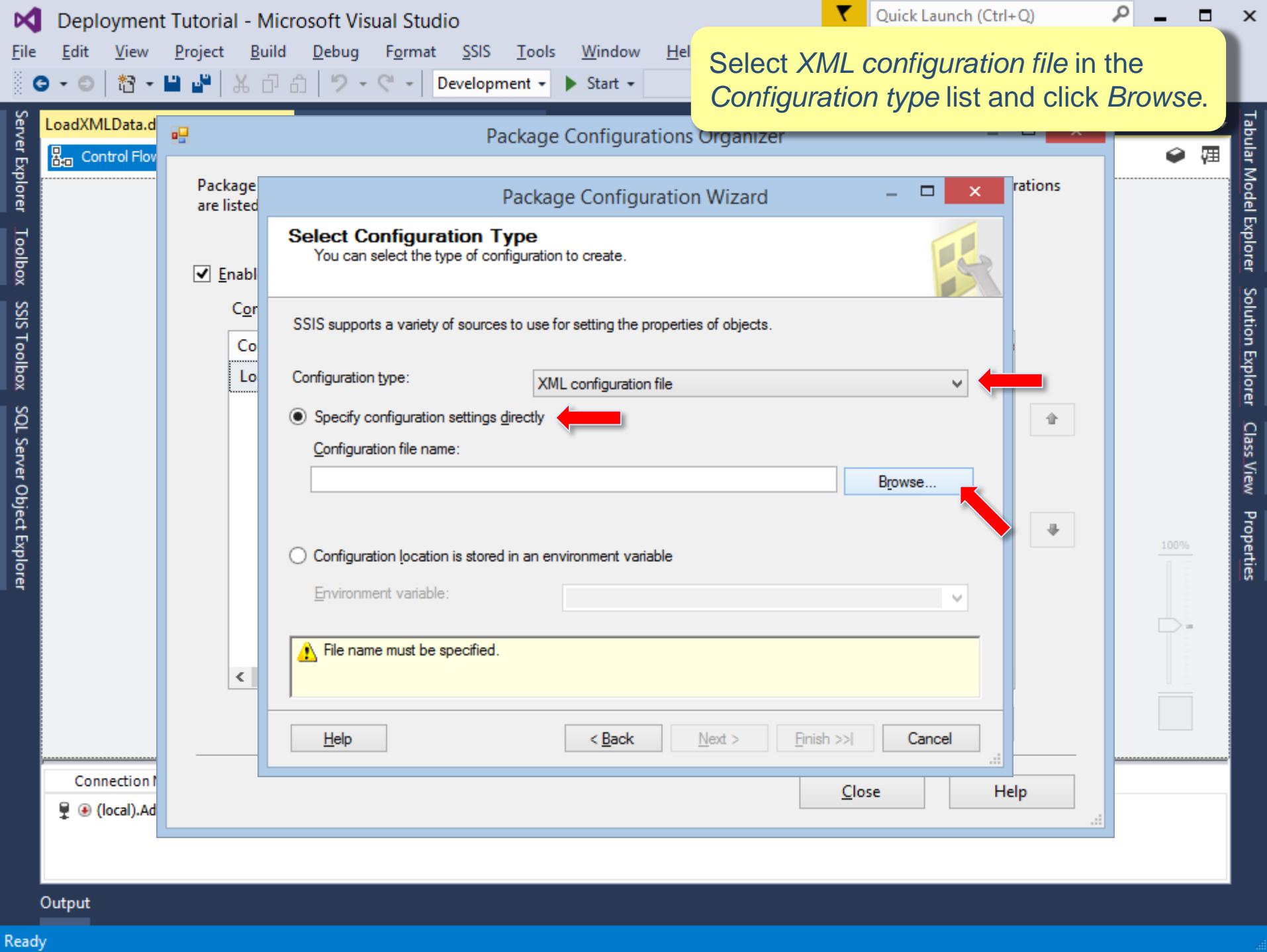
On the Extensions > SSIS menu, select *Package Configurations* or by right-clicking on the Control Flow area (on an empty space), select *Package Configurations*.

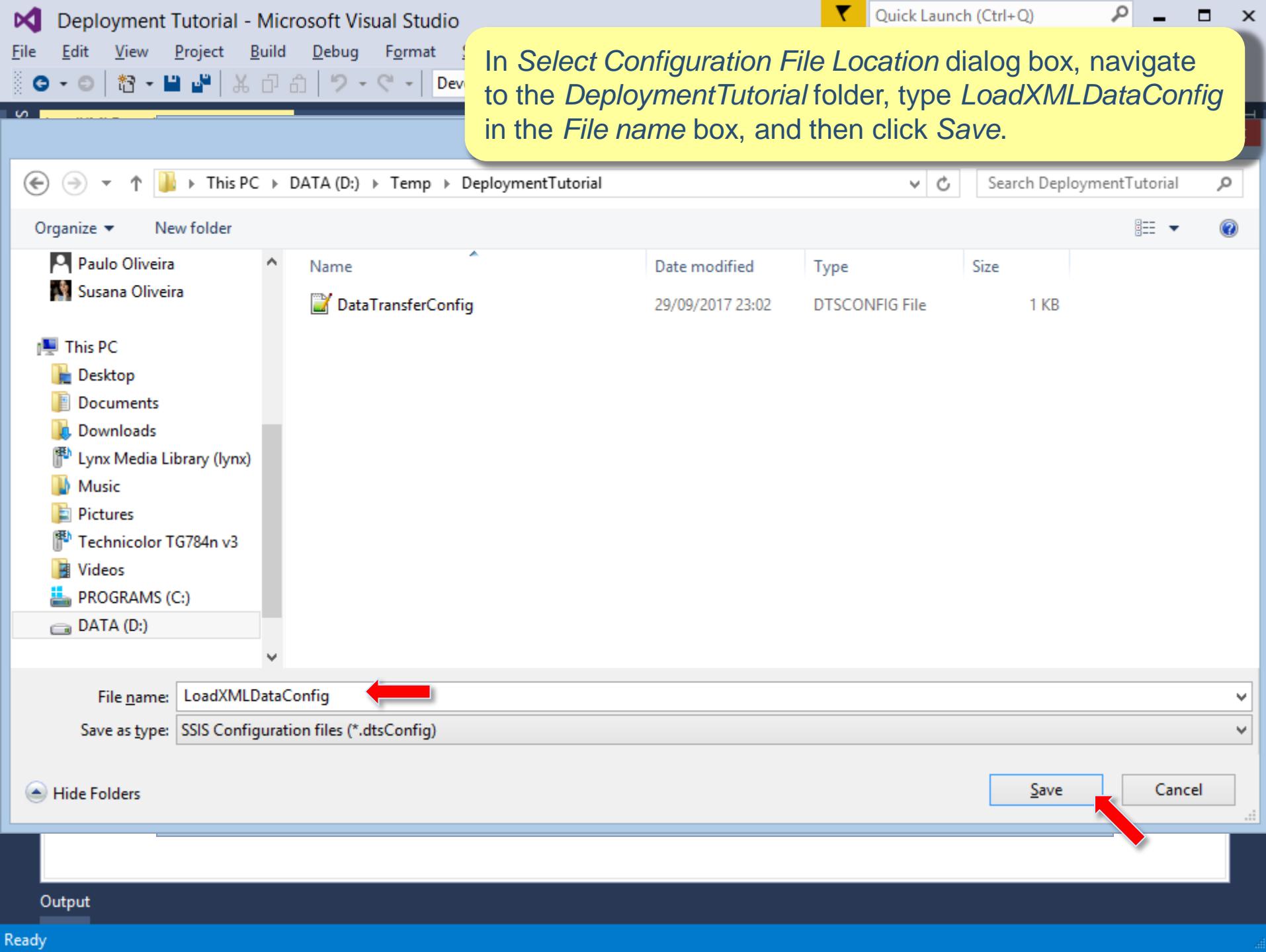


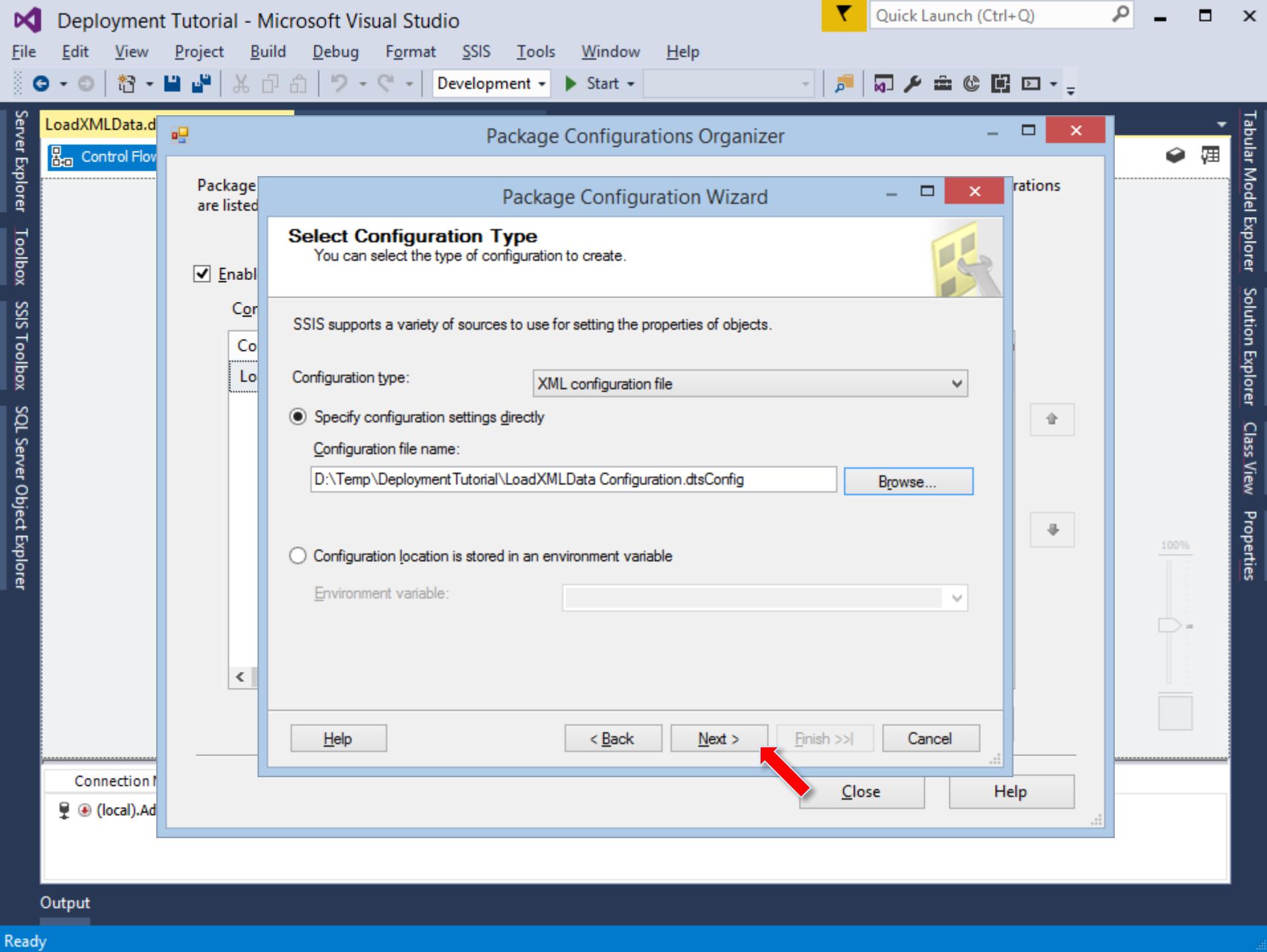


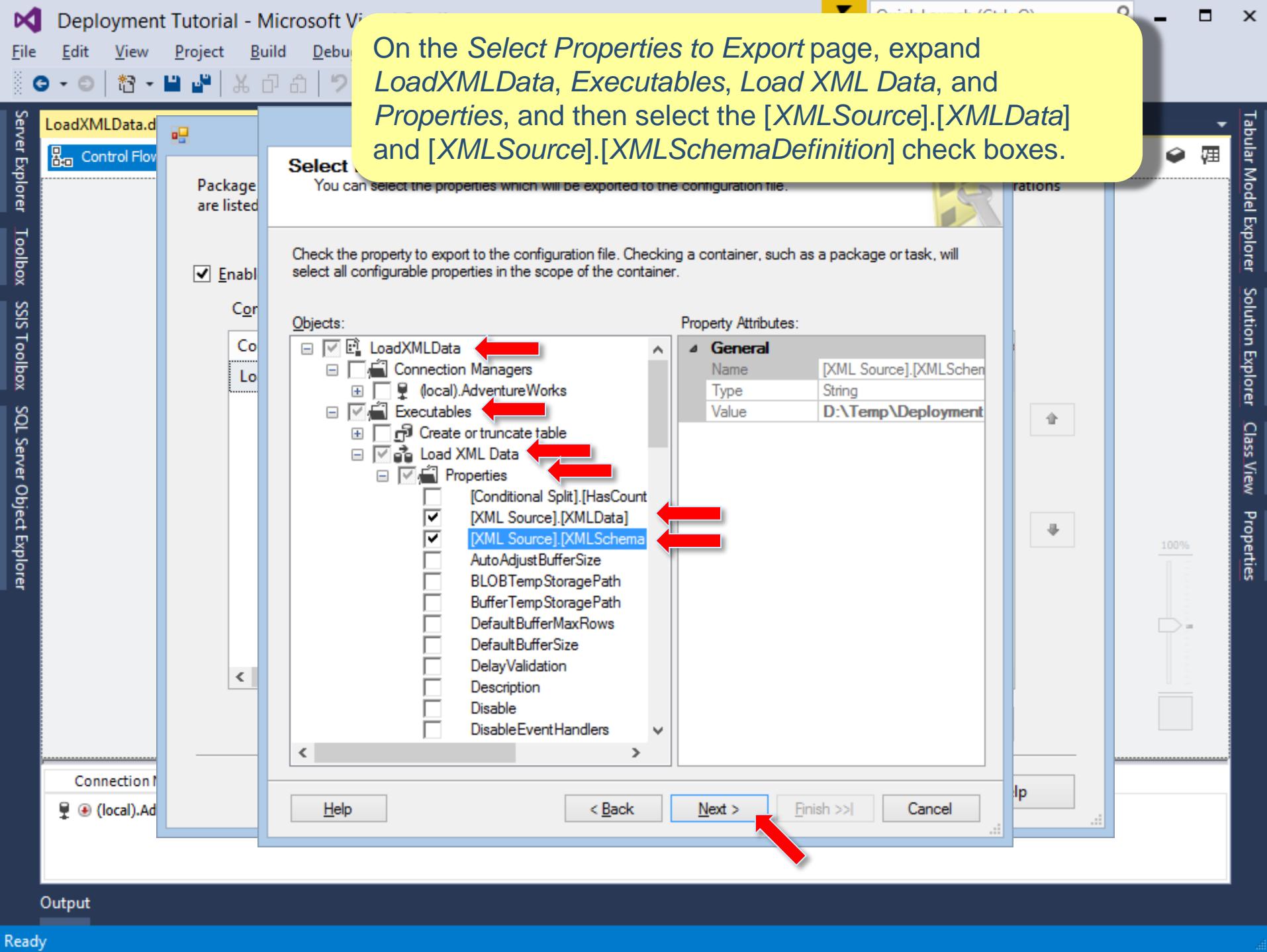


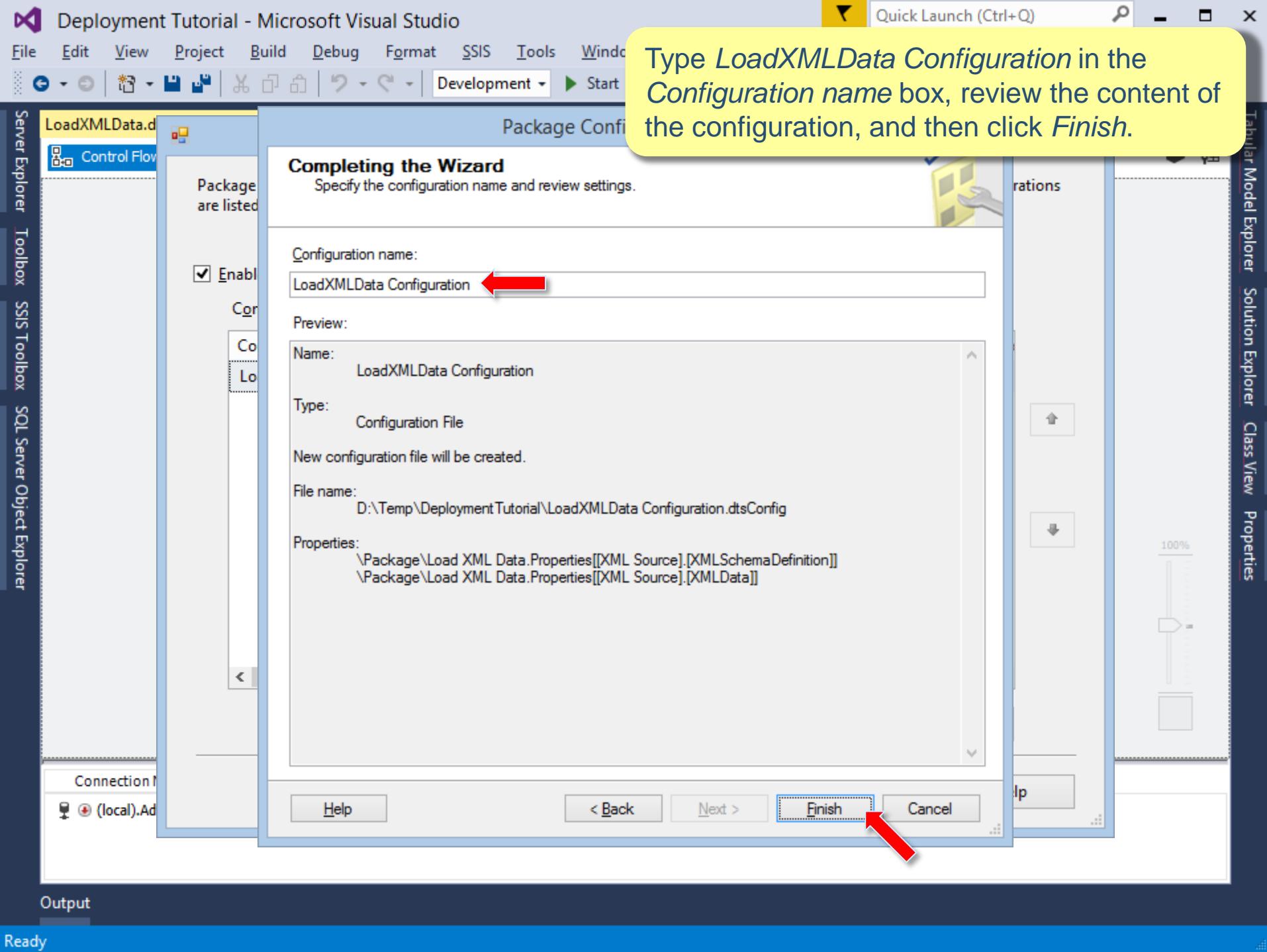












Deployment Tutorial - Microsoft Visual Studio

File Edit View Project Build Debug Format SSIS Tools

Server Explorer Toolbox SSIS Toolbox SQL Server Object Explorer

LoadXMLData.dts Control Flow

Development

Package configurations enable the properties of packages to be loaded at run time. The configurations are listed in the order in which they will be loaded.

Enable package configurations

Configurations:

Configuration Name	Configuration Type	Configuration String	Target Object	Target Project
LoadXMLData EV ...	Indirect XML configuration ...	LoadXMLData		
LoadXMLData Co...	XML configuration file	D:\Temp\Deployment...		

Add... Edit... Remove

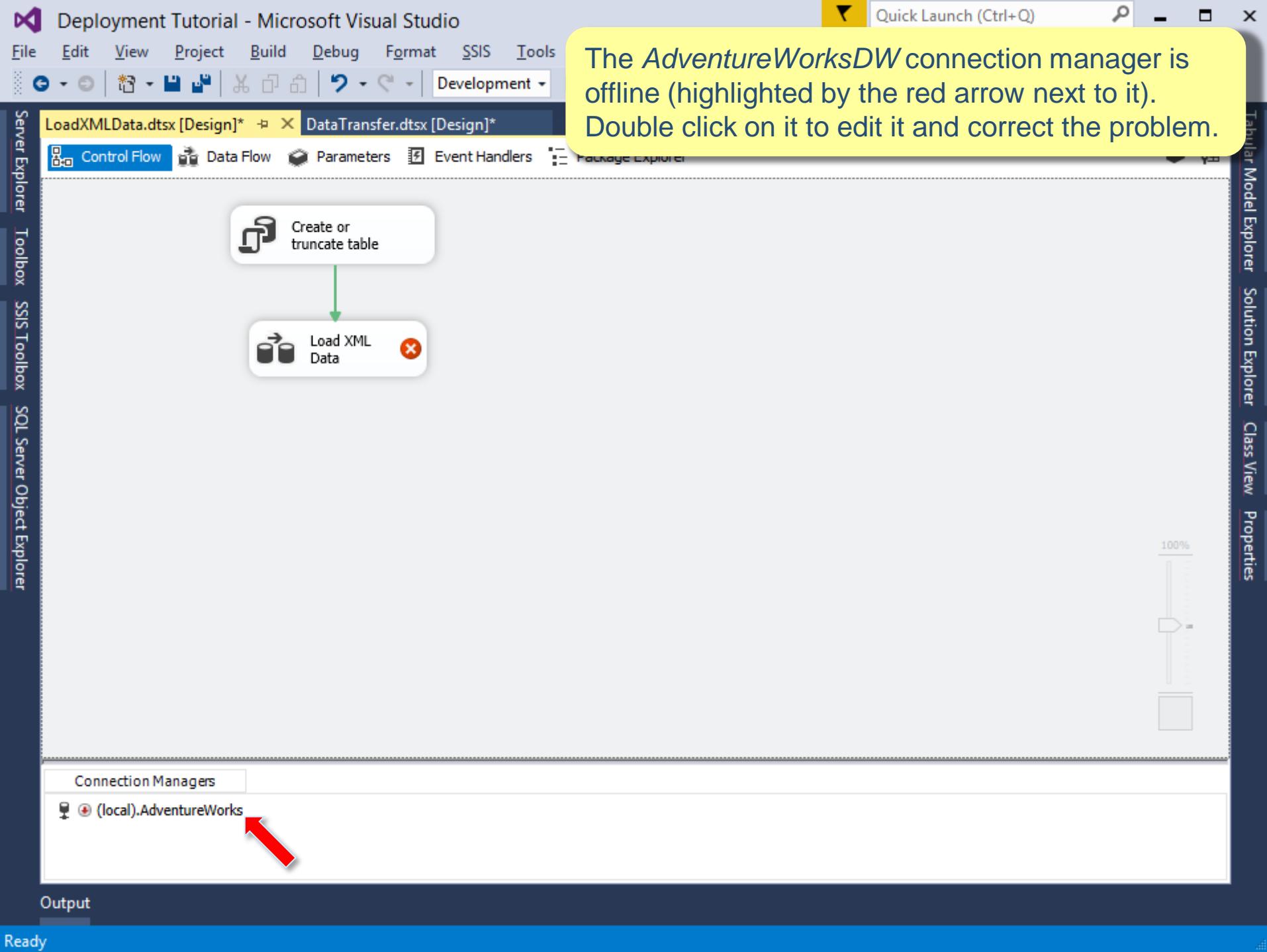
Close Help

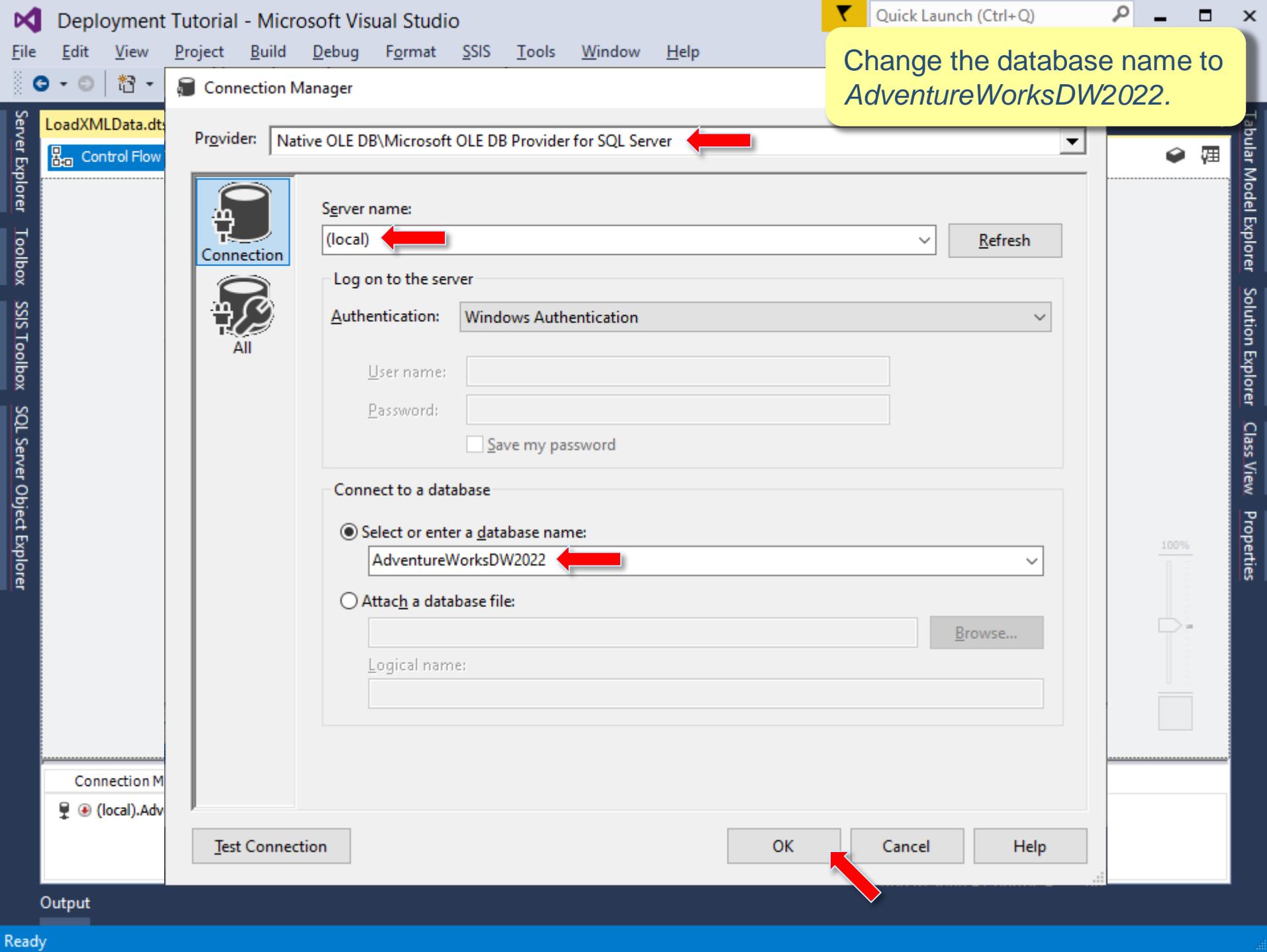
In the *Package Configuration Organizer* dialog box, verify that the *LoadXMLData EV Configuration* is listed first, and the *LoadXMLData Configuration* is listed second, and then click *Close*. All configurations are stored in the XML file, and you are using the system environment variable to specify the location of the file.

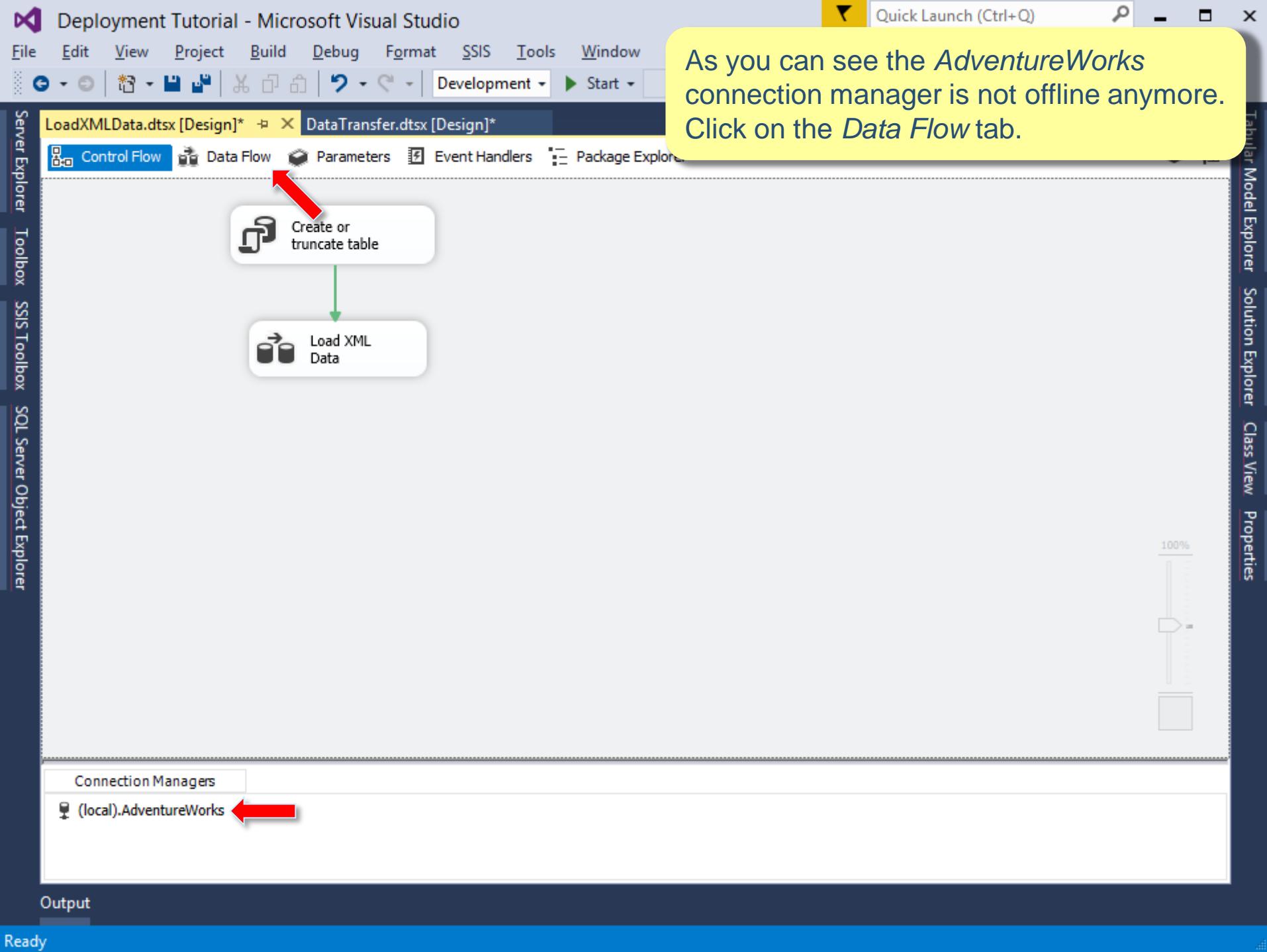
Output

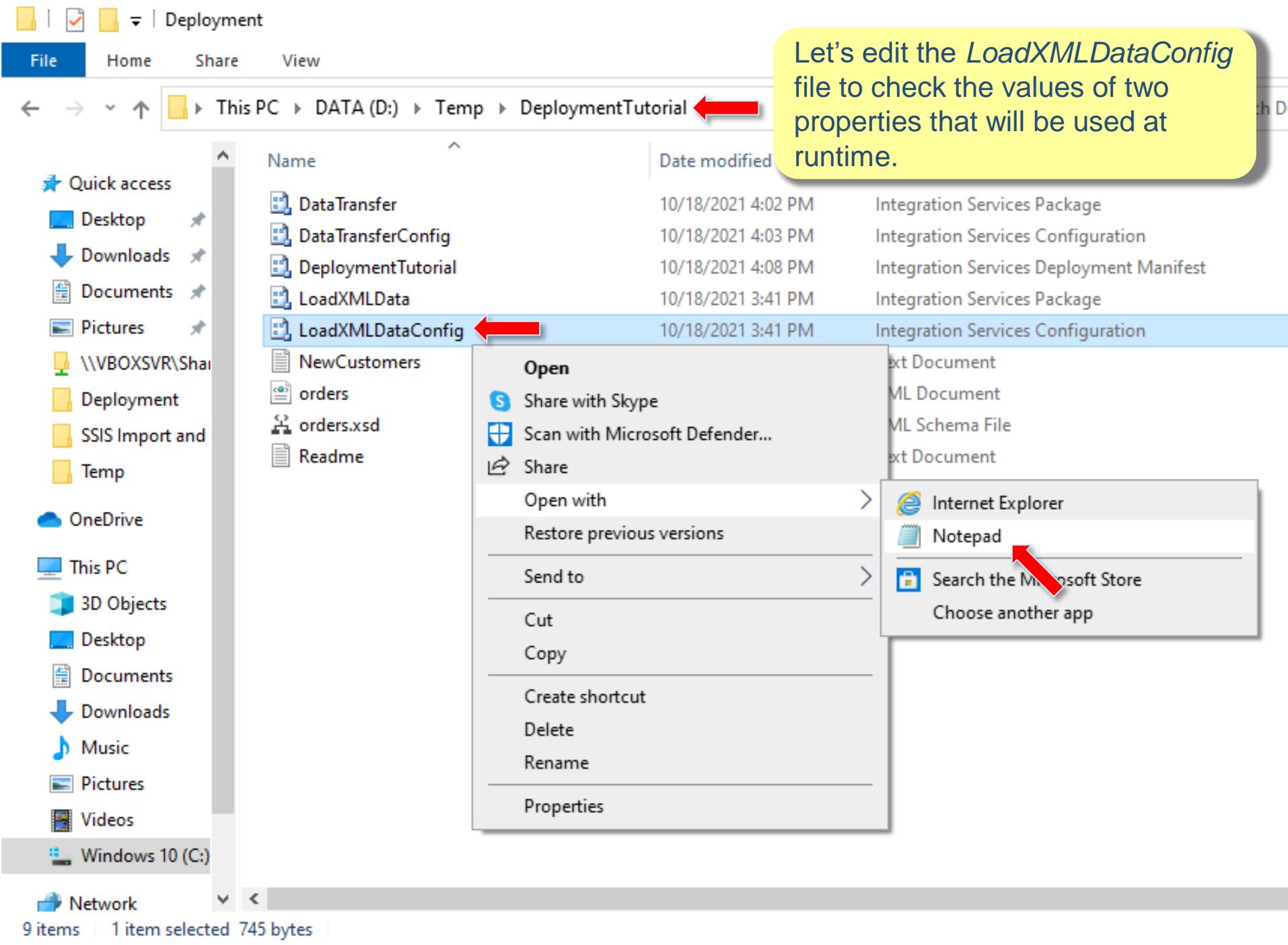
Ready

Configuration Name	Configuration Type	Configuration String	Target Object	Target Project
LoadXMLData EV ...	Indirect XML configuration ...	LoadXMLData		
LoadXMLData Co...	XML configuration file	D:\Temp\Deployment...		







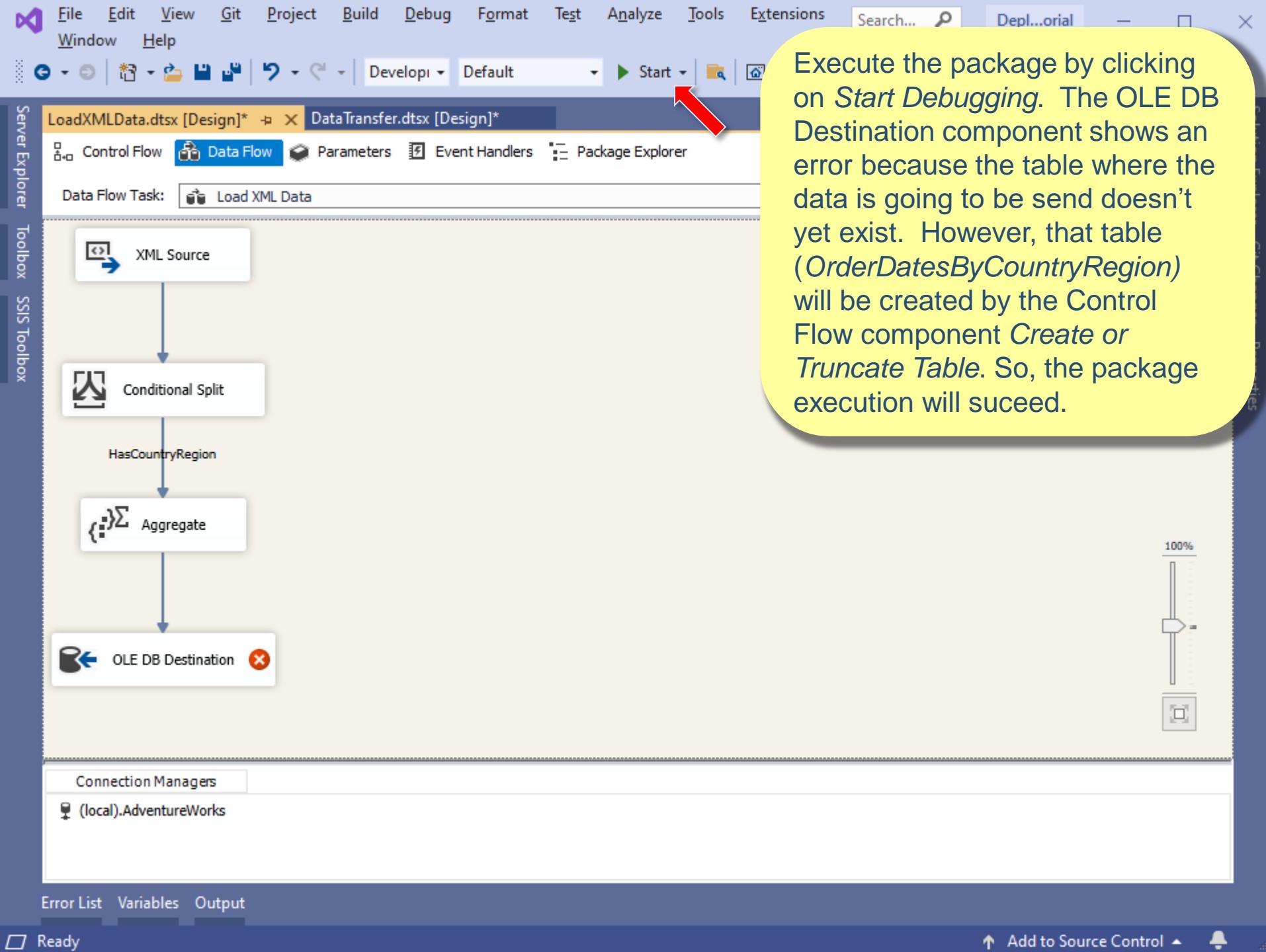


LoadXMLDataConfig - Notepad

File Edit Format View Help

```
<?xml version="1.0"?><DTSConfiguration><DTSConfigurationHeading><DTSConfigurationFileInfo GeneratedBy="Domain\UserName" GeneratedFromPackageName="LoadXMLData" GeneratedFromPackageID="{83E52075-CF88-46D2-9A77-0294F42B549F}" GeneratedDate="10/18/2021 3:32:03 PM"/></DTSConfigurationHeading><Configuration ConfiguredType="Property" Path="\Package\Load XML Data.Properties[[XML Source].[XMLData]]" ValueType="String"><ConfiguredValue>D:\Temp\DeploymentTutorial\orders.xml</ConfiguredValue></Configuration><Configuration ConfiguredType="Property" Path="\Package\Load XML Data.Properties[[XML Source].[XMLSchemaDefinition]]" ValueType="String"><ConfiguredValue>D:\Temp\DeploymentTutorial\orders.xsd</ConfiguredValue></Configuration></DTSConfiguration>
```

You may need to update the *LoadXMLDataConfig* with the correct path for the *orders.xml* and *orders.xsd* files, based on the *DeploymentTutorial* folder path which you have used (the suggested path was *D:\Temp\DeploymentTutorial*) – don't forget to save the changes.



The execution results in the insertion of 21 rows of data. The result consists in the rows coming from the XML data file, *orders.xml*. Each row is a summary by country/region; the row lists the name of a country/region, the number of orders for each country/region and the dates of the newest and oldest orders.

Click on *Stop Debugging* to stop the package execution.

```
graph TD; XML[XML Source] -- "830 rows" --> Conditional[Conditional Split]; Conditional -- "HasCountryRegion (822 rows)" --> Aggregate[Aggregate]; Aggregate -- "21 rows" --> OLE[OLE DB Destination]
```

Connection Managers

(local).AdventureWorks

Package execution completed with success. Click here to switch to design mode, or select Stop Debugging from the Debug menu.

File Edit View Project Build Debug

Control Flow Data Flow Parameters

Data Flow Task: Load XML Data

XML Source

Conditional Split

Aggregate

OLE DB Destination

LoadXMLData.dt

Deployment Tutorial (Running) - Microsoft Visual Studio

Quick Launch (Ctrl+Q)

Explorer

Solution Explorer

Properties

Task List

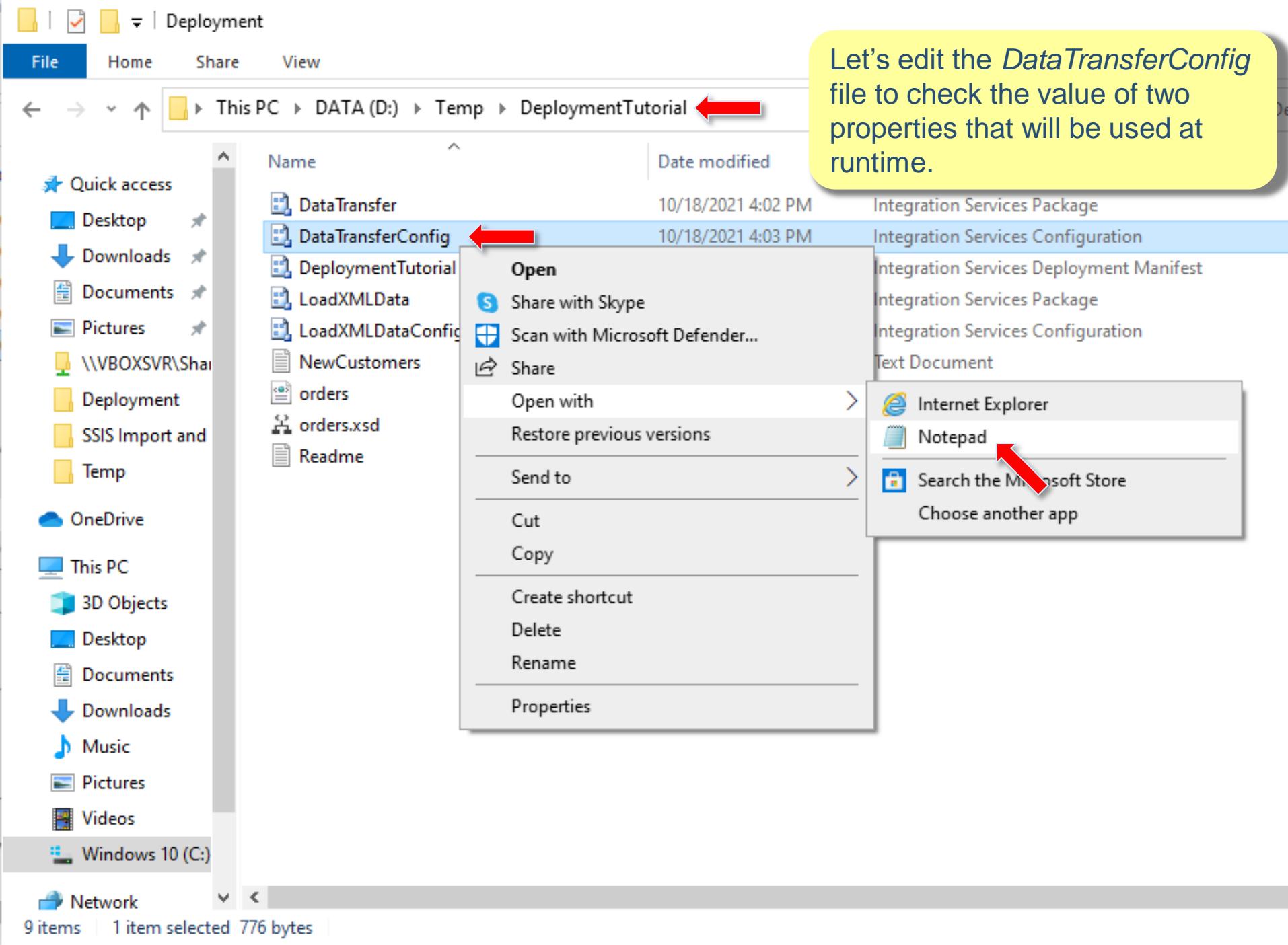
Toolbox

Task List

Output

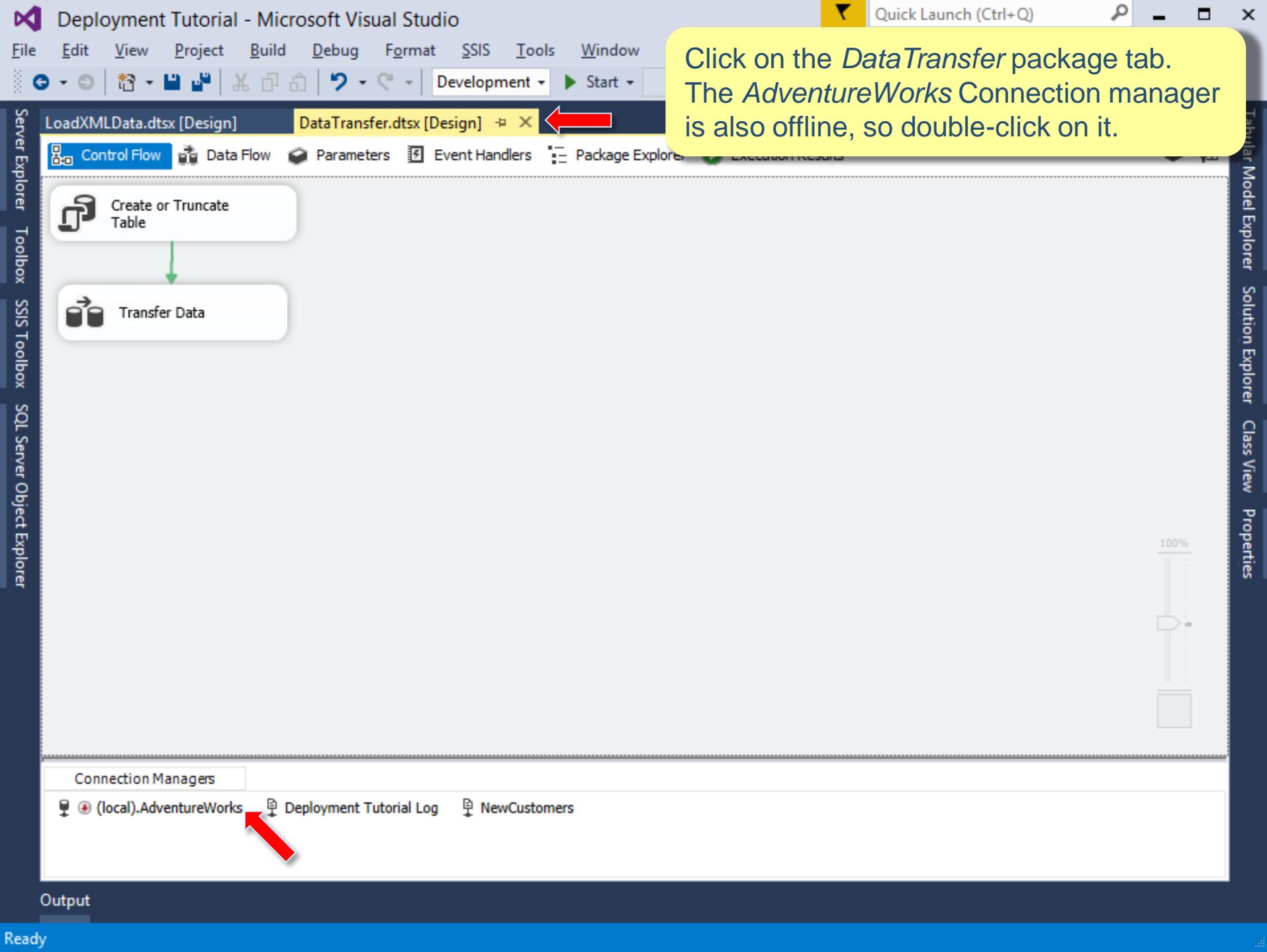
Autos Locals Watch 1 Call Stack Breakpoints Exception Settings Command Window Immediate Window Output

Ready

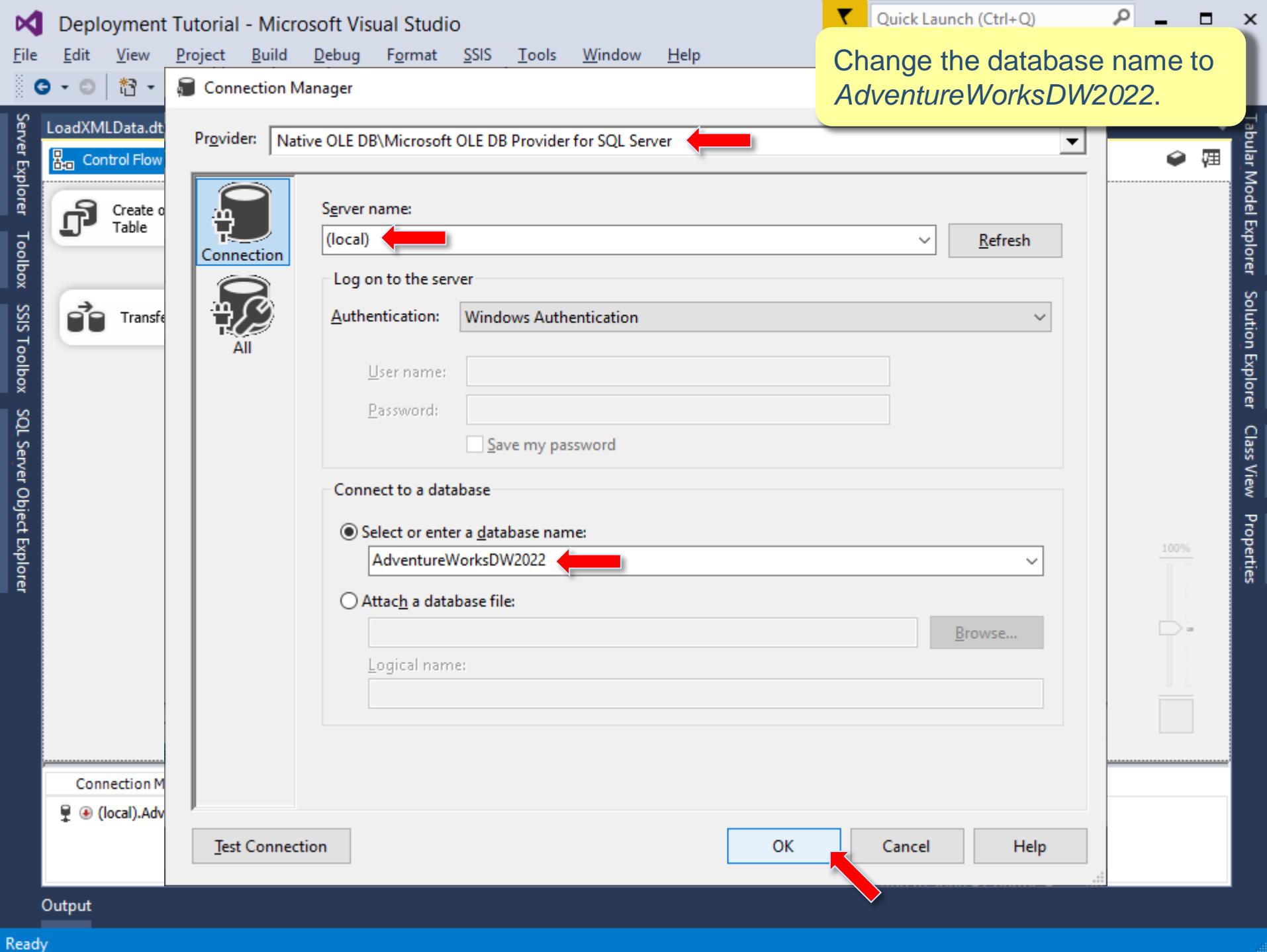


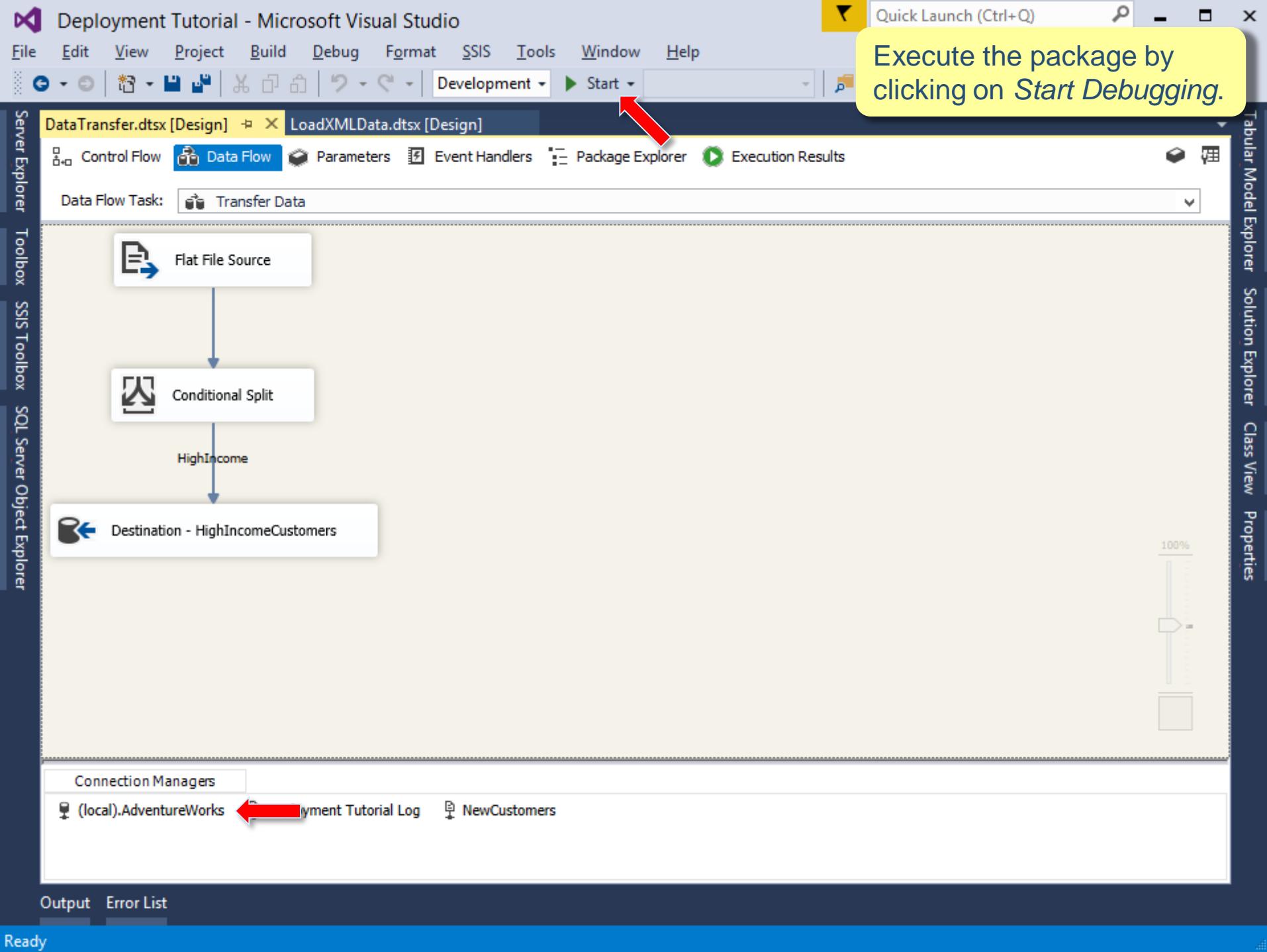
```
<?xml version="1.0"?><DTSConfiguration><DTSConfigurationHeading><DTSConfigurationFileInfo GeneratedBy="Domain\UserName" GeneratedFromPackageName="DataTransfer" GeneratedFromPackageID="{A56CEC64-65C2-4736-86B3-5782E7D51A22}" GeneratedDate="10/18/2021 3:25:40 PM"/></DTSConfigurationHeading><Configuration ConfiguredType="Property" Path="\Package.Connections[Deployment Tutorial Log].Properties[ConnectionString]" ValueType="String"><ConfiguredValue>D:\Temp\DeploymentTutorial\Deployment Tutorial Log</ConfiguredValue></Configuration><Configuration ConfiguredType="Property" Path="\Package.Connections[NewCustomers].Properties[ConnectionString]" ValueType="String"><ConfiguredValue>D:\Temp\DeploymentTutorial\NewCustomers.txt</ConfiguredValue></Configuration></DTSConfiguration>
```

You may need to update the *DataTransferConfig* with the correct path for the *Deployment Tutorial Log* and *NewCustomers.txt* files, based on the *DeploymentTutorial* folder path which you have used (the suggested path was *D:\Temp\DeploymentTutorial*) – don't forget to save the changes.



Click on the *DataTransfer* package tab.  
The *AdventureWorks* Connection manager  
is also offline, so double-click on it.





The execution results in the insertion of 31 rows of data.  
The return result contains any rows from the text file,  
*Customers.txt*, that have values larger than 100000 in the  
*YearlyIncome* column.  
Click on *Stop Debugging* to stop the package execution.

```
graph TD; FFS[Flat File Source] -- "384 rows" --> CS[Conditional Split]; CS -- "HighIncome (31 rows)" --> D[Destination - HighIncomeCustomers]
```

Connection Managers

(local).AdventureWorks Deployment Tutorial Log NewCustomers

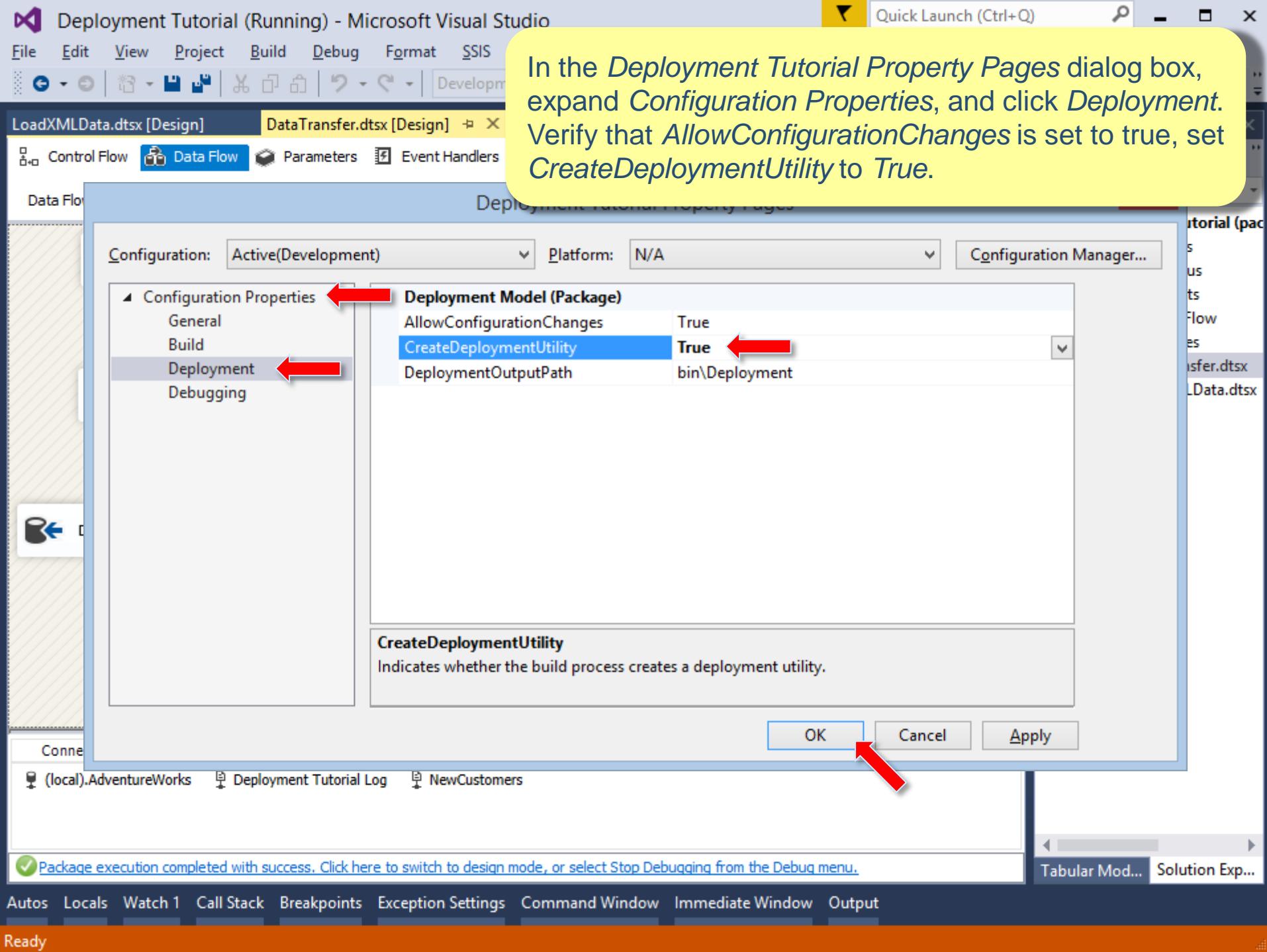
Package execution completed with success. Click here to switch to design mode, or select Stop Debugging from the Debug menu.

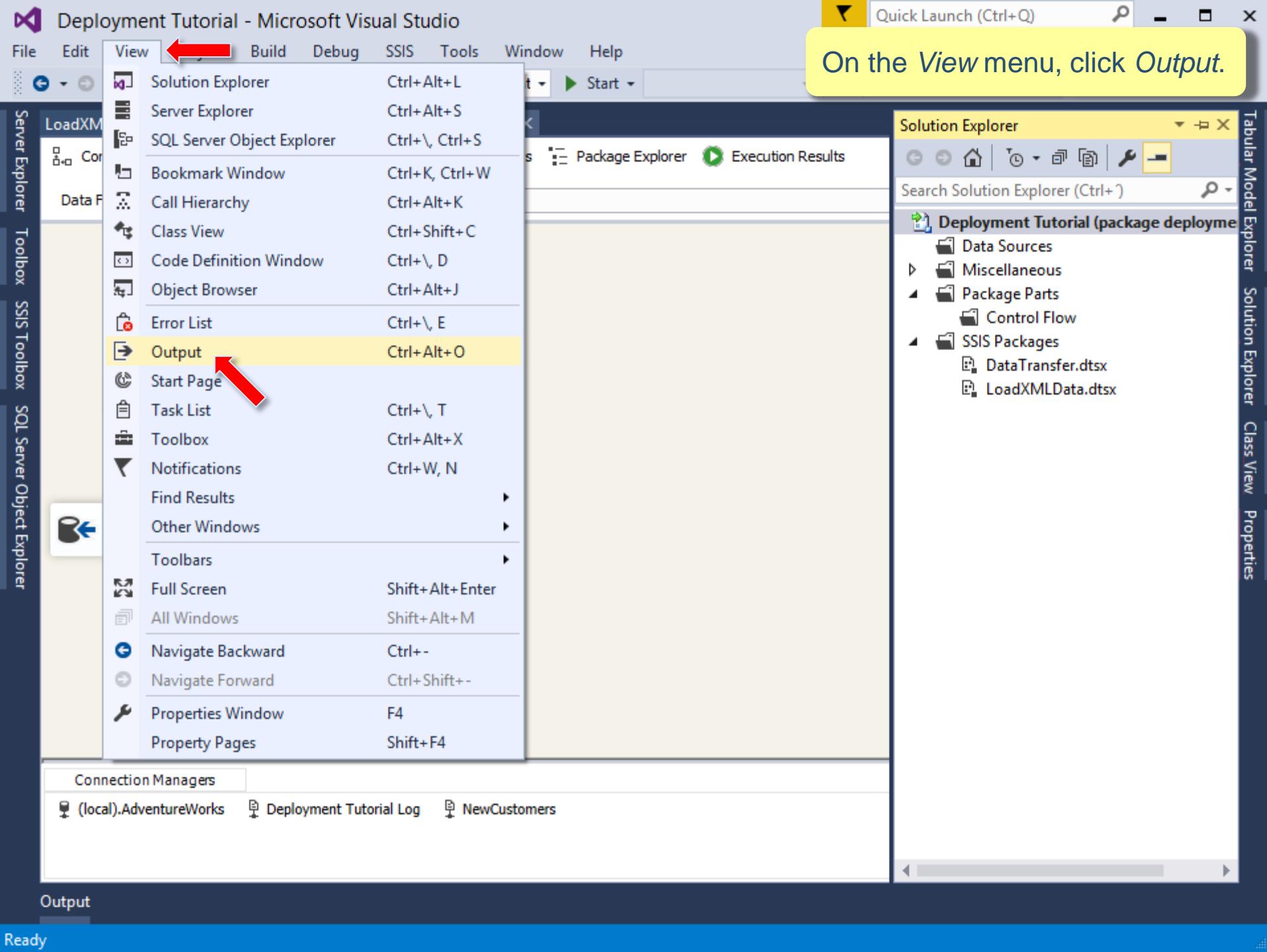
Autos Locals Watch 1 Call Stack Breakpoints Exception Settings Command Window Immediate Window Output

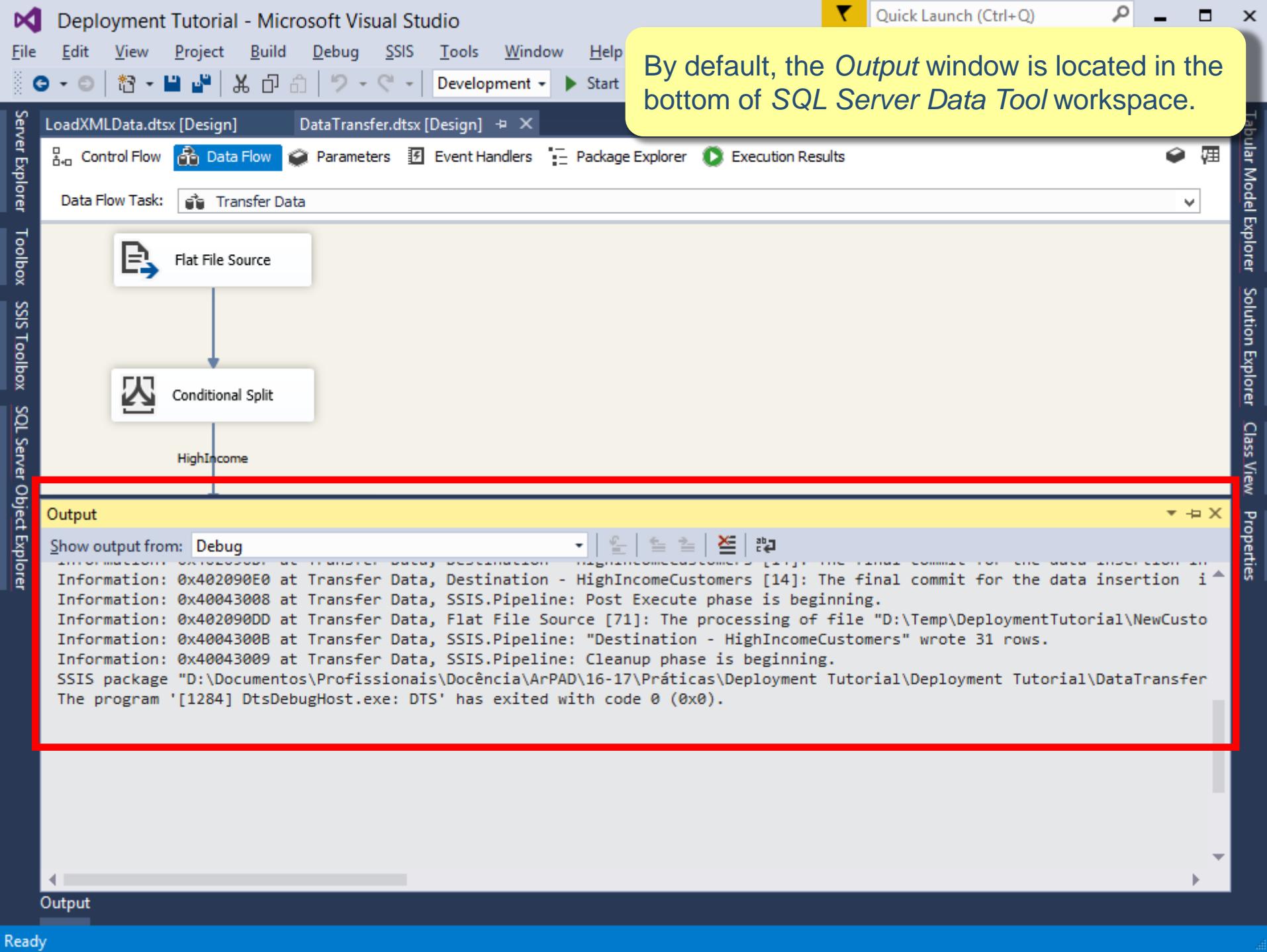
Ready

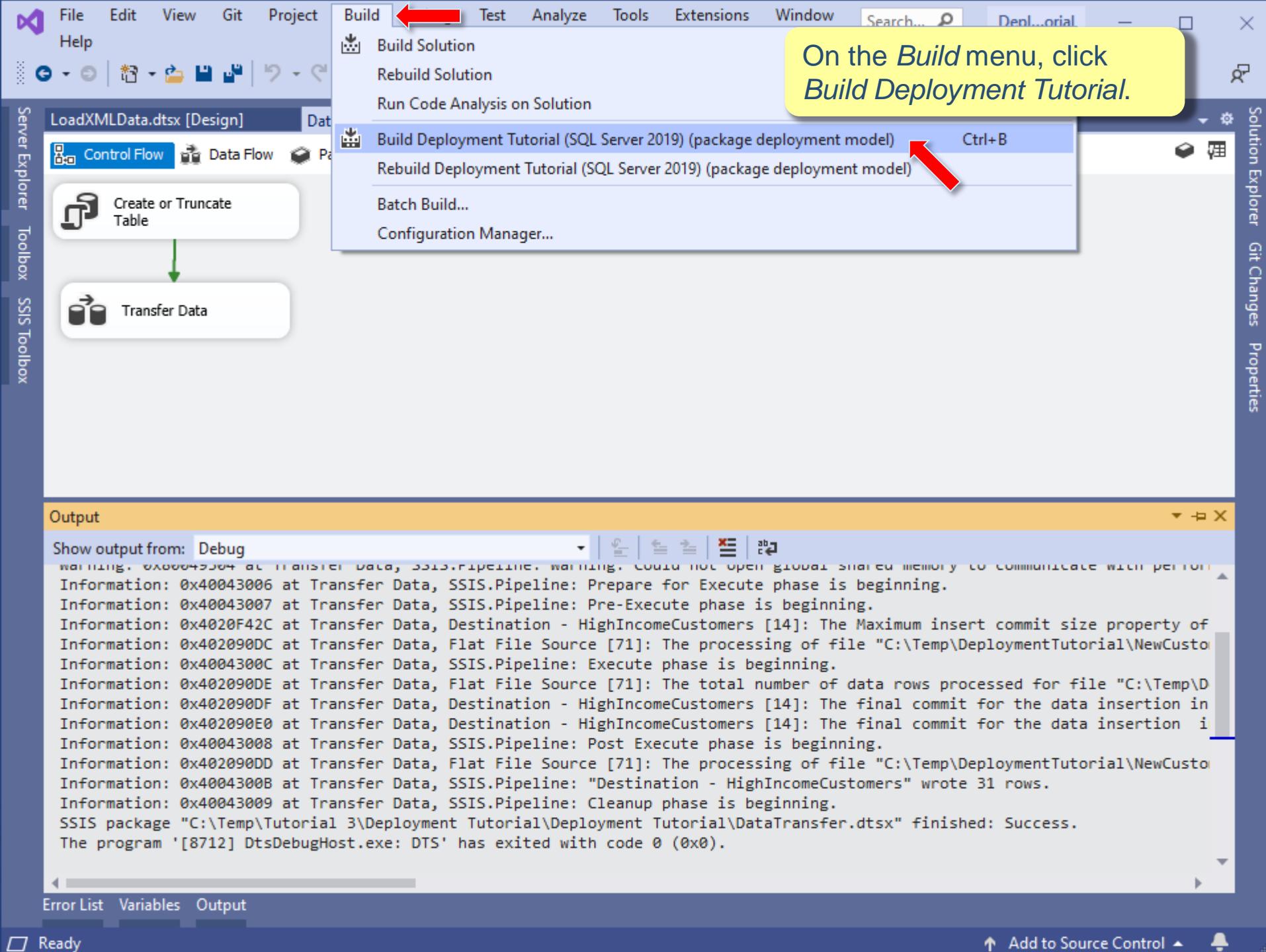
The screenshot shows the Microsoft Visual Studio interface with the SSIS Designer open. In the center, a data flow diagram is displayed with components: Flat File Source, Conditional Split, and Destination - HighIncomeCustomers. The 'Transfer Data' task is selected under the Data Flow Task dropdown. To the right, the Solution Explorer pane is visible, showing a project named 'Deployment Tutorial (SQL Server 2019)'. A context menu is open over the project node, with the 'Properties' option highlighted. Red arrows indicate the path from the Data Flow tab to the context menu, and from the context menu to the 'Properties' option.

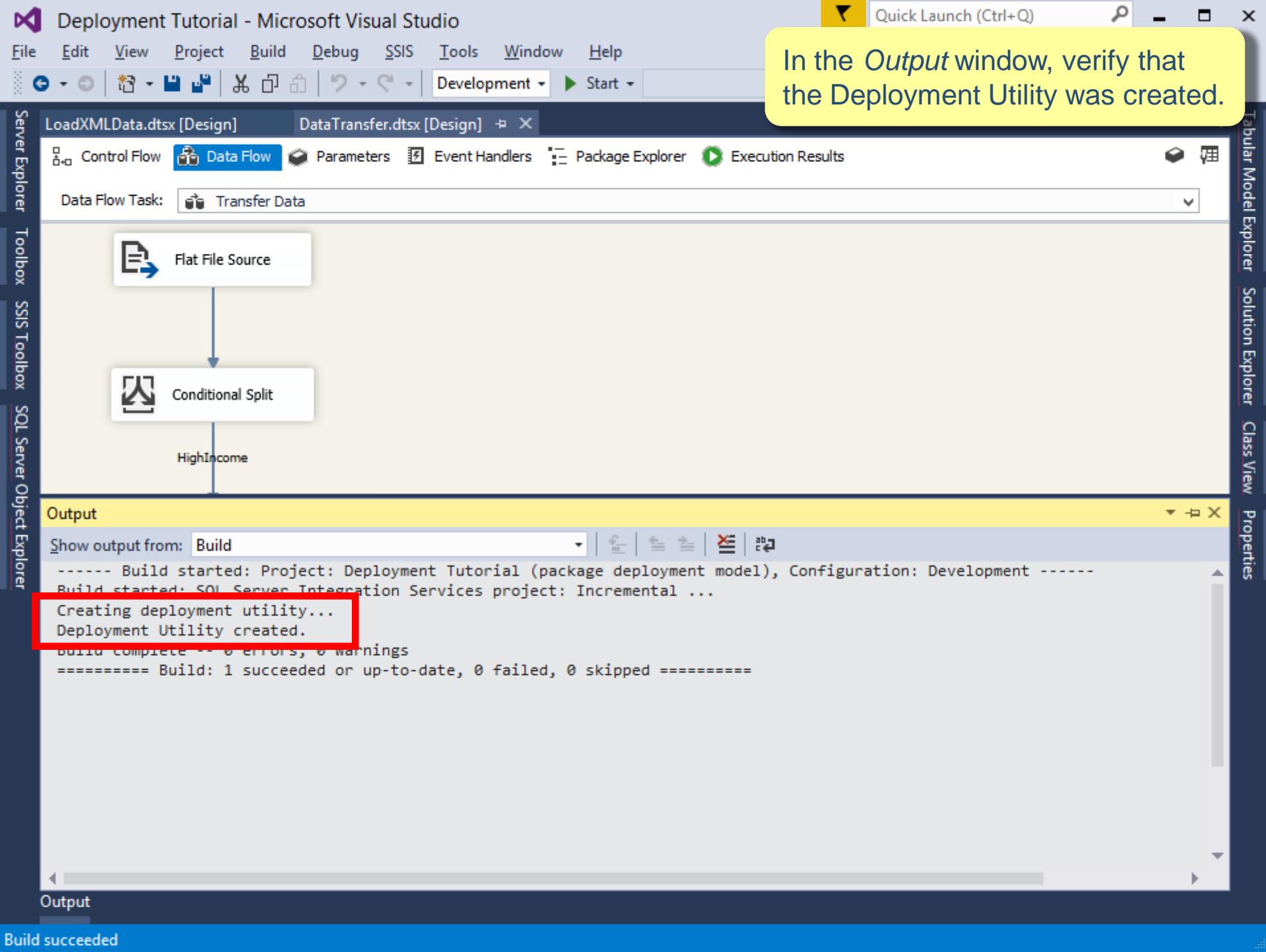
Next, you will create the deployment bundle, which is a folder that contains the items that you need to install on another computer. The deployment bundle will include a deployment manifest, copies of the packages, and copies of the supporting files from the *Deployment Tutorial* project. Before you can build the deployment utility, you must modify the properties of the Deployment Tutorial project. In *Solution Explorer*, right-click *Deployment Tutorial* and click *Properties*.

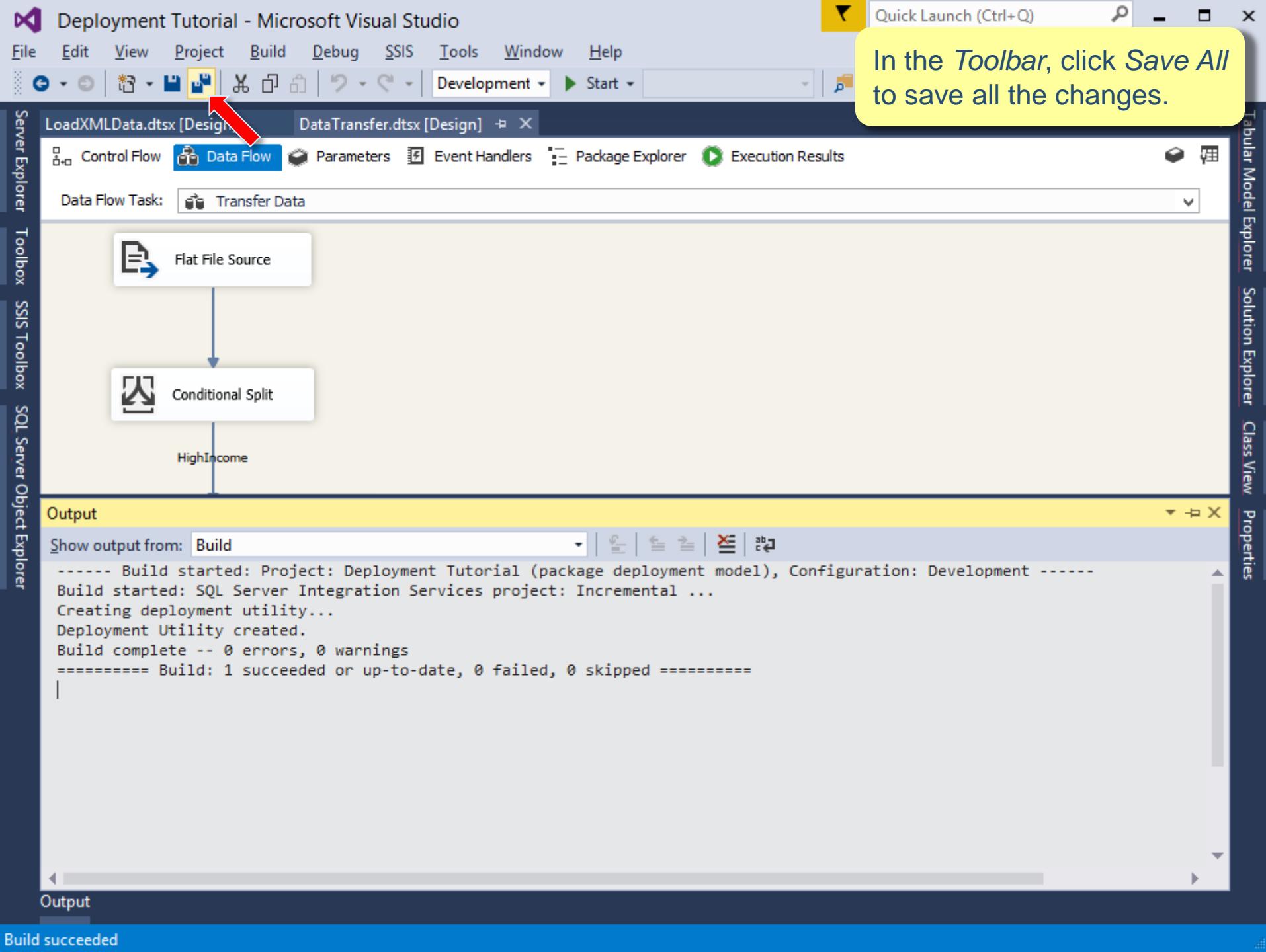












The deployment bundle is the folder that you will copy to the destination computer and use to install packages.

Navigate to the *Deployment* folder which is inside the *bin* folder, which in turn is inside the *Deployment Tutorial* package folder created when you initially saved the integration services project.

bin

File Home Share View

Copy Paste Cut ⌘ Copy path ⌘ Paste shortcut Move to ⌘ Copy to ⌘ Delete Rename New folder New item ⌘ Easy access ⌘ Properties Open Select all Select none Invert selection

Clipboard Organize New Open Select

← → ↑ ↵ Docência ArPAD 16-17 Práticas Deployment Tutorial bin Search bin

Favorites

- Desktop
- Dropbox
- Downloads
- Recent places

OneDrive

- Aulas Eliminas MEI.rtfd
- Documentos

Homegroup

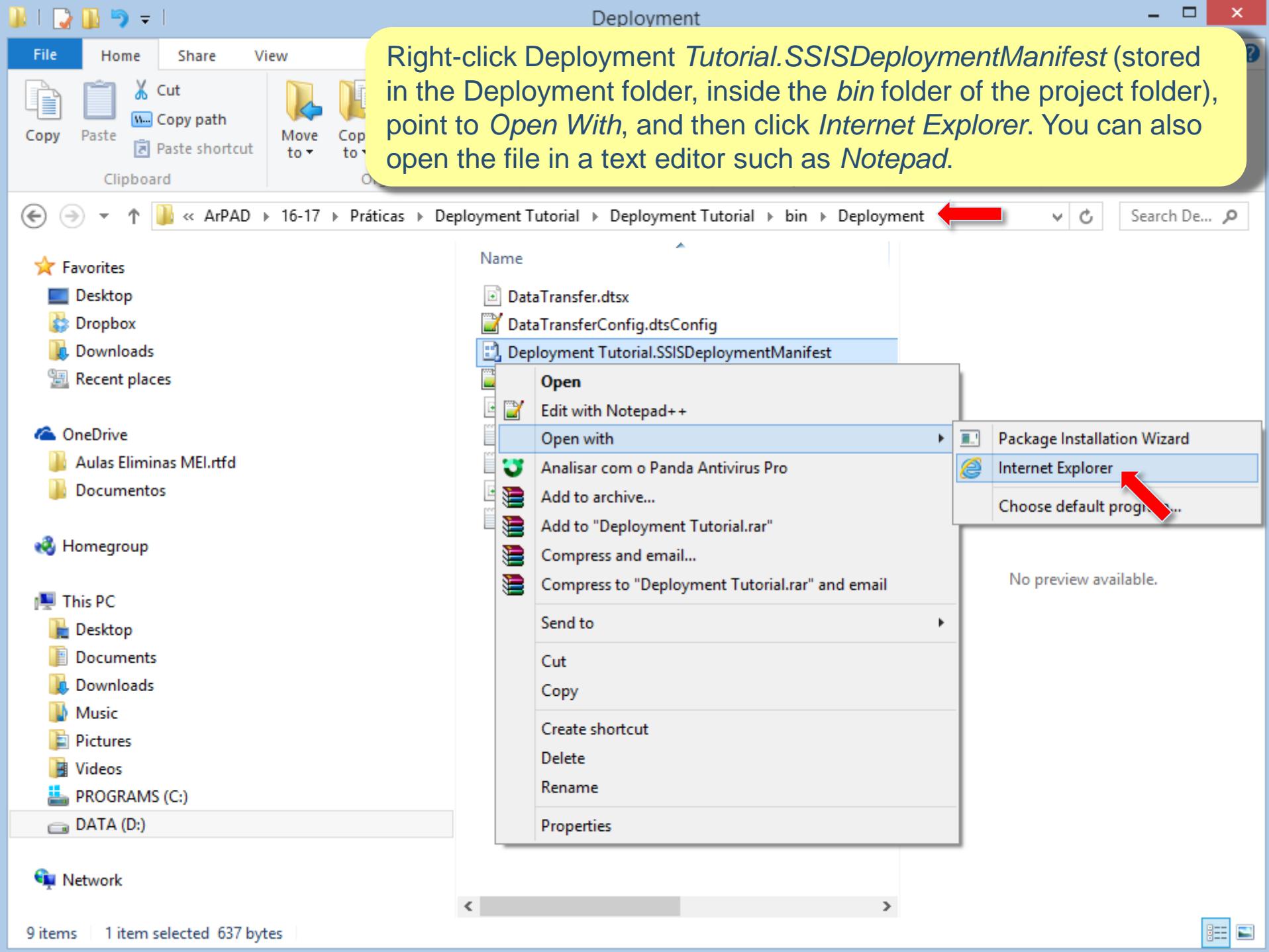
This PC

- Desktop
- Documents
- Downloads
- Music
- Pictures
- Videos
- PROGRAMS (C:)
- DATA (D:)

Network

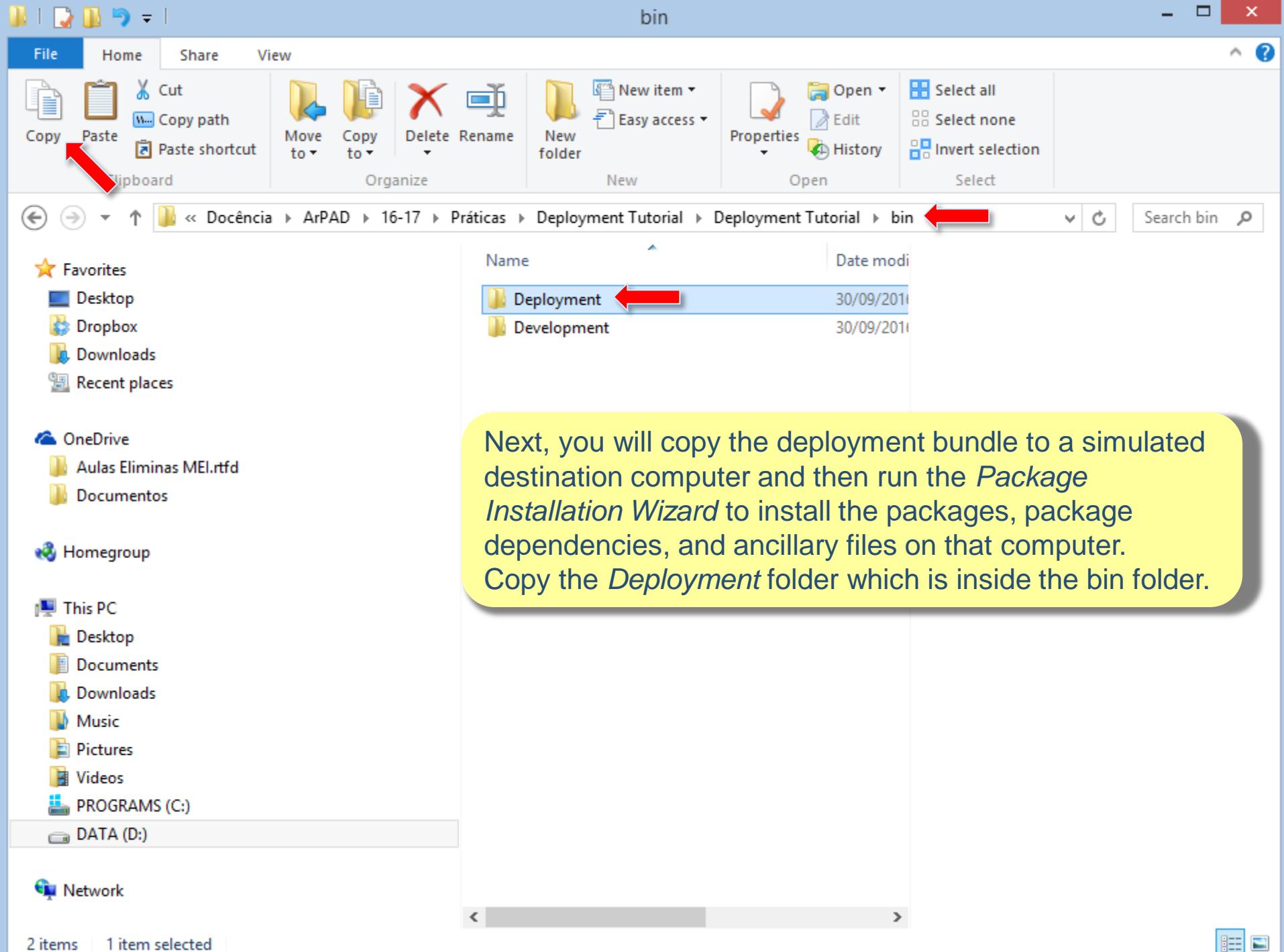
2 items 1 item selected

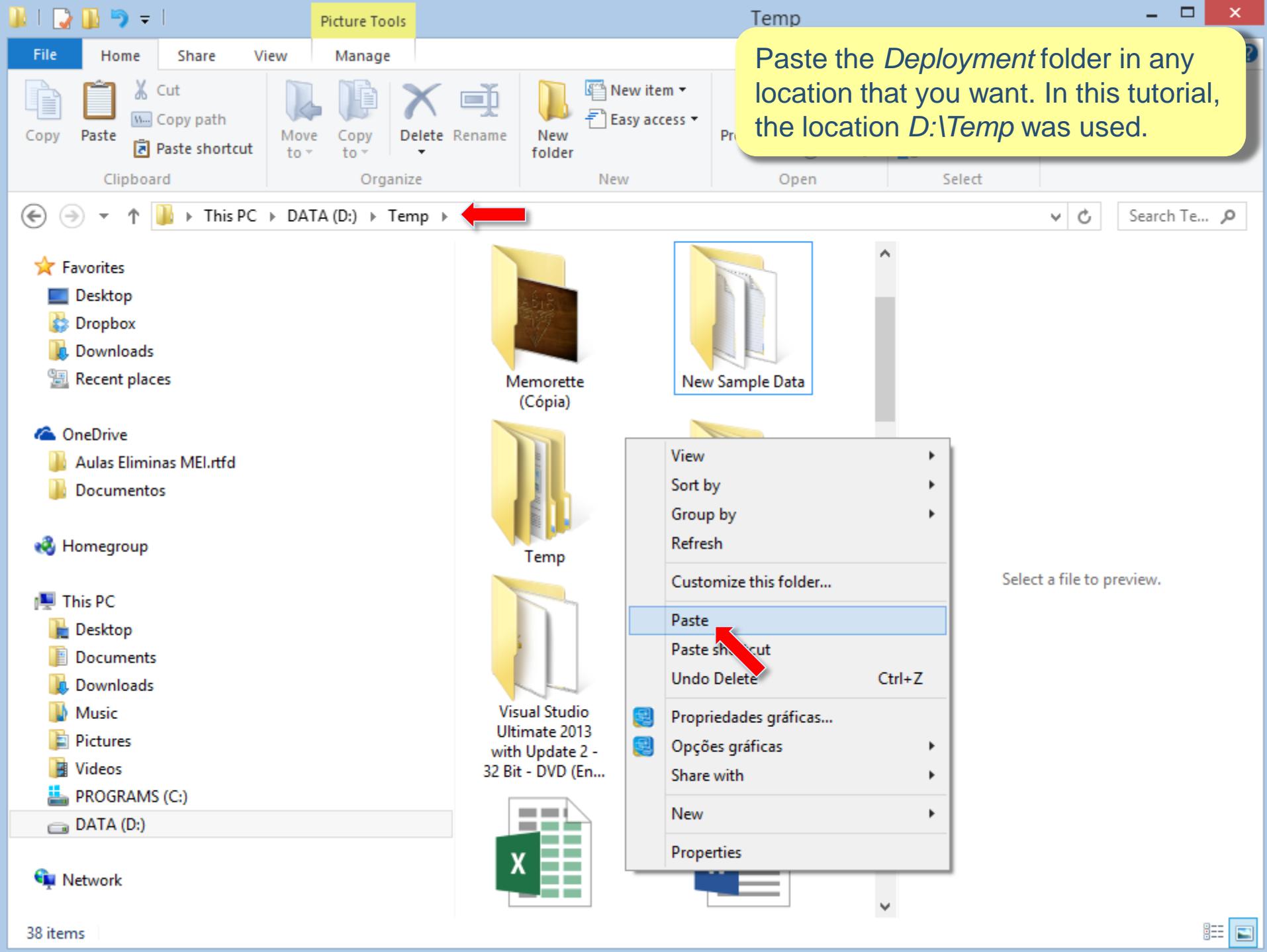
Name	Date modified
Deployment	30/09/2010
Development	30/09/2010

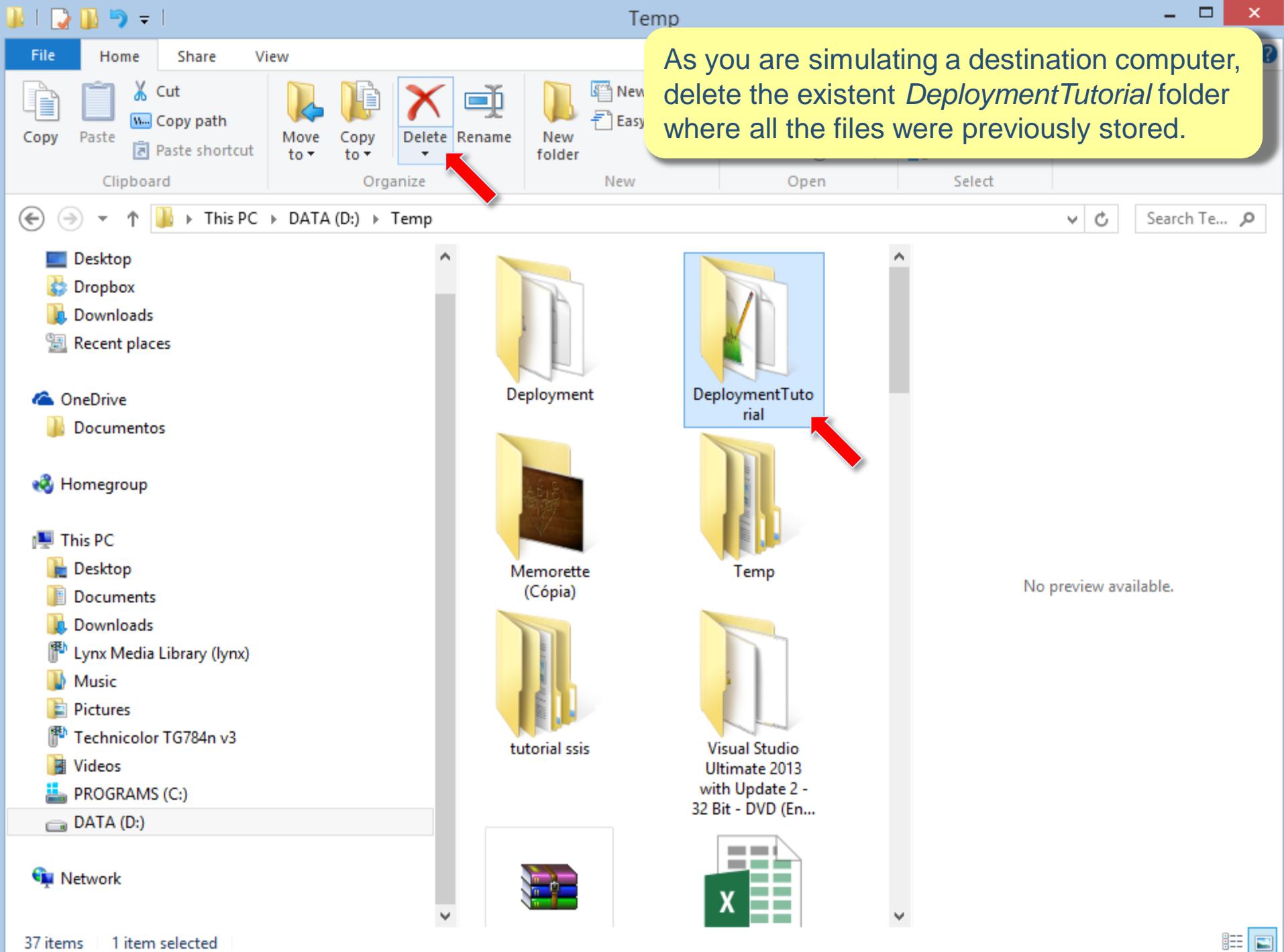


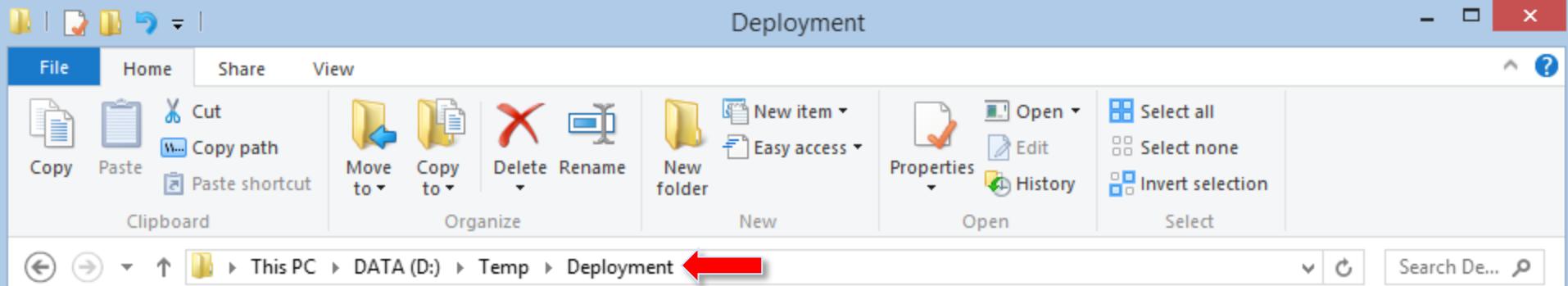
```
<?xml version="1.0"?>
- <DTSManifest AllowConfigurationChanges="true" GeneratedDate="2016-01-30T16:42:23.5658608+01:00"
GeneratedFromProjectName="Deployment Tutorial" GeneratedBy="LYNX\Paulo">
    <Package>DataTransfer.dtsx</Package>
    <Package>LoadXMLData.dtsx</Package>
    <ConfigurationFile>DataTransferConfig.dtsConfig</ConfigurationFile>
    <ConfigurationFile>LoadXMLData Configuration.dtsConfig</ConfigurationFile>
    <MiscellaneousFile>NewCustomers.txt</MiscellaneousFile>
    <MiscellaneousFile>orders.xml</MiscellaneousFile>
    <MiscellaneousFile>orders.xsd</MiscellaneousFile>
    <MiscellaneousFile>Readme.txt</MiscellaneousFile>
</DTSManifest>
```

Verify that the value of the *AllowConfigurationChanges* attribute is *true* and the XML includes a *Package* element for each of the two packages, a *MiscellaneousFile* element for each of the four non-package files, and a *ConfigurationFile* element for each of the two XML configuration files.









★ Favorites  
Desktop  
Dropbox  
Downloads  
Recent places

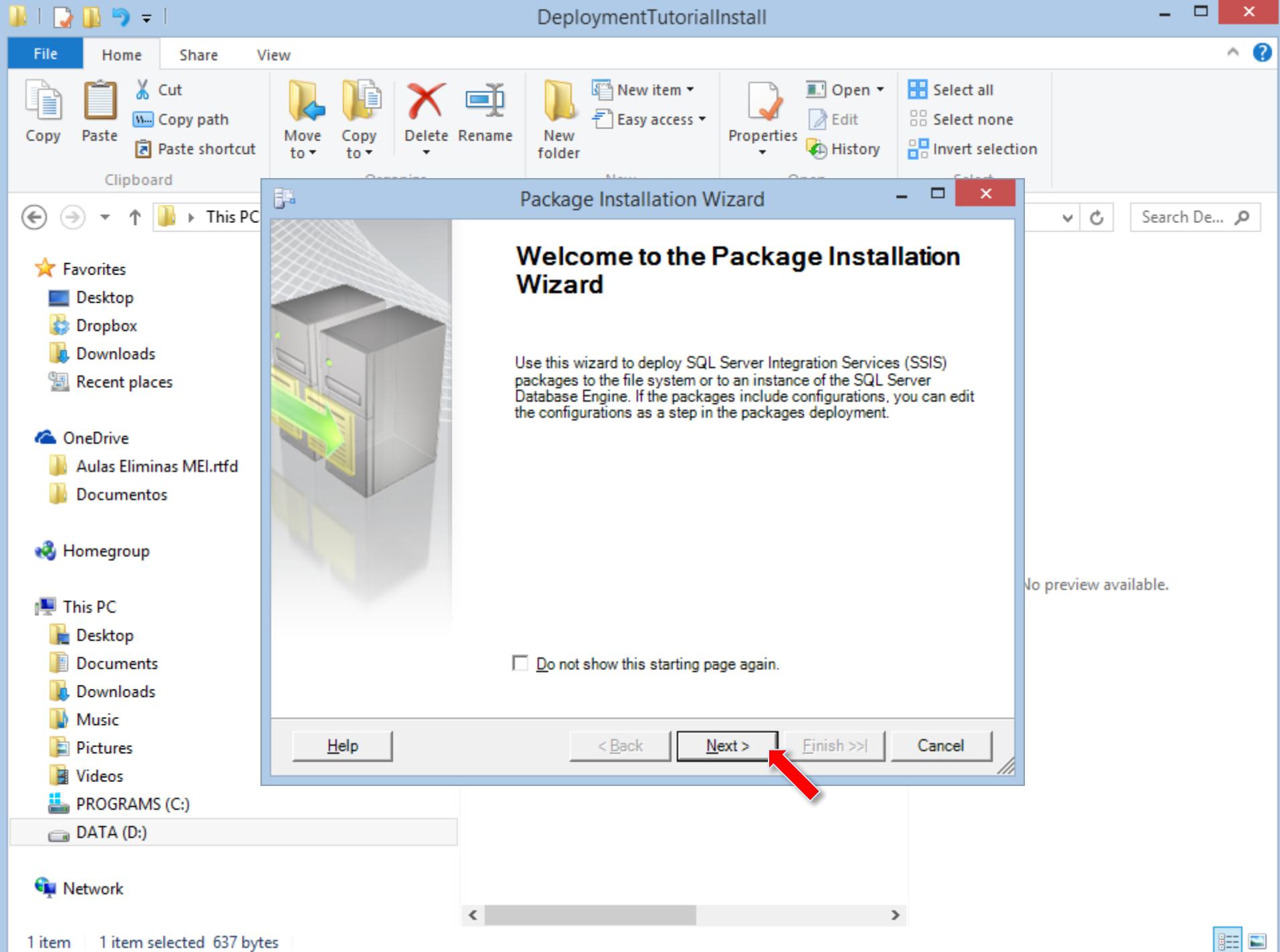
Next, you will run the *Package Installation Wizard* to deploy the packages from the *Deployment Tutorial* project to an instance of SQL Server.

In the *Deployment* folder, double-click the manifest file, *Deployment Tutorial.SSISDeploymentManifest*.

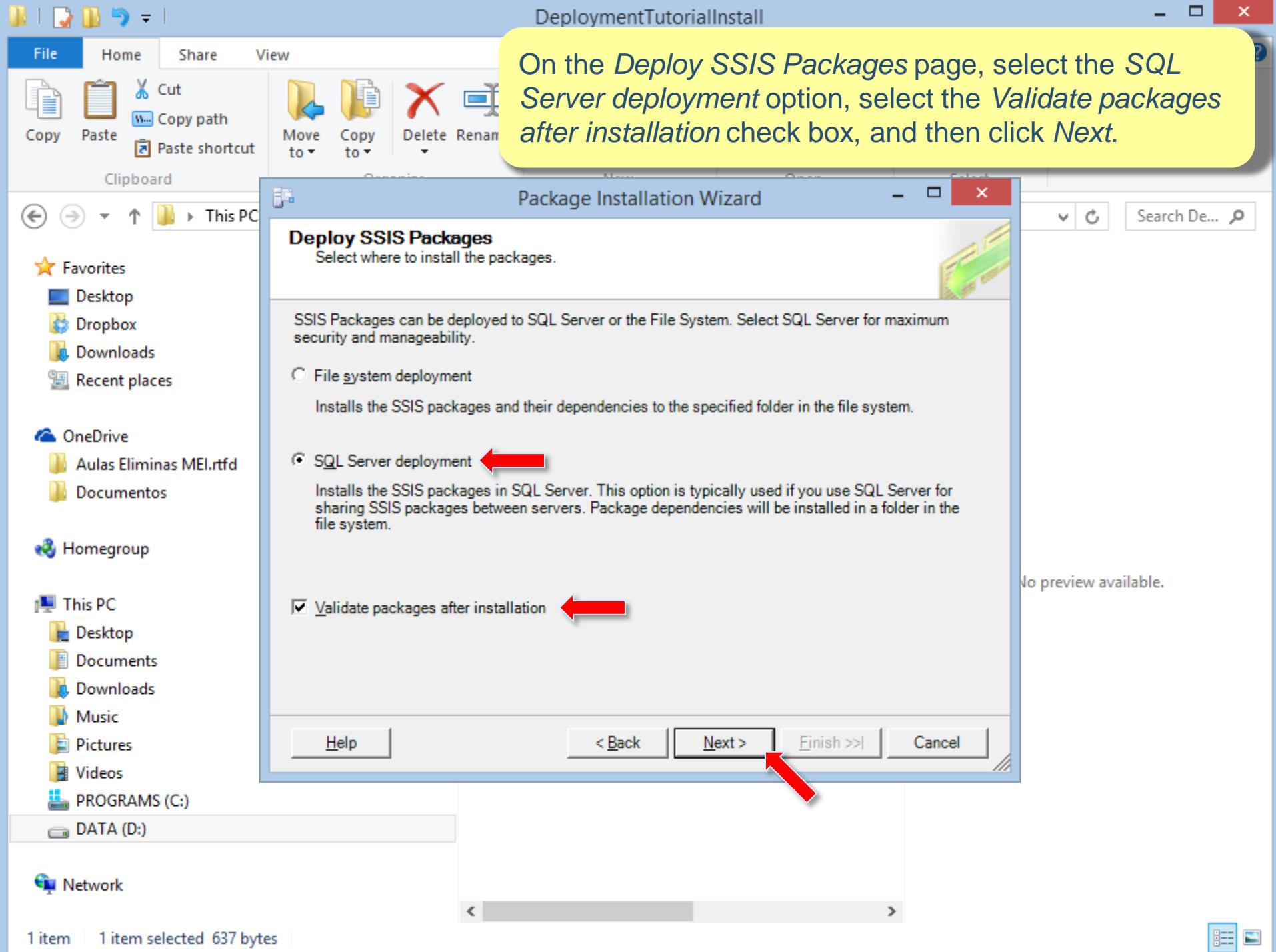
The Package Installation Wizard will guide you through the steps to install and configure the packages. You will install the packages to an instance of SQL Server on the destination computer (the computer to which you copied the deployment bundle). You will also create a folder in which the wizard will install the files.

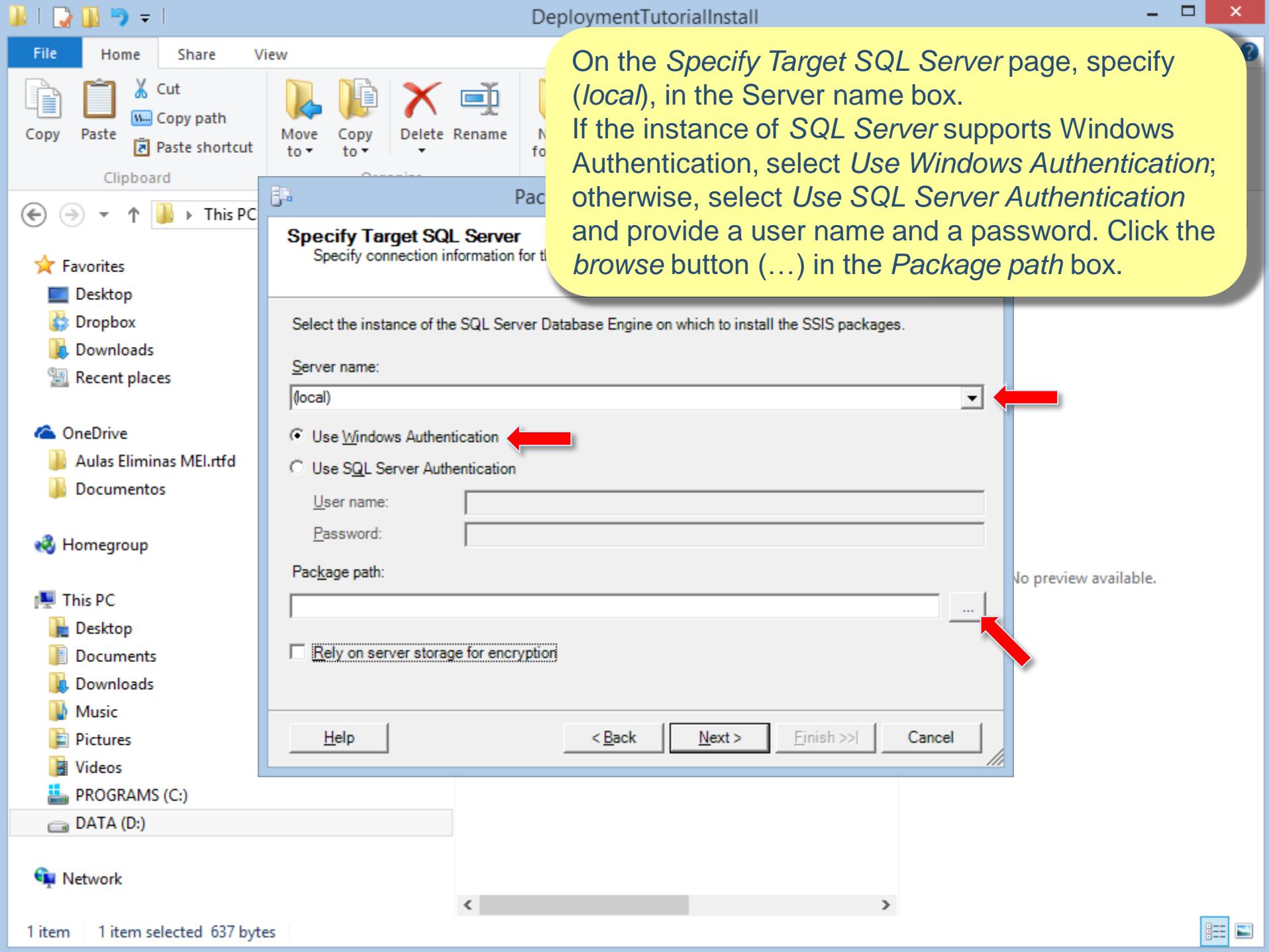
If the Package Installation Wizard doesn't automatically start, you need to manually open the manifest file with the *dtsinstall.exe*. The location of this executable is:  
*C:\Program Files\Microsoft SQL Server\160\DTs\Binn*

No preview available.

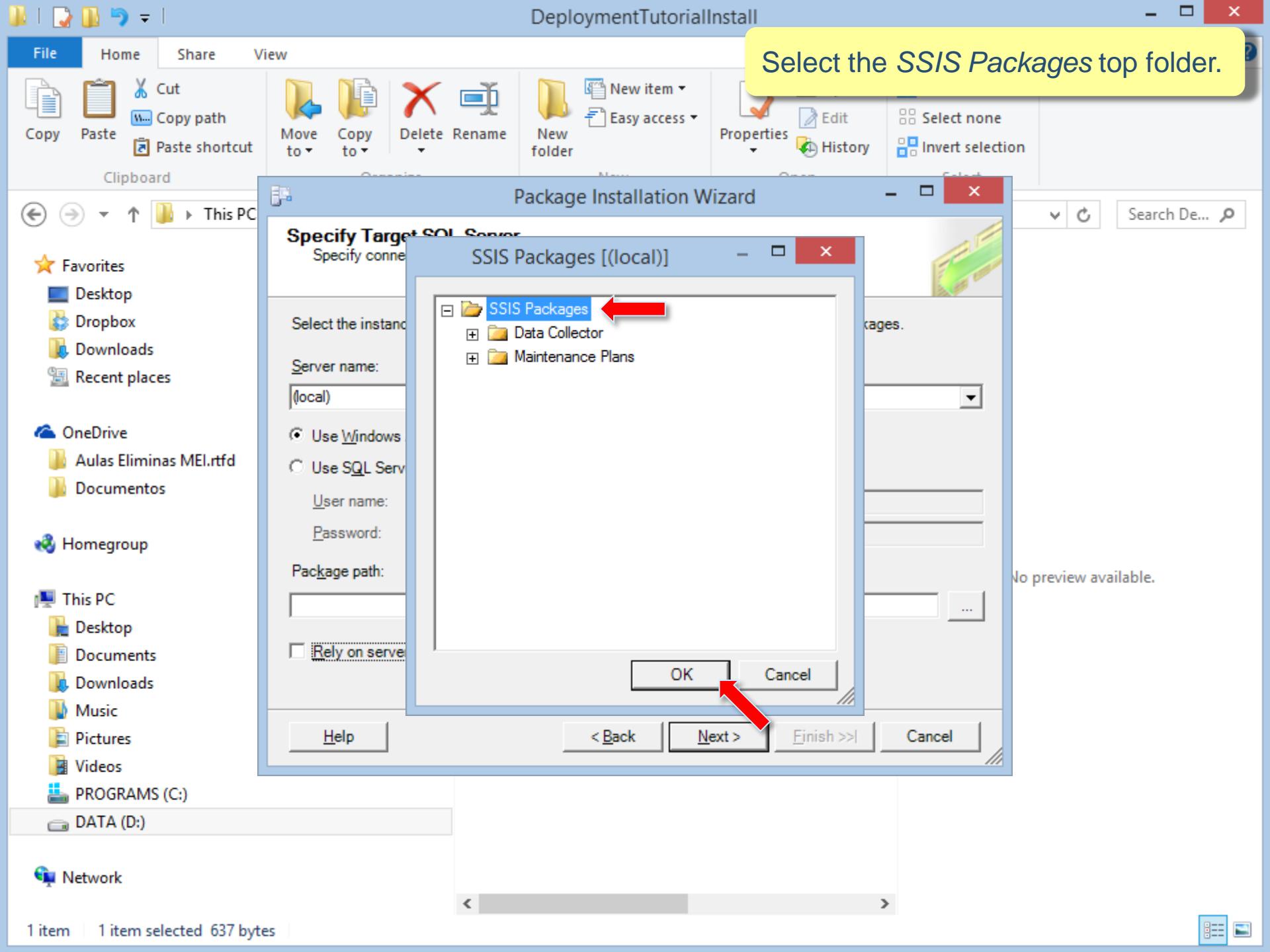


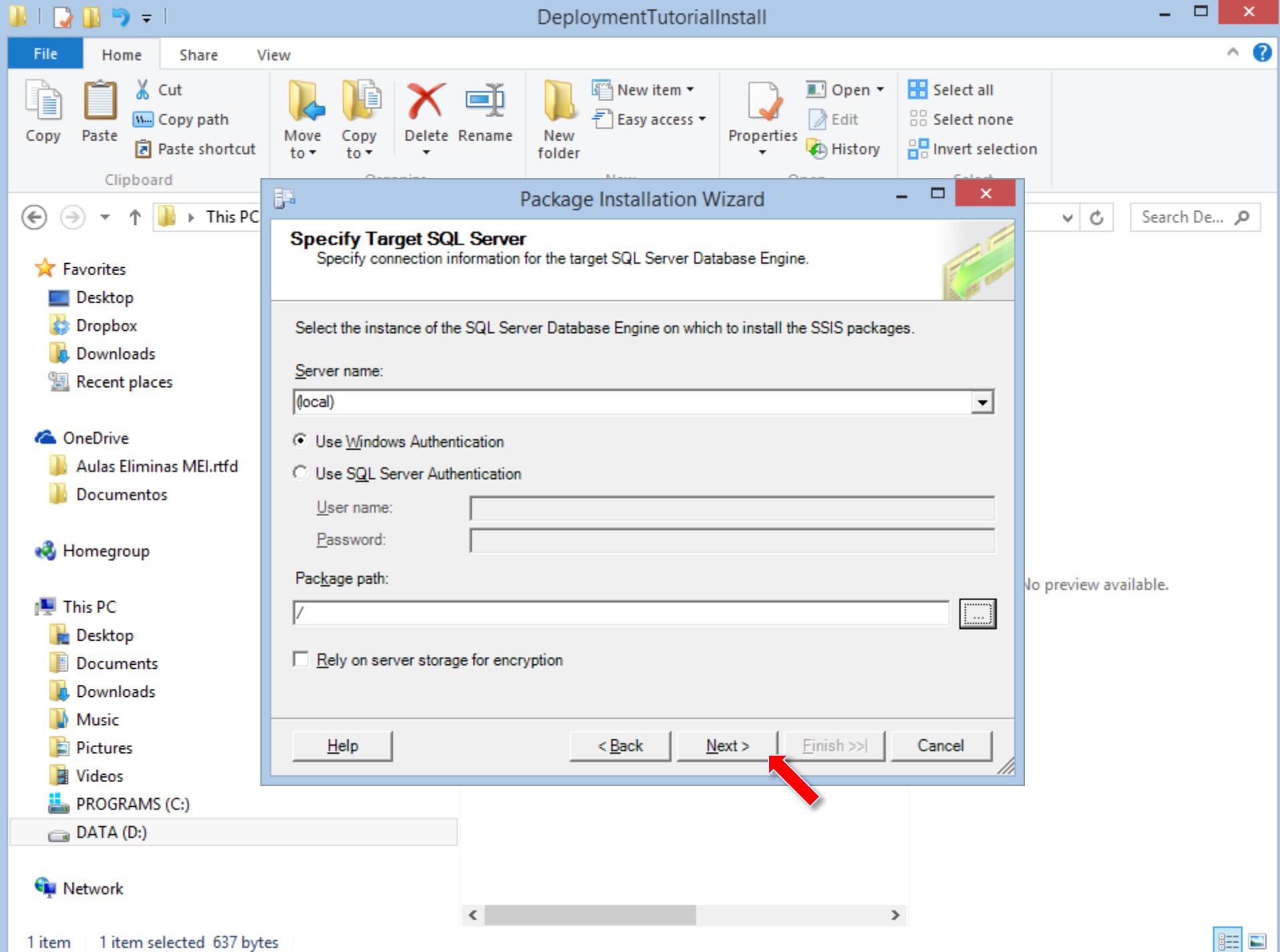
On the *Deploy SSIS Packages* page, select the *SQL Server deployment* option, select the *Validate packages after installation* check box, and then click *Next*.



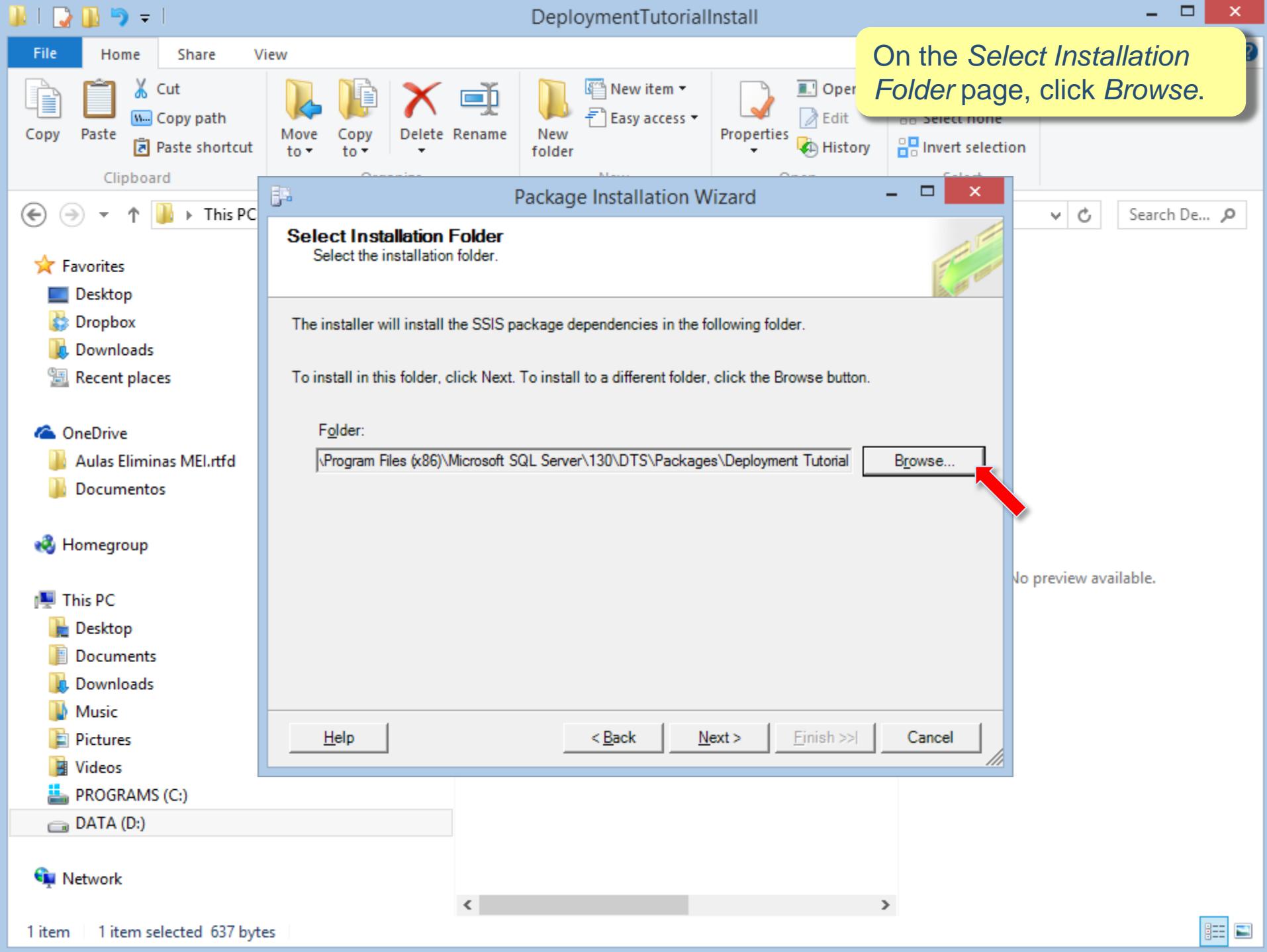


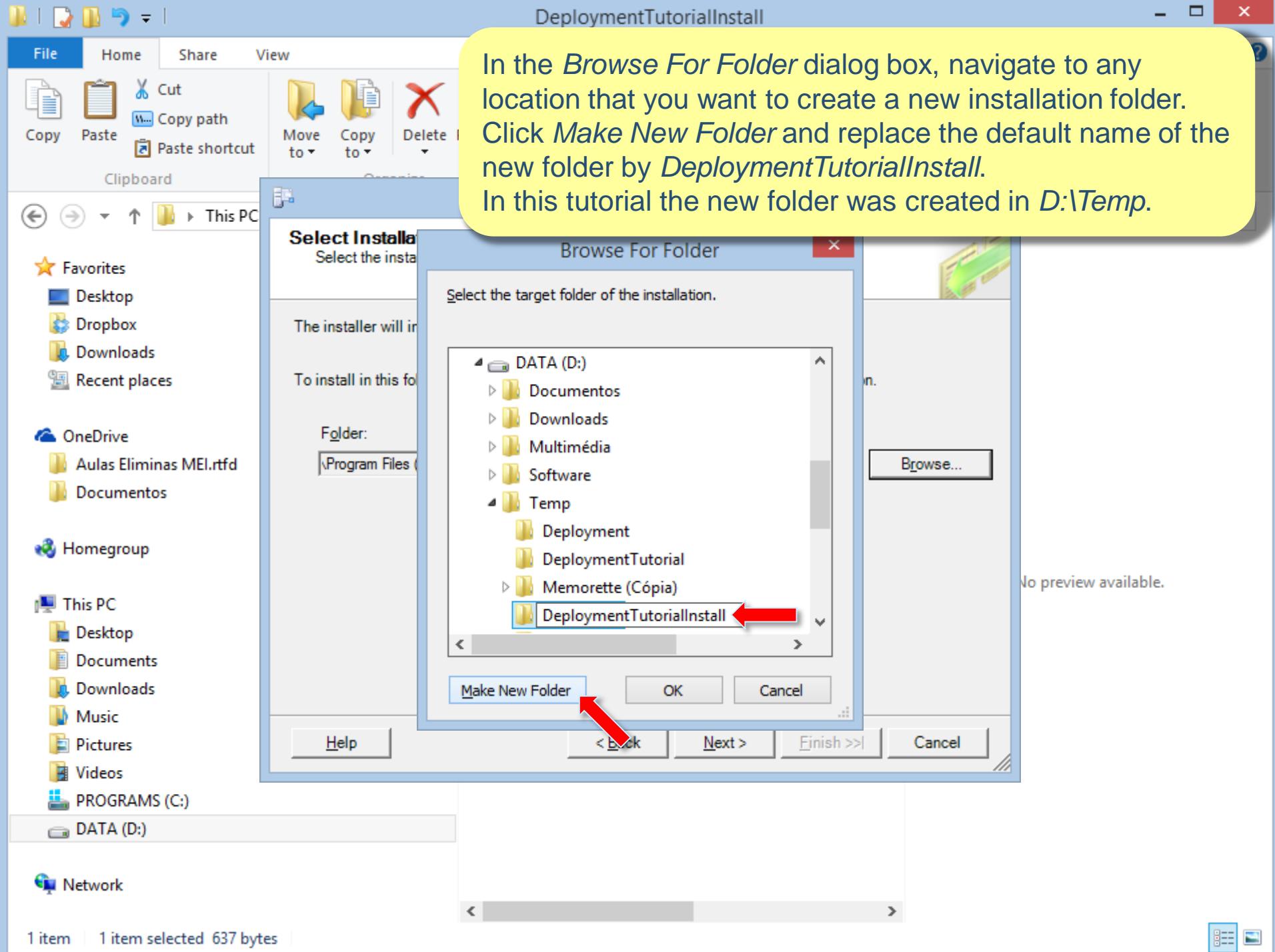
Select the SSIS Packages top folder.

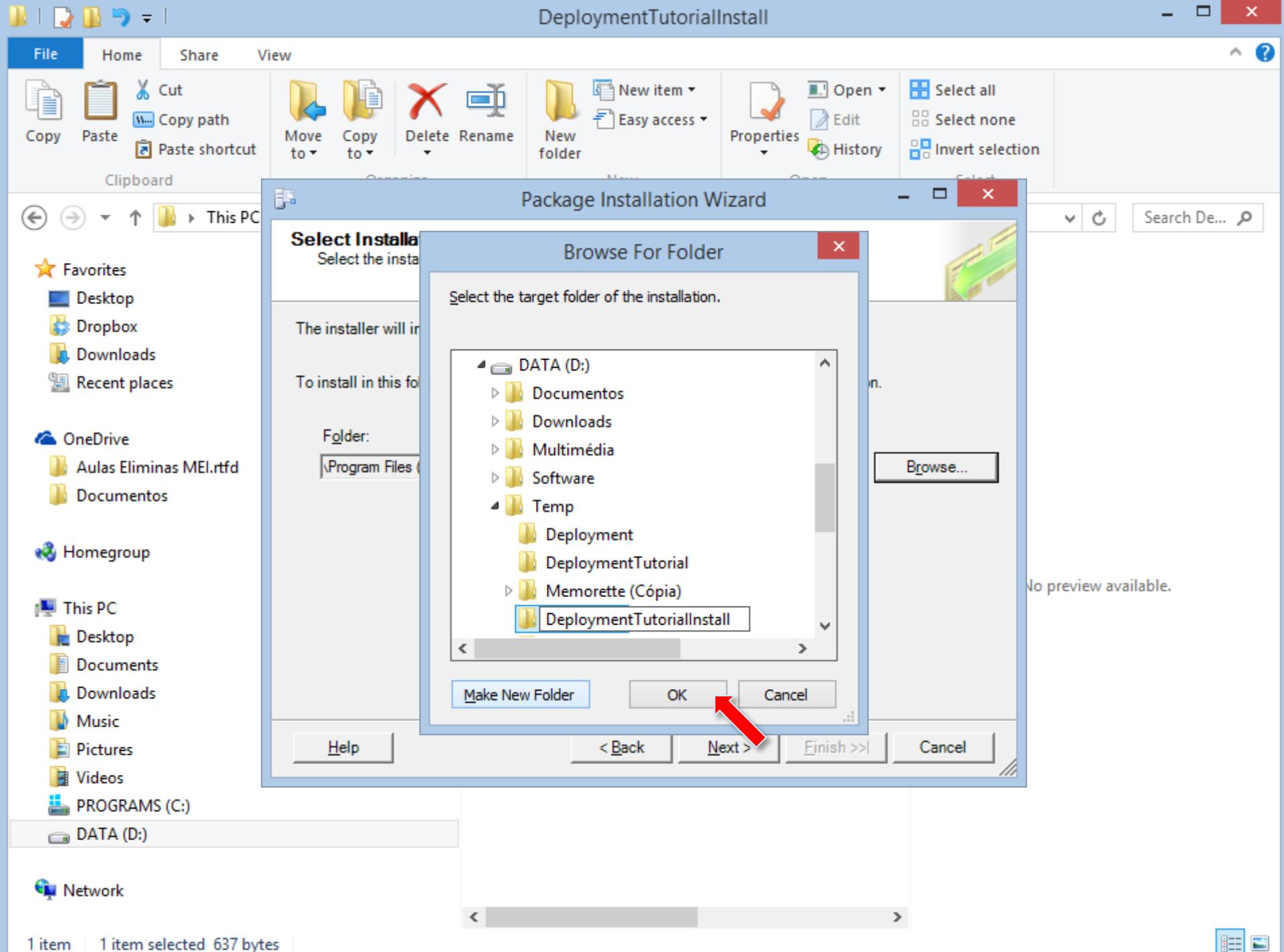


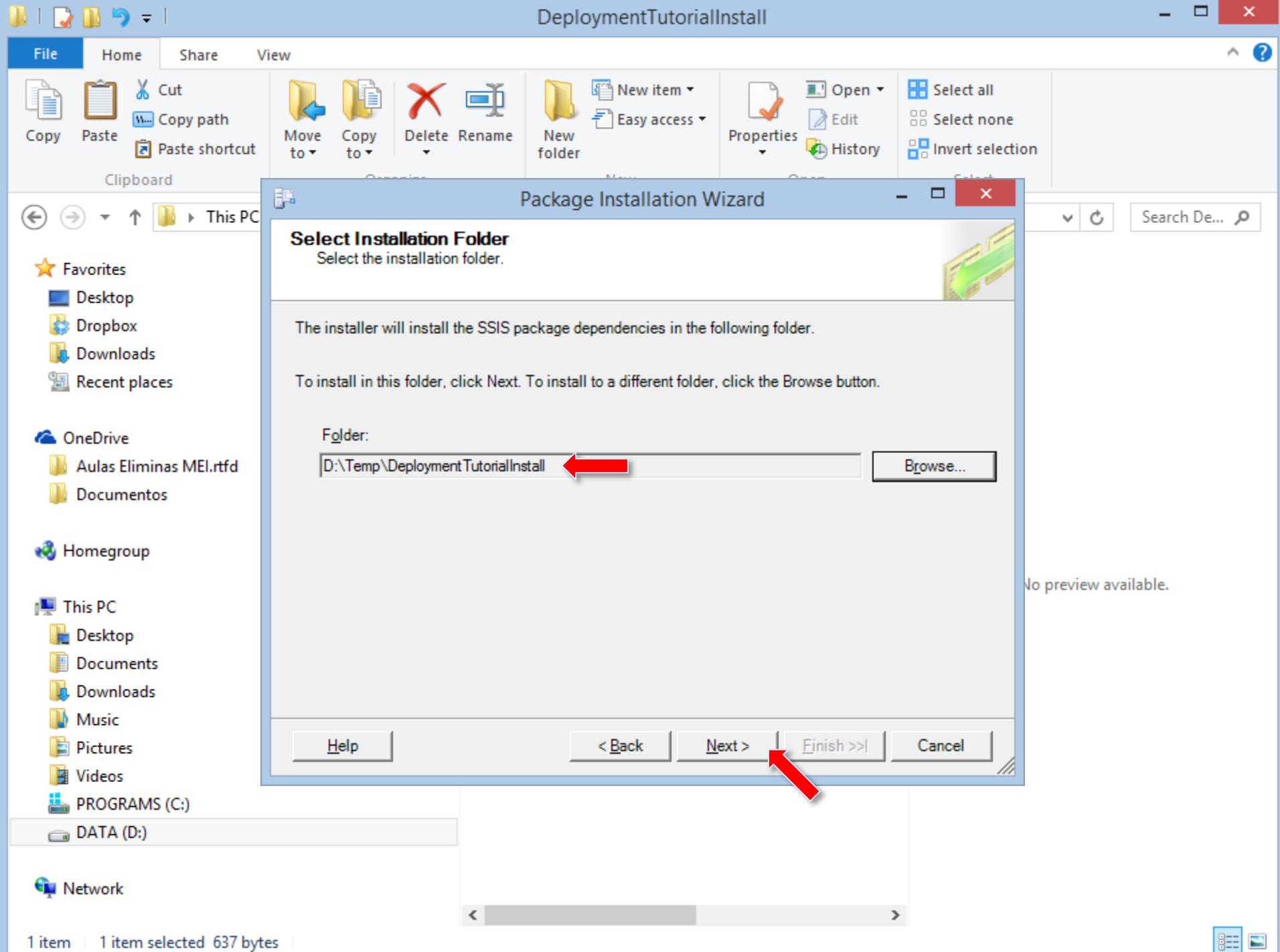


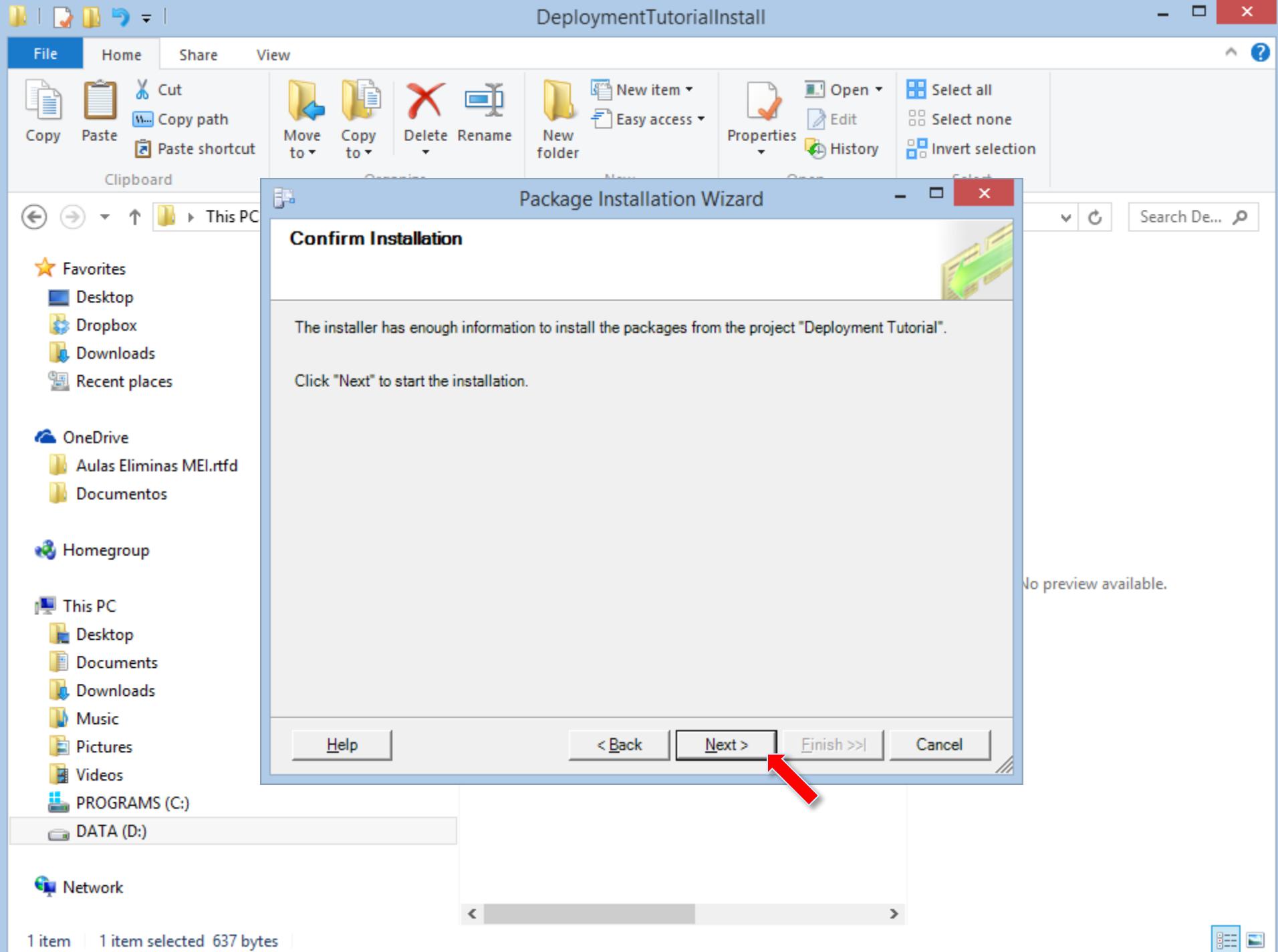
On the Select Installation Folder page, click Browse.



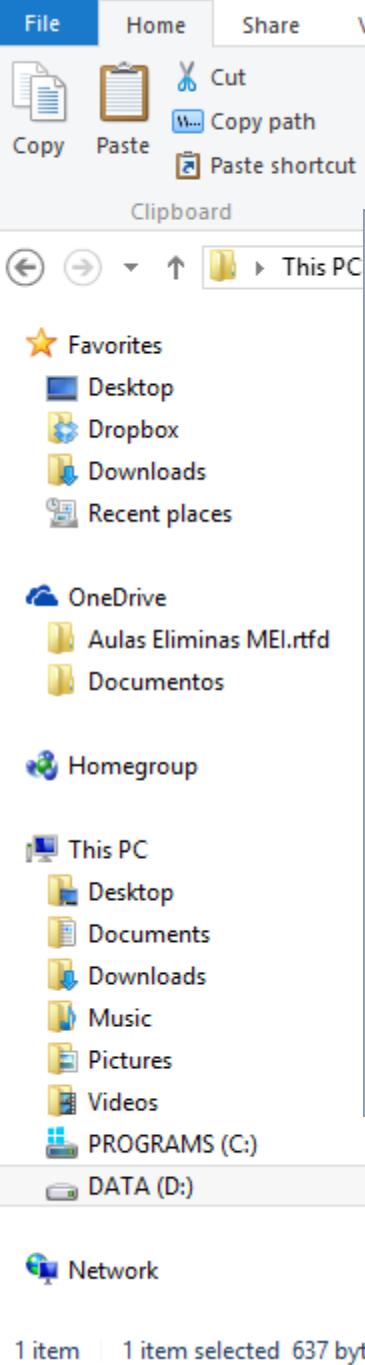
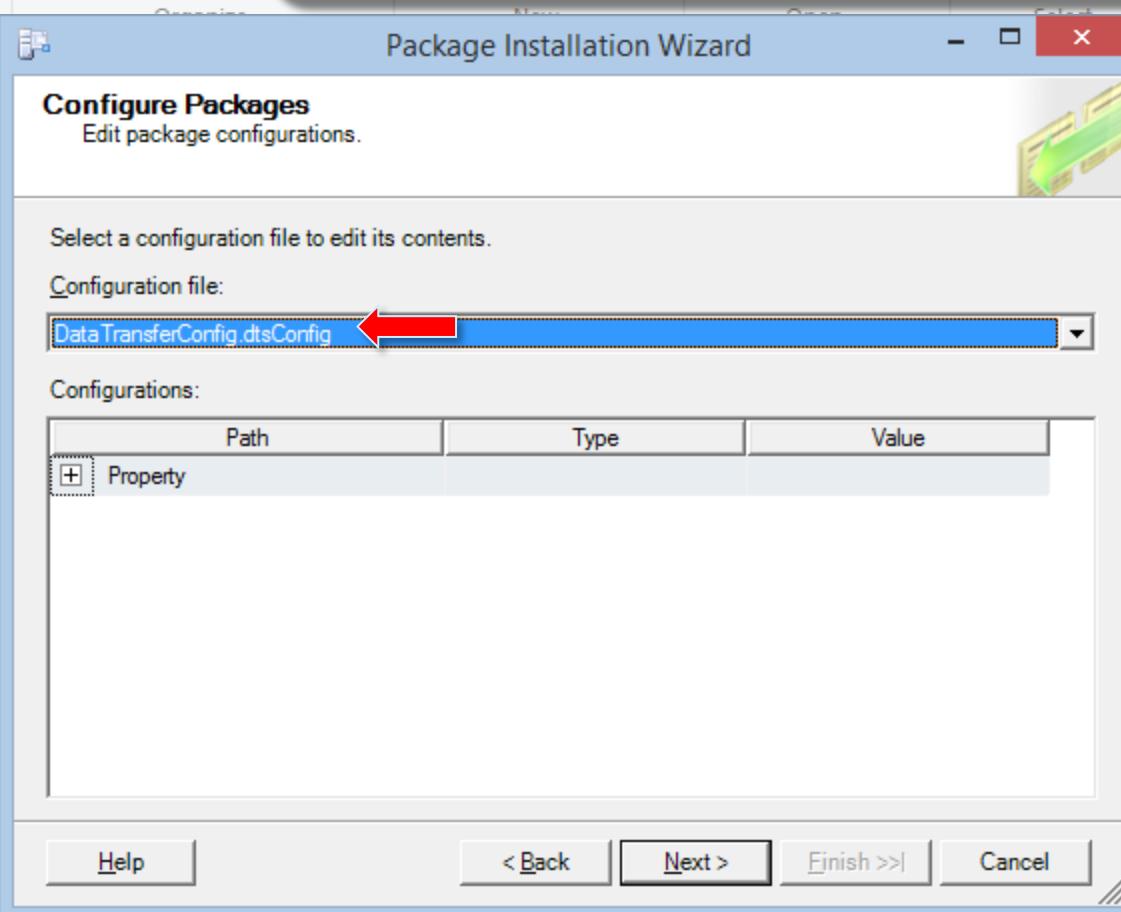








The wizard installs the packages. After installation is completed, the *Configure Packages* page opens. In the *Configuration file list*, click *datatransferconfig.dtsconfig*.



Expand *Property* in the *Path* column of the *Configurations* box.

File Home Share View

Cut Copy Paste Move to Copy to Delete Rename New folder Properties History Invert selection

Clipboard

Favorites Desktop Dropbox Downloads Recent places

OneDrive Aulas Eliminas Documentos

Homegroup

This PC Desktop Documents Downloads Music Pictures Videos

PROGRAMS (C:)

DATA (D:)

Network

Search De...

Package Installation Wizard

Configure Packages Edit package configurations.

Select a configuration file to edit its contents.

Configuration file: DataTransferConfig.dtsConfig

Configurations:

Path	Type	Value
Property		
\Package.Connections[Deplo...	System.String	D:\Temp\DeploymentTutorial\Deployment Tutorial Log
\Package.Connections[NewC...	System.String	D:\Temp\DeploymentTutorial\NewCustomers.txt

Help < Back Next > Finish >> Cancel

1 item 1 item selected 637 bytes

File Home Share View

Cut Copy Paste Copy path Paste shortcut

Clipboard

Favorites

Desktop Dropbox Downloads Recent places OneDrive Aulas Eliminadas Documentos Homegroup This PC Desktop Documents Downloads Music Pictures Videos PROGRAMS (C:) DATA (D:)

Network

1 item 1 item selected 637 bytes

Configure Packages Edit package configurations.

Select a configuration file to edit its contents.

Configuration file: DataTransferConfig.dtsConfig

Configurations:

	Path	Type	Value
Property	\Package.Connections[Deplo...	System.String	D:\Temp\DeploymentTutorialInstall\Deployment Tutorial ...
	\Package.Connections[NewC...	System.String	D:\Temp\DeploymentTutorialInstall\NewCustomers.txt

Help < Back Next > Finish >> Cancel

Update the *Value* column with the following values (or with the correct path you have used for the *DeploymentTutorialInstall* folder):  
*D:\Temp\DeploymentTutorialInstall\Deployment Tutorial Log*  
*D:\Temp\DeploymentTutorialInstall\NewCustomers.txt*  
(tip: you can copy & paste the values if the suggested location was used).

In the Configuration file list, click *loadxmldataconfig.dtsconfig* and expand *Property*.

Package Installation Wizard

### Configure Packages

Edit package configurations.

Select a configuration file to edit its contents.

Configuration file:

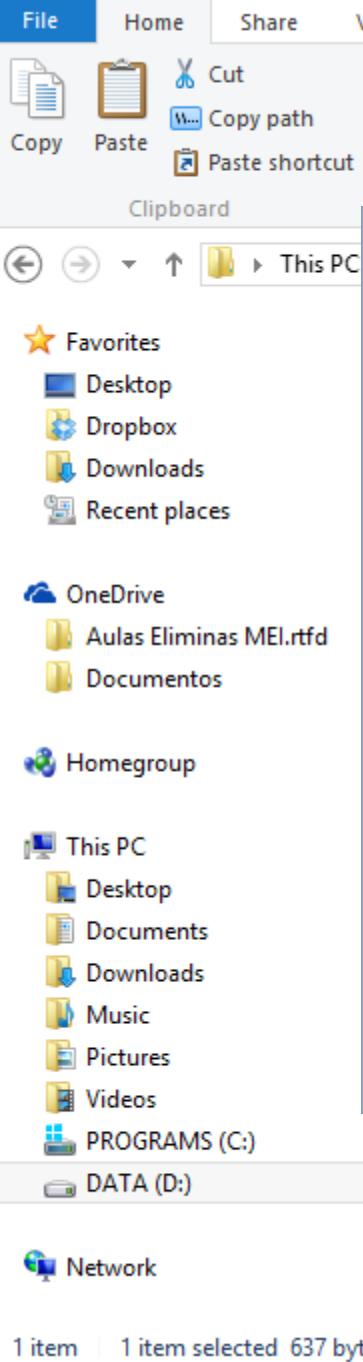
LoadXMLData Configuration.dtsConfig

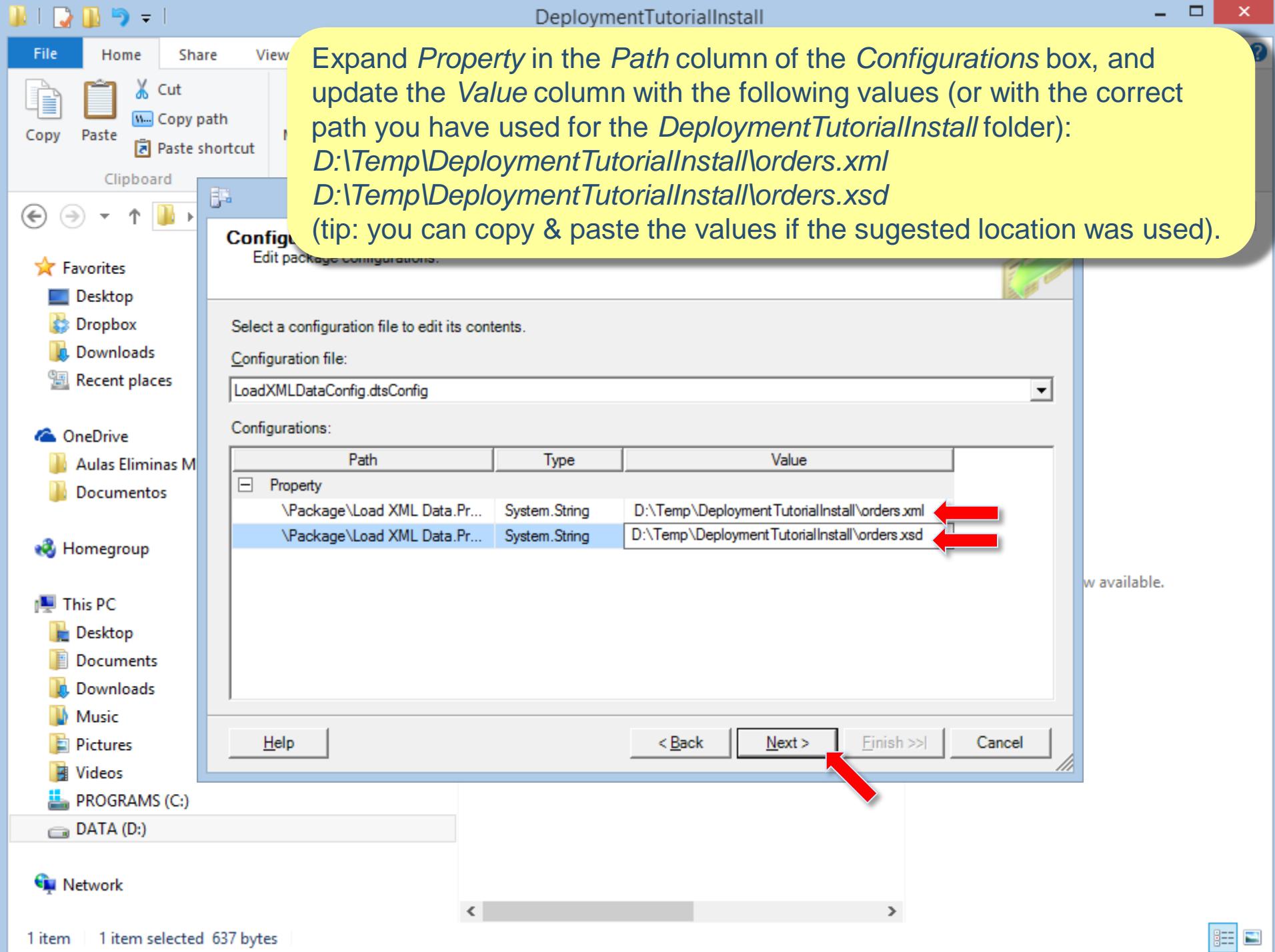
Configurations:

	Path	Type	Value
Property	\Package\Load XML Data.Pr...	System.String	D:\Temp\Deployment Tuto...
	\Package\Load XML Data.Pr...	System.String	D:\Temp\Deployment Tuto...

No preview available.

Help < Back Next > Finish >> Cancel





File Home Cut Copy Paste Clipboard Favorites Desktop Dropbox Downloads Recent places OneDrive Aulas Eliminas Documentos Homegroup This PC Desktop Documents Downloads Music Pictures Videos PROGRAMS (C:) DATA (D:) Network

Packaging Progress: 1 item | 1 item selected 637 bytes

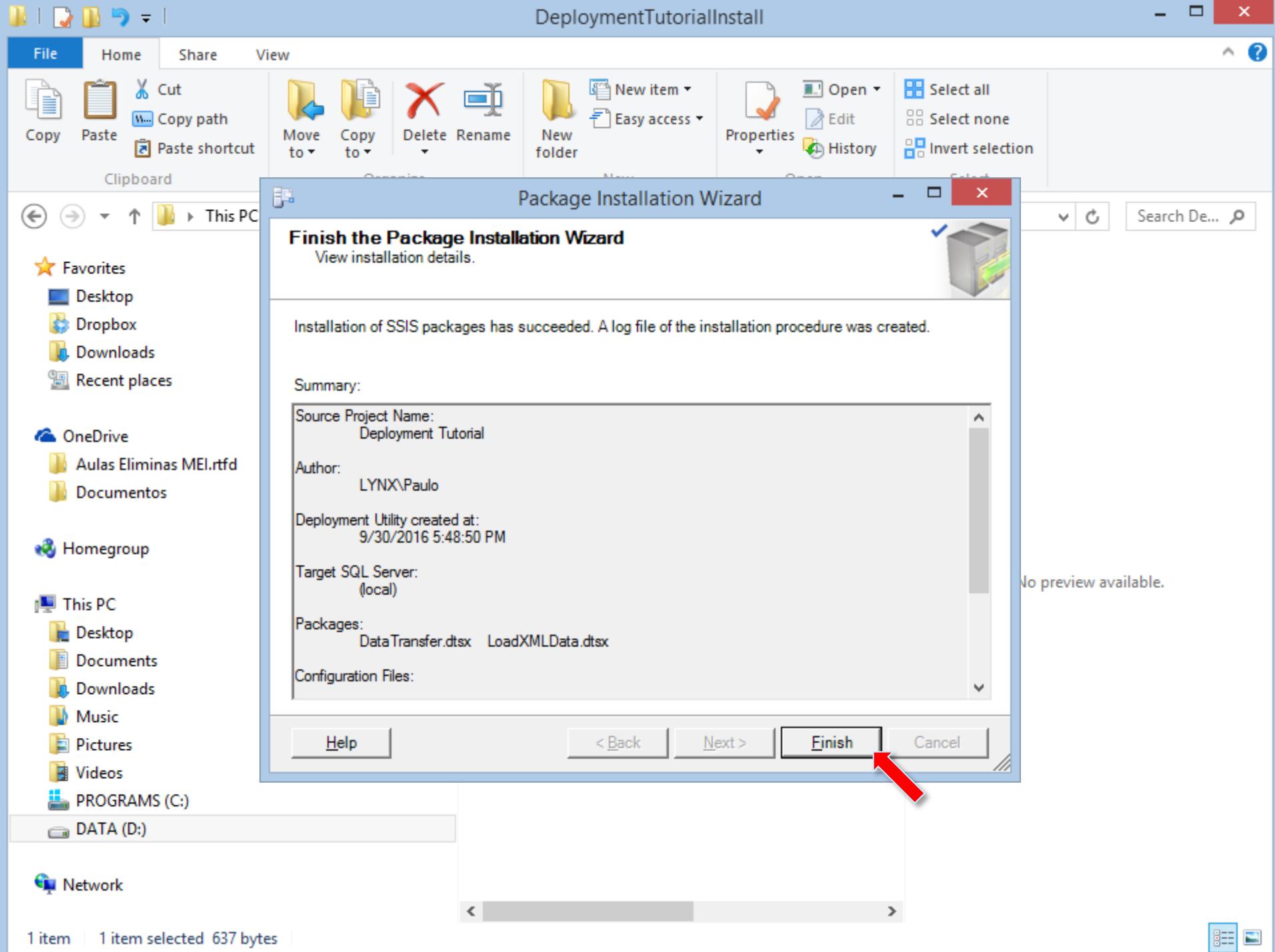
**Packages Validation**  
All installed packages are validated.

Packages validation progress:

- DataTransfer
  - ⚠ Warning: The configuration file name "D:\Temp\DeploymentTutorial\datatransferconfig.dtsconfig" is not valid. Check the configuration entries for "DataTransfer".
  - ⚠ Warning: Failure importing configuration file: "D:\Temp\DeploymentTutorial\datatransferconfig.dtsconfig".
  - ⚠ Warning: Failed to load at least one of the configuration entries for the package. Check configuration entries for "DataTransfer".
  - ⚠ Warning: The SSIS logging provider has failed to open the log. Error code: 0x80070003. The system cannot find the path specified.
  - ⚠ Warning: The configuration file name "D:\Temp\DeploymentTutorial\datatransferconfig.dtsconfig" is not valid. Check the configuration entries for "DataTransfer".
  - ⚠ Warning: Failure importing configuration file: "D:\Temp\DeploymentTutorial\datatransferconfig.dtsconfig".
  - ⚠ Warning: The configuration file name "D:\Temp\DeploymentTutorial\DataTransferConfig.dtsConfig" is not valid. Check the configuration entries for "DataTransfer".
  - ⚠ Warning: Failure importing configuration file: "D:\Temp\DeploymentTutorial\DataTransferConfig.dtsConfig".
  - ⚠ Warning: Failed to load at least one of the configuration entries for the package. Check configuration entries for "DataTransfer".
  - 🔍 Validation has started
  - 🔍 Validation is completed
- LoadXMLData
  - ⚠ Warning: The configuration file name "D:\Temp\DeploymentTutorial\loadxmldataconfig.dtsconfig" is not valid. Check the configuration entries for "LoadXMLData".
  - ⚠ Warning: Failure importing configuration file: "D:\Temp\DeploymentTutorial\loadxmldataconfig.dtsconfig".
  - ⚠ Warning: The configuration file name "D:\Temp\DeploymentTutorial\LoadXMLDataConfig.dtsConfig" is not valid. Check the configuration entries for "LoadXMLData".
  - ⚠ Warning: Failure importing configuration file: "D:\Temp\DeploymentTutorial\LoadXMLDataConfig.dtsConfig".
  - ⚠ Warning: Failed to load at least one of the configuration entries for the package. Check configuration entries for "LoadXMLData".
  - ⚠ Warning: The configuration file name "D:\Temp\DeploymentTutorial\loadxmldataconfig.dtsconfig" is not valid. Check the configuration entries for "LoadXMLData".
  - ⚠ Warning: Failure importing configuration file: "D:\Temp\DeploymentTutorial\loadxmldataconfig.dtsconfig".
  - ⚠ Warning: The configuration file name "D:\Temp\DeploymentTutorial\LoadXMLDataConfig.dtsConfig" is not valid. Check the configuration entries for "LoadXMLData".
  - ⚠ Warning: Failure importing configuration file: "D:\Temp\DeploymentTutorial\LoadXMLDataConfig.dtsConfig".
  - ⚠ Warning: Failed to load at least one of the configuration entries for the package. Check configuration entries for "LoadXMLData".
  - 🔍 Validation has started
  - 🔍 Validation is completed

Help < Back Next > Finish >> Cancel

On the *Package Validation* page, view the validation results of each package installed. Because you haven't updated yet the values of the environment variables several warnings appear on the Package Validation page. These warnings do not affect package installation.



Go to the Installation folder (in this tutorial: *D:\Temp\DeploymentTutorialInstall*) and see the *files* that are now stored into it.

File Home Share View

Copy Paste Cut Copy path Move to Copy to Delete Rename New folder New item Easy access

Clipboard Organize New Open Select

This PC > DATA (D:) > Temp > DeploymentTutorialInstall

Favorites

- Desktop
- Dropbox
- Downloads
- Recent places

OneDrive

- Aulas Eliminas MEI.rtf
- Documentos

Homegroup

Select a file to preview.

Name Date r

DataTransferConfig.dtsConfig	30/09/
LoadXMLDataConfig.dtsConfig	30/09/
NewCustomers.txt	12/07/
orders.xml	12/07/
orders.xsd	12/07/
Readme.txt	12/07/

DATA (D:)

Network

6 items

Let's update the environment variables with the new location of the packages configuration files.  
On Windows Search type *environment variables* and execute *Edit the system environment variables*.

## Search

Everywhere ▾

environment variables

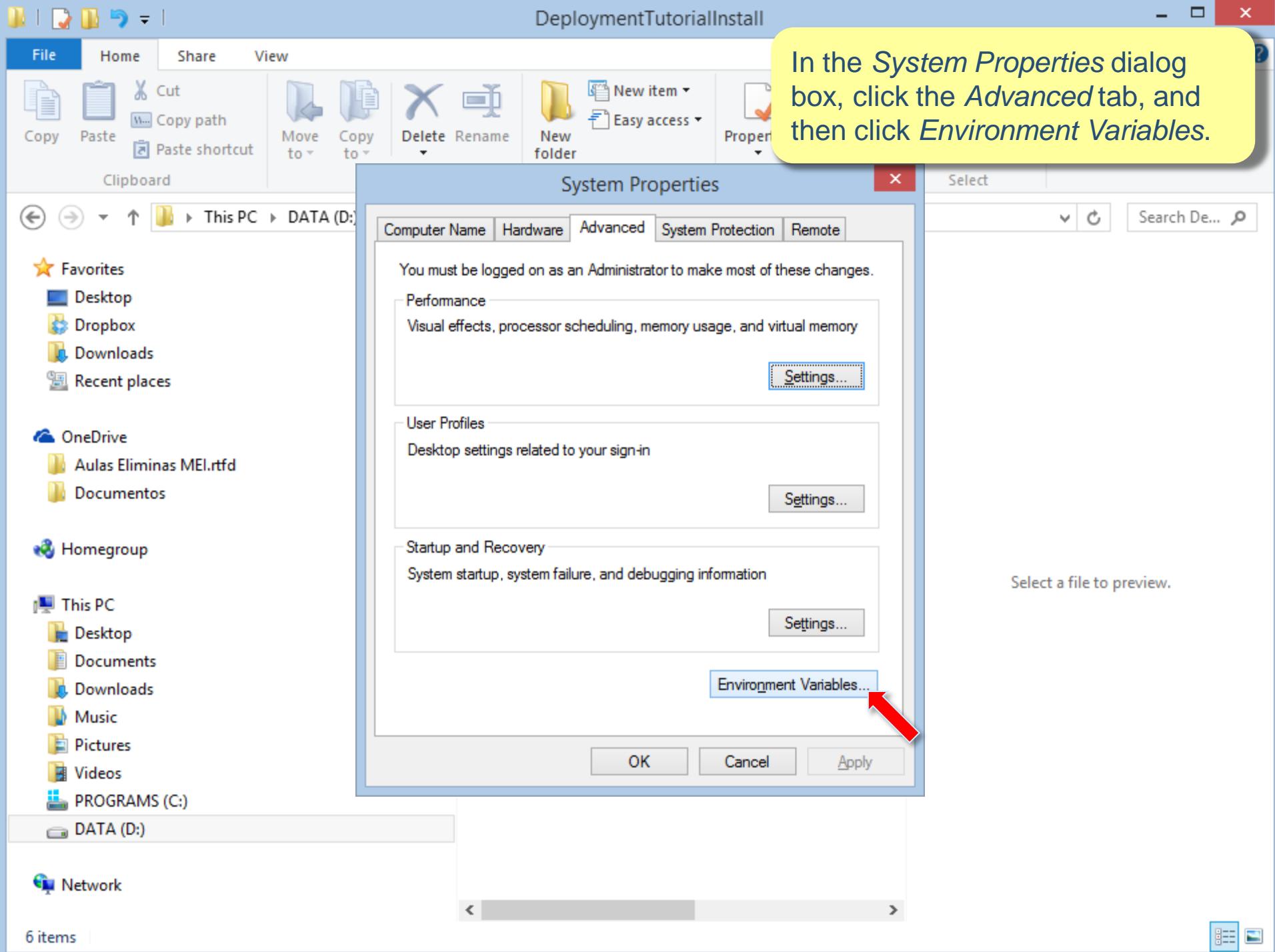


Edit the system environment variables

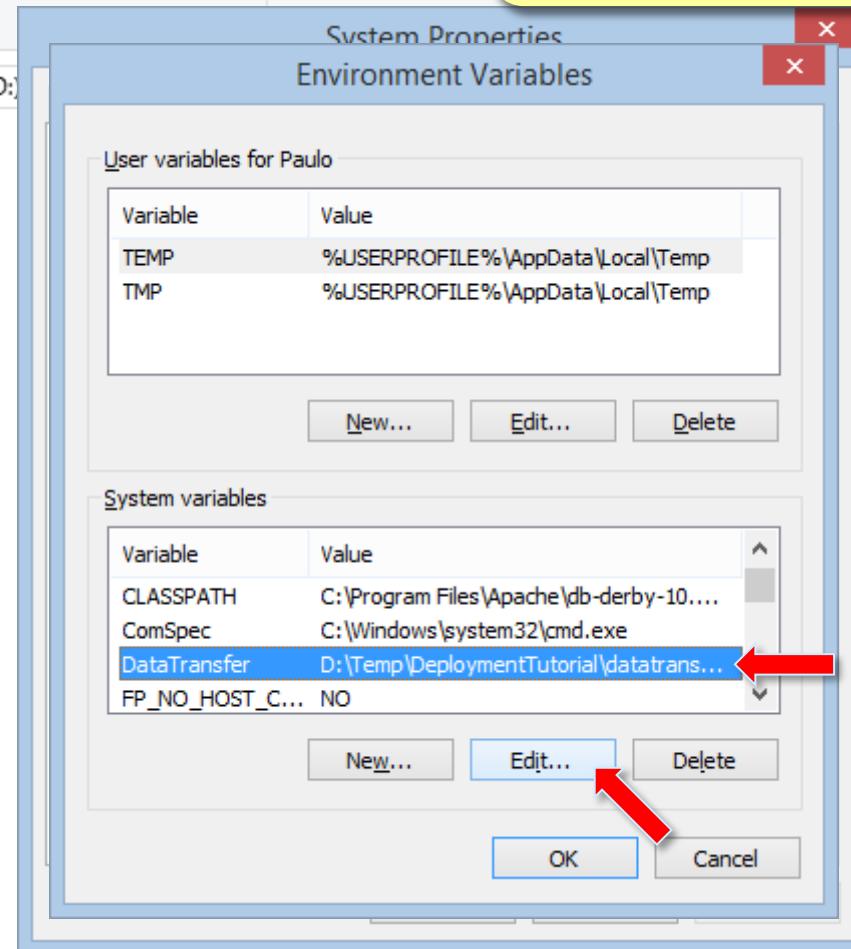


Edit environment variables for your account

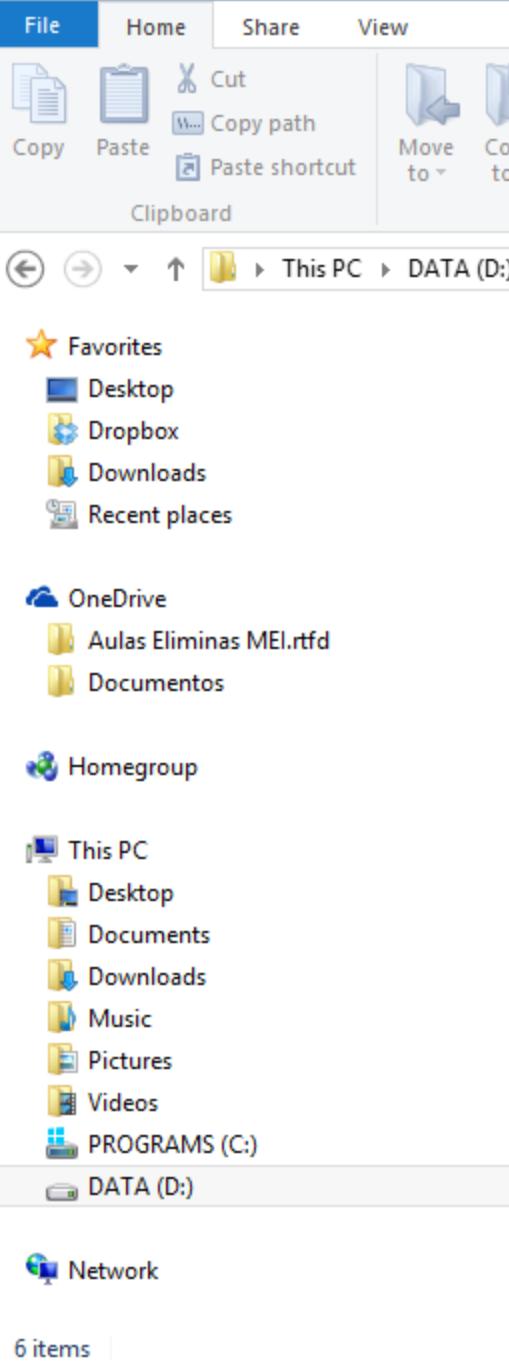
In the *System Properties* dialog box, click the *Advanced* tab, and then click *Environment Variables*.



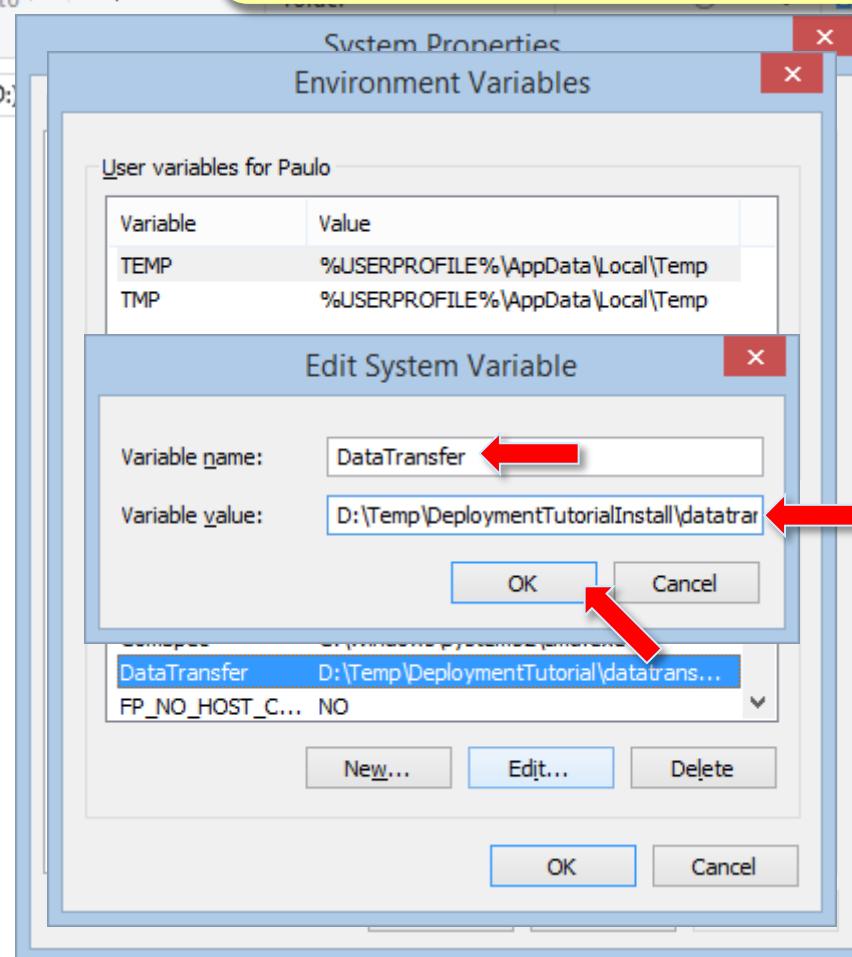
Select *DataTransfer* variable in the *System Variables* list box of the *Environment Variables* dialog box and click *Edit*.



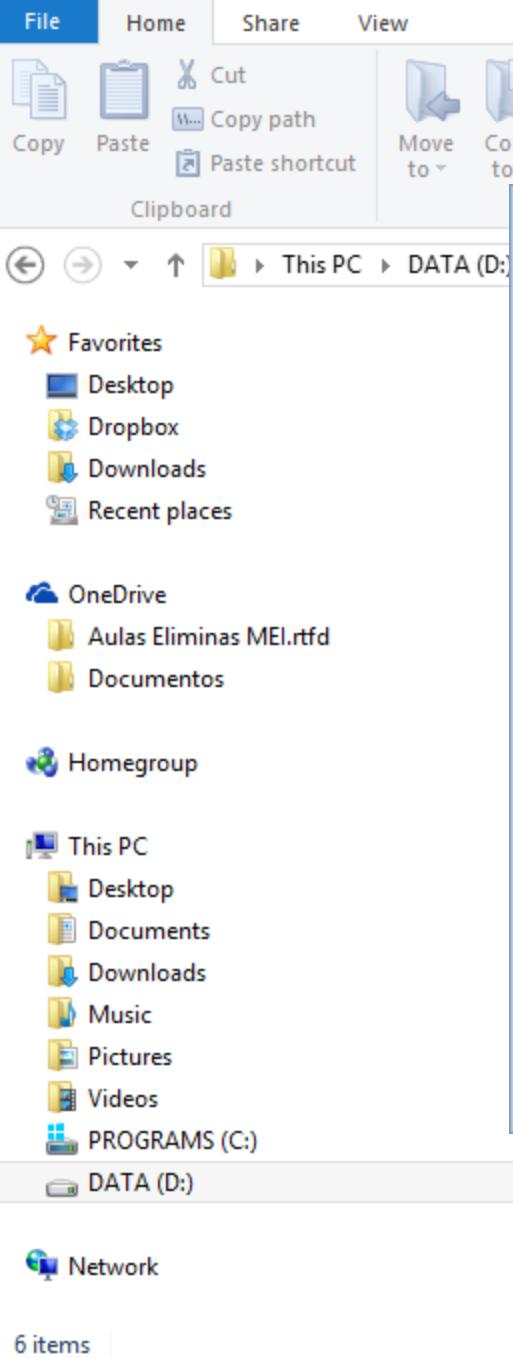
Select a file to preview.



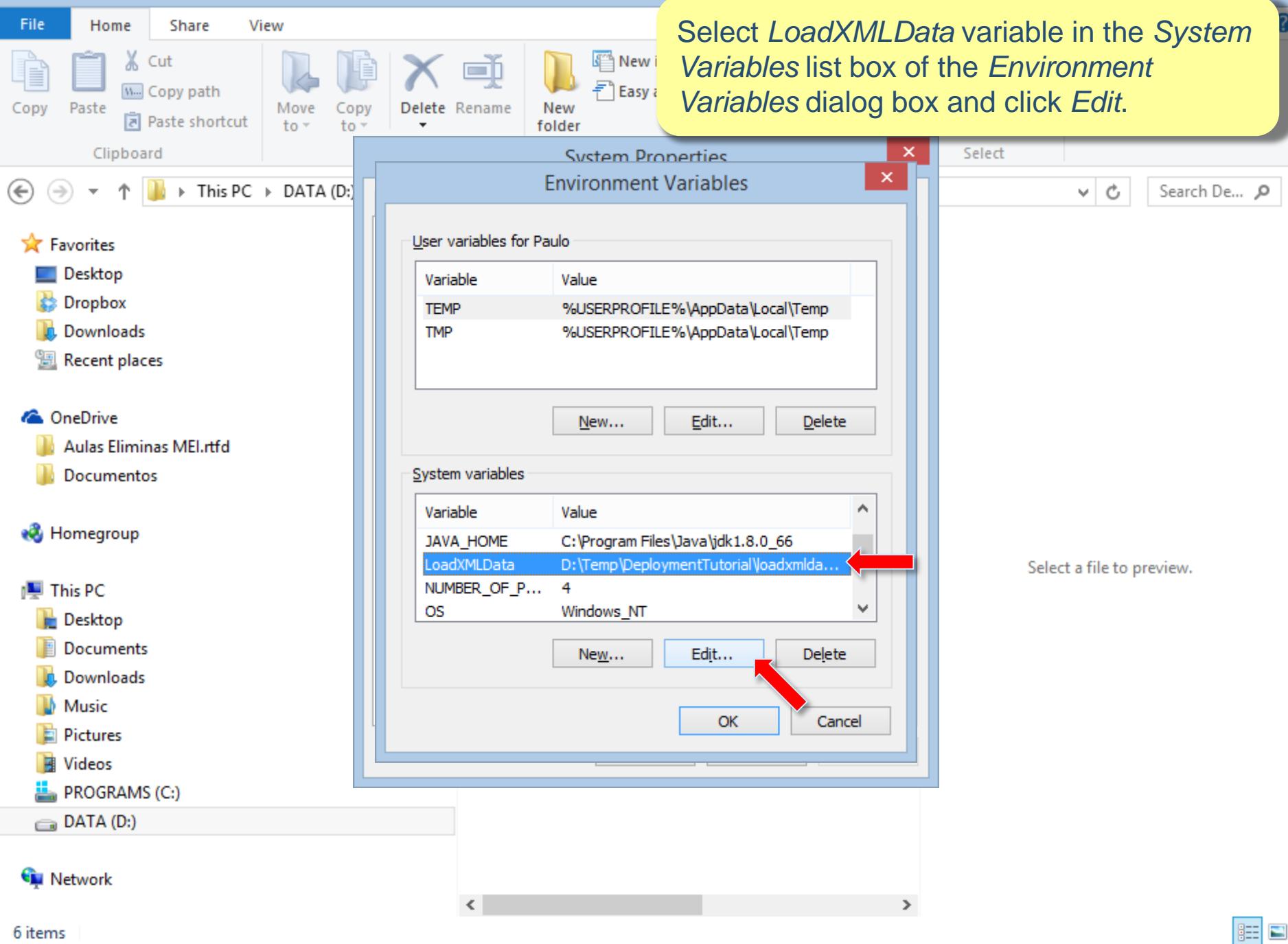
Update the *Variable value* box to:  
D:\Temp\DeploymentTutorial\Install\datatransfer.dtsconfig  
or the specific location which you have used.



Select a file to preview.

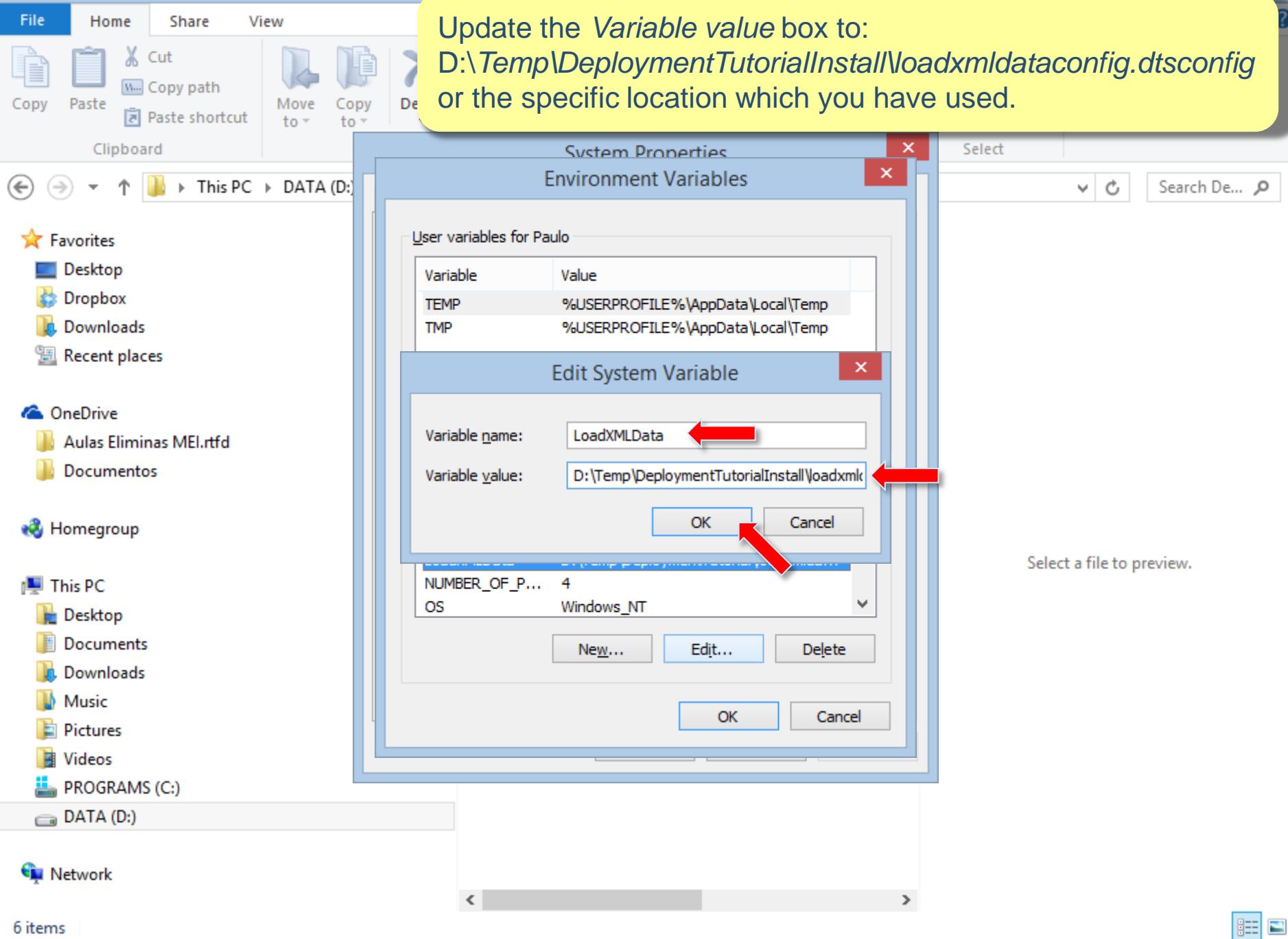


Select *LoadXMLData* variable in the *System Variables* list box of the *Environment Variables* dialog box and click *Edit*.

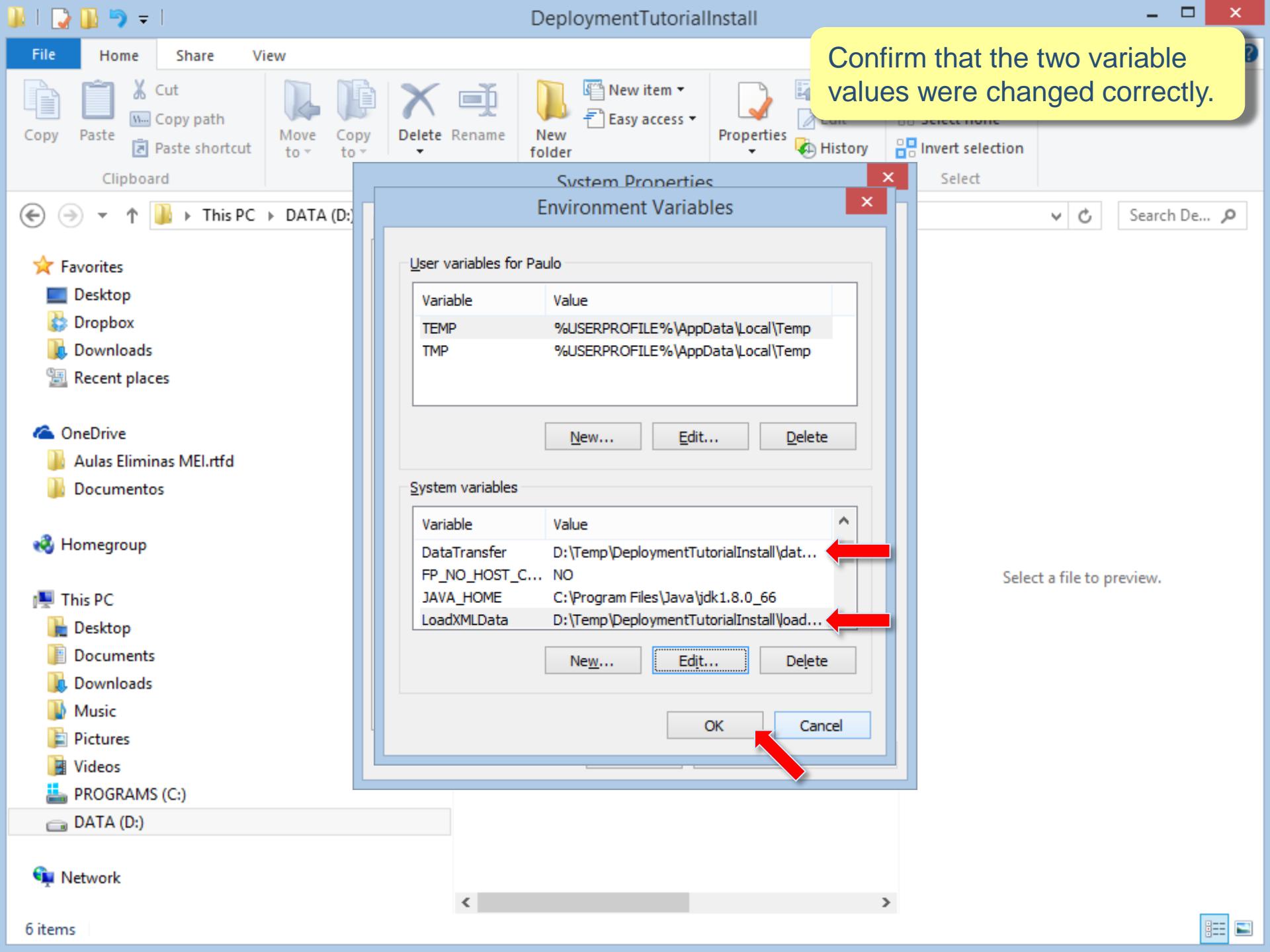


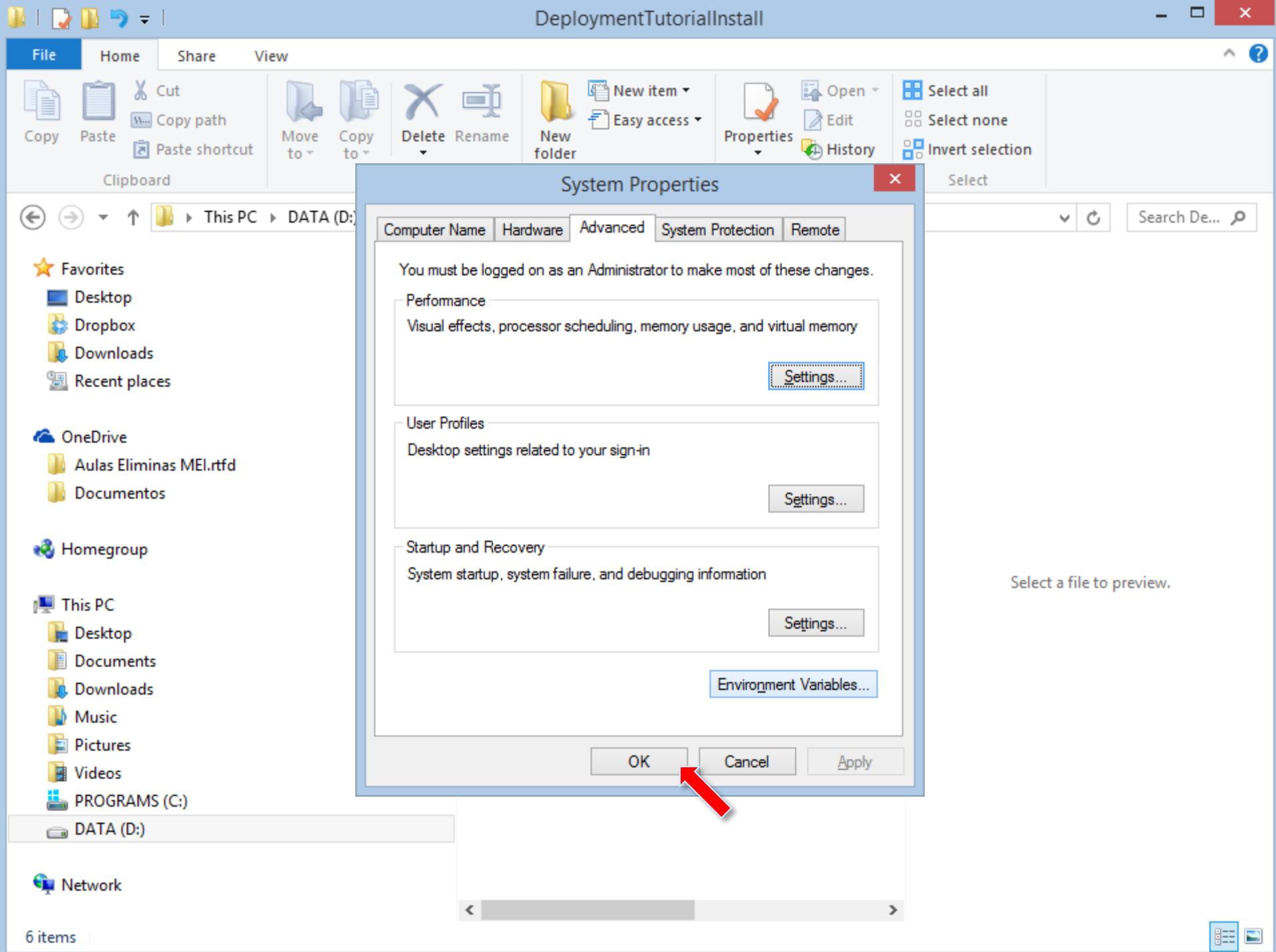
Update the *Variable value* box to:

D:\Temp\DeploymentTutorialInstall\LoadXMLDataconfig.dtsconfig  
or the specific location which you have used.



Confirm that the two variable values were changed correctly.





Next, you will test the packages that you deployed to an instance of SQL Server. In other Integration Services tutorials, you ran packages in SQL Server Data Tools, the development environment for Integration Services, using the *Start Debugging* option on the *Debug* menu. This time you will run the packages differently.

Before you run packages in *SQL Server Management Studio* by using the *Execute Package Utility*, ensure that the *Integration Services* service is running. The *Integration Services* service provides support for package storage and execution. If the service is stopped, you cannot connect to *Integration Services* and *SQL Server Management Studio* does not list the packages to run.

Run *SQL Server Management Studio* as *Administrator* by right-clicking on it.

## Search

Everywhere ▾

: SQL Server Management Studio 

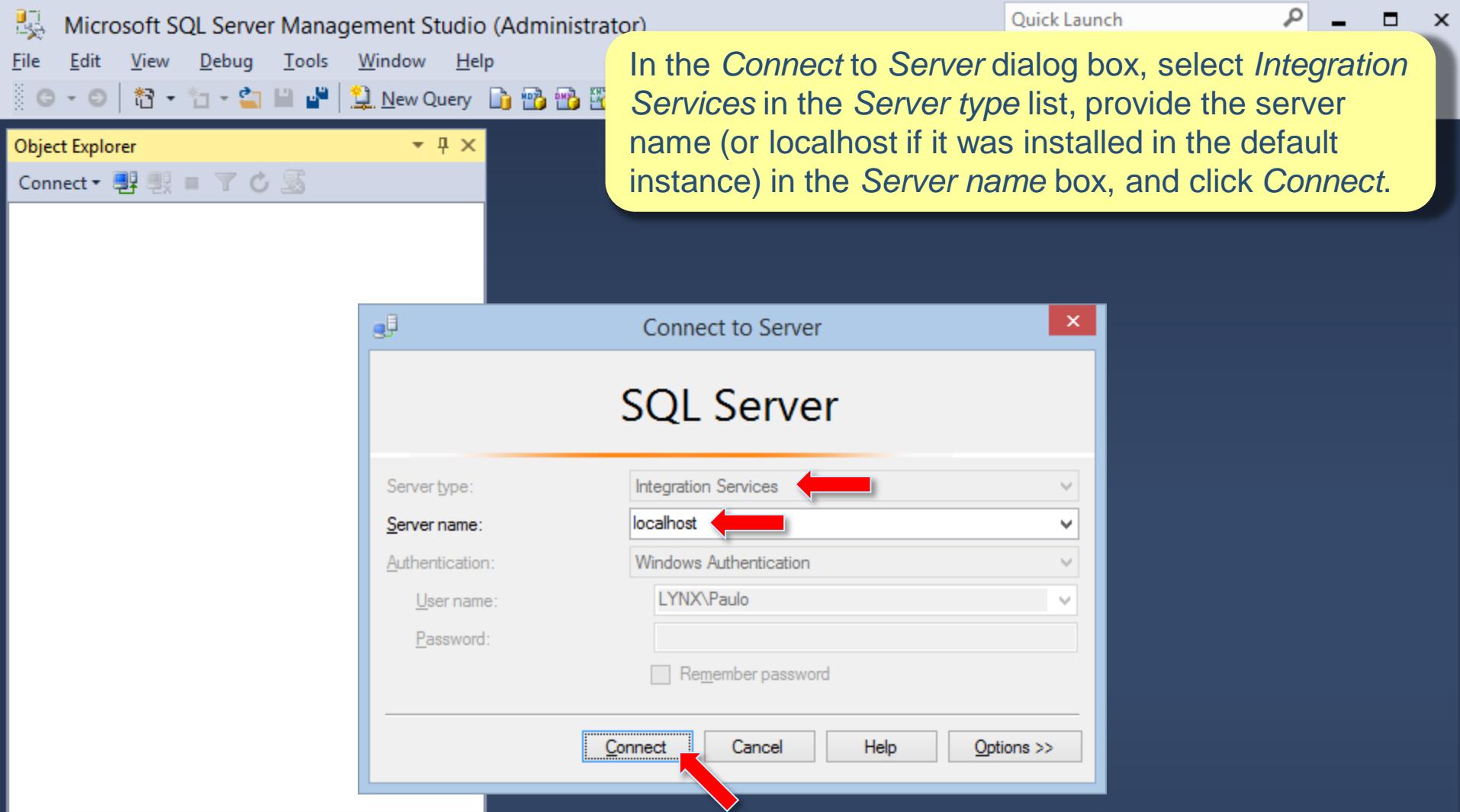


Microsoft SQL Server  
Management Studio

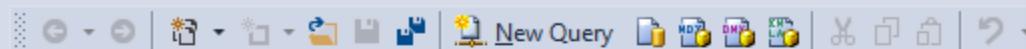


- Pin to Start
- Unpin from Taskbar
- Uninstall
- Open in new window
- Run as administrator**
- Open file location





If you cannot connect to *Integration Services*, the *Integration Services* service is likely not running. To check the status of the service, run *SQL Server 2022 Configuration Manager*. In the left pane, click *SQL Server Services*. In the right pane, find the *Integration Services* service. Start the service if it is not already running (You can also use Windows Services to perform the check).



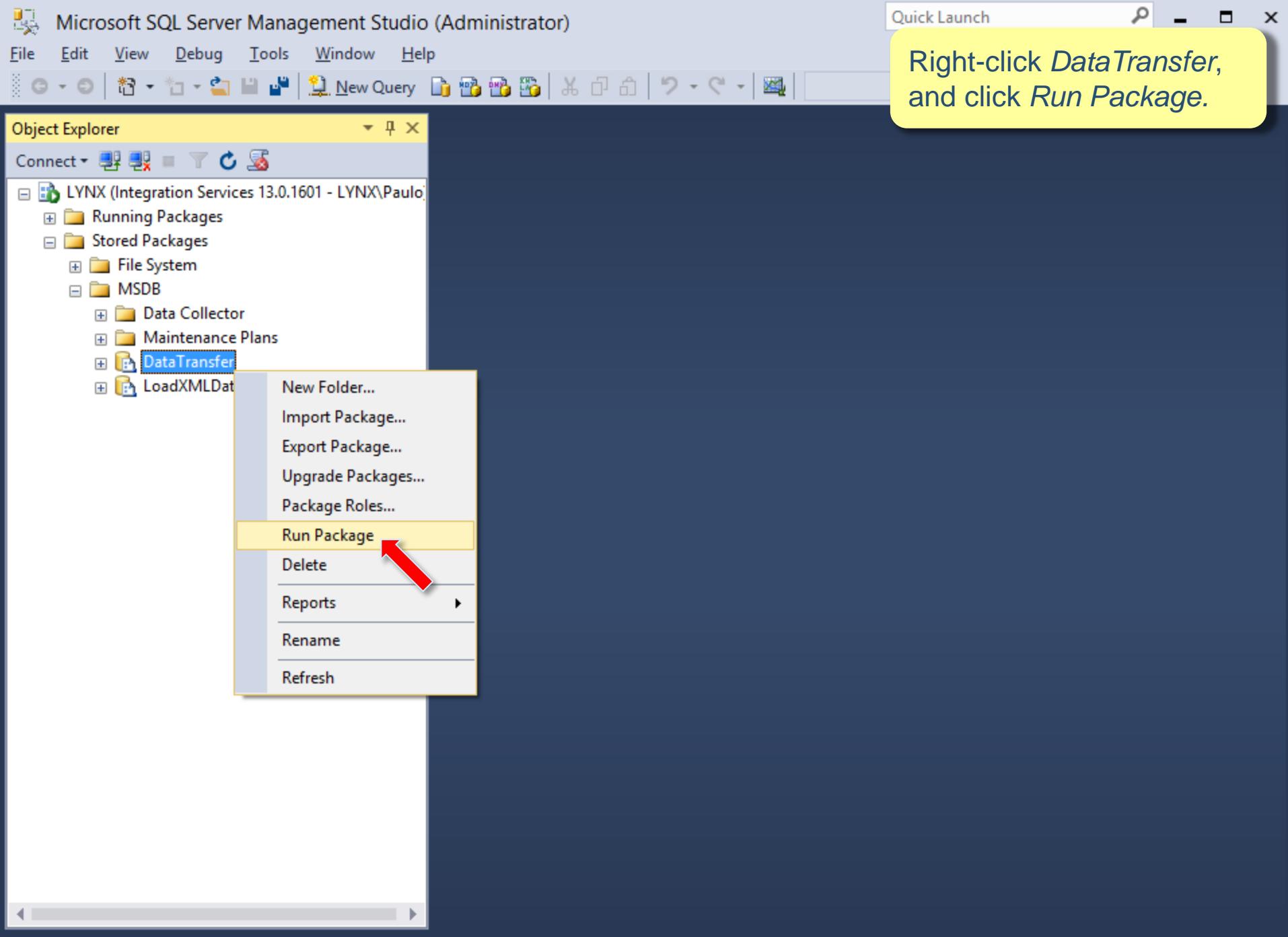
## Object Explorer

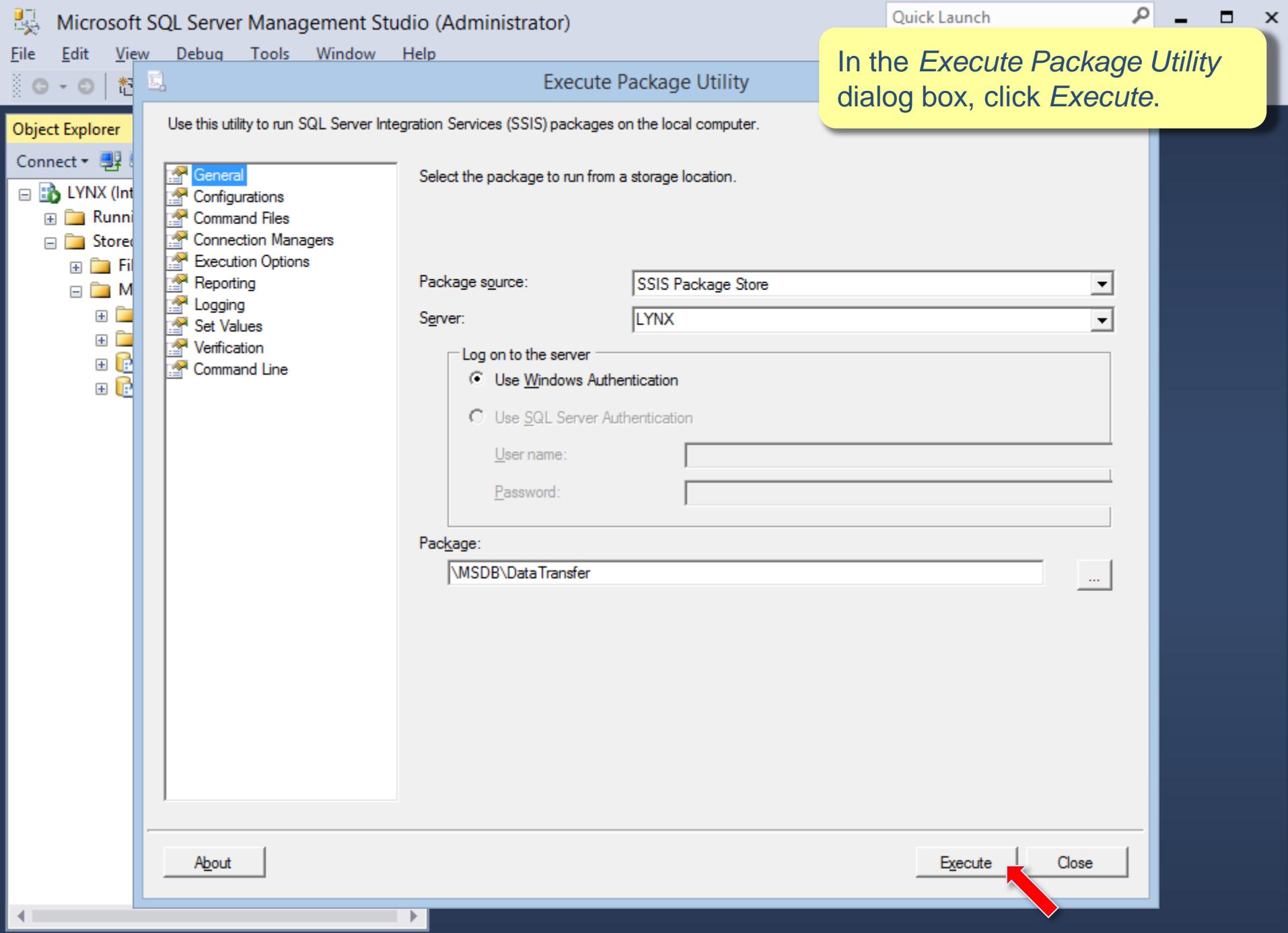


LYNX (Integration Services 13.0.1601 - LYNX\Paulo

- + Running Packages
- **Stored Packages** ←
- + File System
- **MSDB** ←
- + Data Collector
- + Maintenance Plans
- + DataTransfer
- + LoadXMLData

In Object Explorer, expand the **Stored Packages** folder and the **MSDB** folder.





Microsoft SQL Server Management Studio (Administrator)

File Edit View Debug Tools Window Help

New Query MDW DWH KWM

Object Explorer

Connect LYNX (Integrated) Running P Stored Pac File Sys MSDB Dat Ma Dat Load

Package Execution Progress

DataTransfer

Information: The package is attempting to configure from the XML file "D:\Temp\DeploymentTutorialInstall\datatransferconfig.xml".  
Information: The package is attempting to configure from the XML file "D:\Temp\DeploymentTutorialInstall\DataTransferConfig.xml".

Validation has started  
Validation is completed  
Start, 11:14:16  
Information: The package is attempting to configure from the XML file "D:\Temp\DeploymentTutorialInstall\datatransferconfig.xml".  
Information: The package is attempting to configure from the XML file "D:\Temp\DeploymentTutorialInstall\DataTransferConfig.xml".

Validation has started  
Validation is completed  
Start, 11:14:16  
Create or Truncate Table

Start, 11:14:16  
Validation has started  
Validation is completed  
Progress: Executing query "IF NOT EXISTS (SELECT \* FROM sys.tables WHERE type...)" . - 100 percent complete  
Finished, 11:14:17, Elapsed time: 00:00:00.750

Transfer Data

Start, 11:14:17  
Validation has started  
Information: Validation phase is beginning.  
Progress: Validating - 0 percent complete  
Progress: Validating - 33 percent complete  
Progress: Validating - 66 percent complete  
Progress: Validating - 100 percent complete  
Validation is completed  
Information: Prepare for Execute phase is beginning.  
Progress: Prepare for Execute - 0 percent complete  
Progress: Prepare for Execute - 33 percent complete

Stop Close

You can see the execution progress details in the *Package Execution Progress* window.

Microsoft SQL Server Management Studio (Administrator)

File Edit View Debug Tools Window Help

New Query DMS Package

Object Explorer

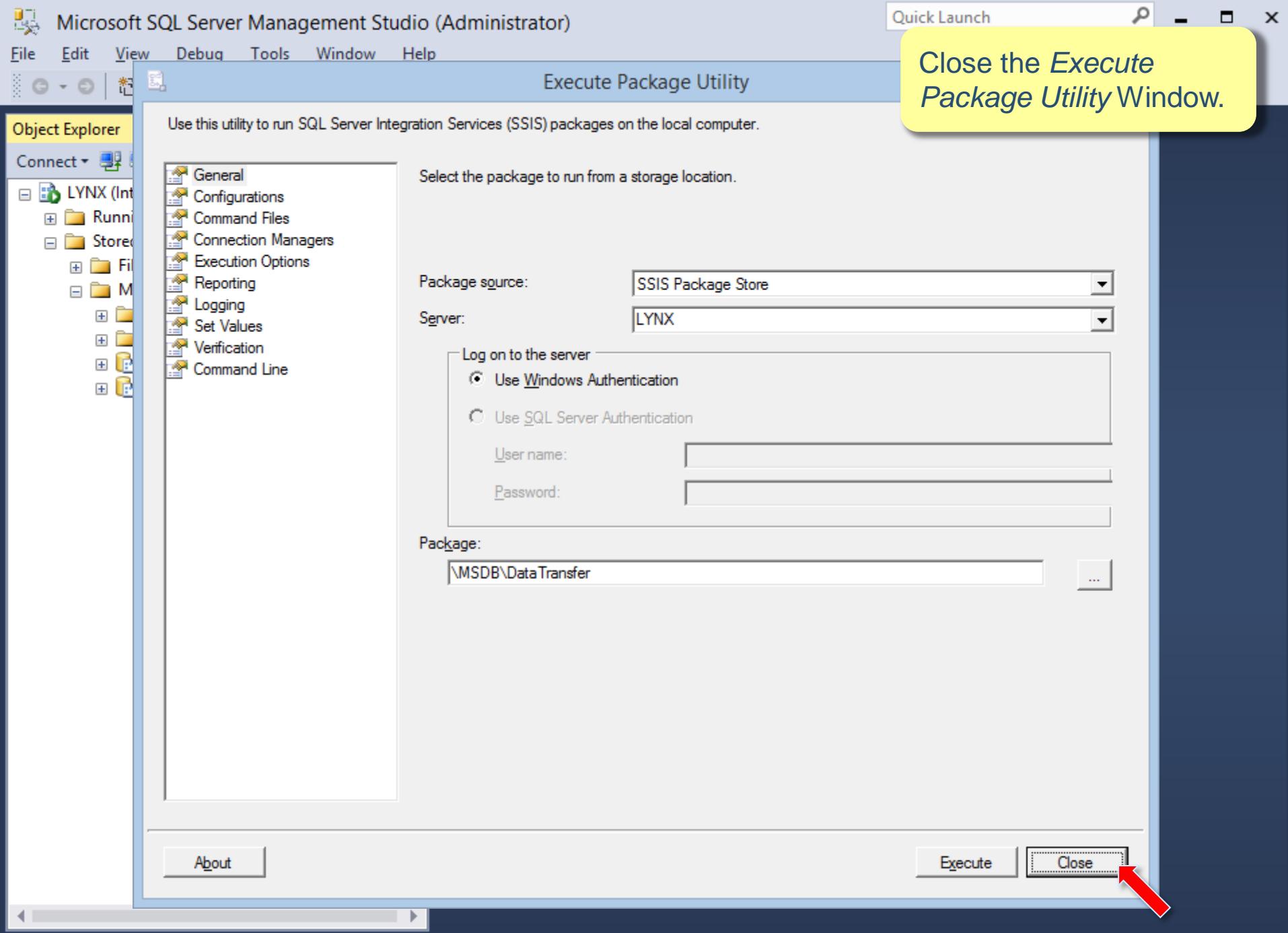
Connect LYNX (Integrated) Running P Stored Pac File Sys MSDB Dat Ma Dat Load

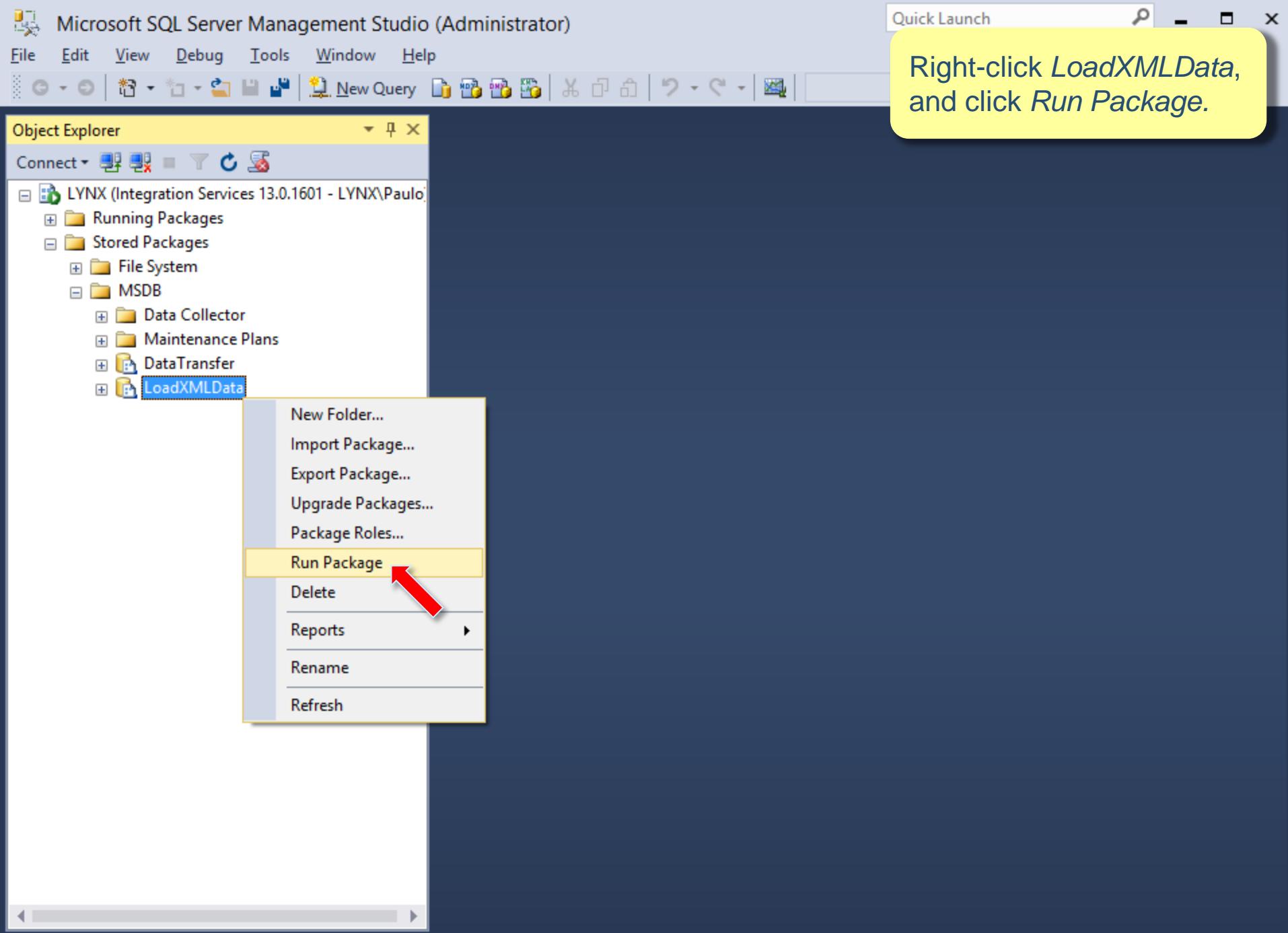
Execution results show that 31 rows were loaded into the *Destination – HighIncomeCustomers*.

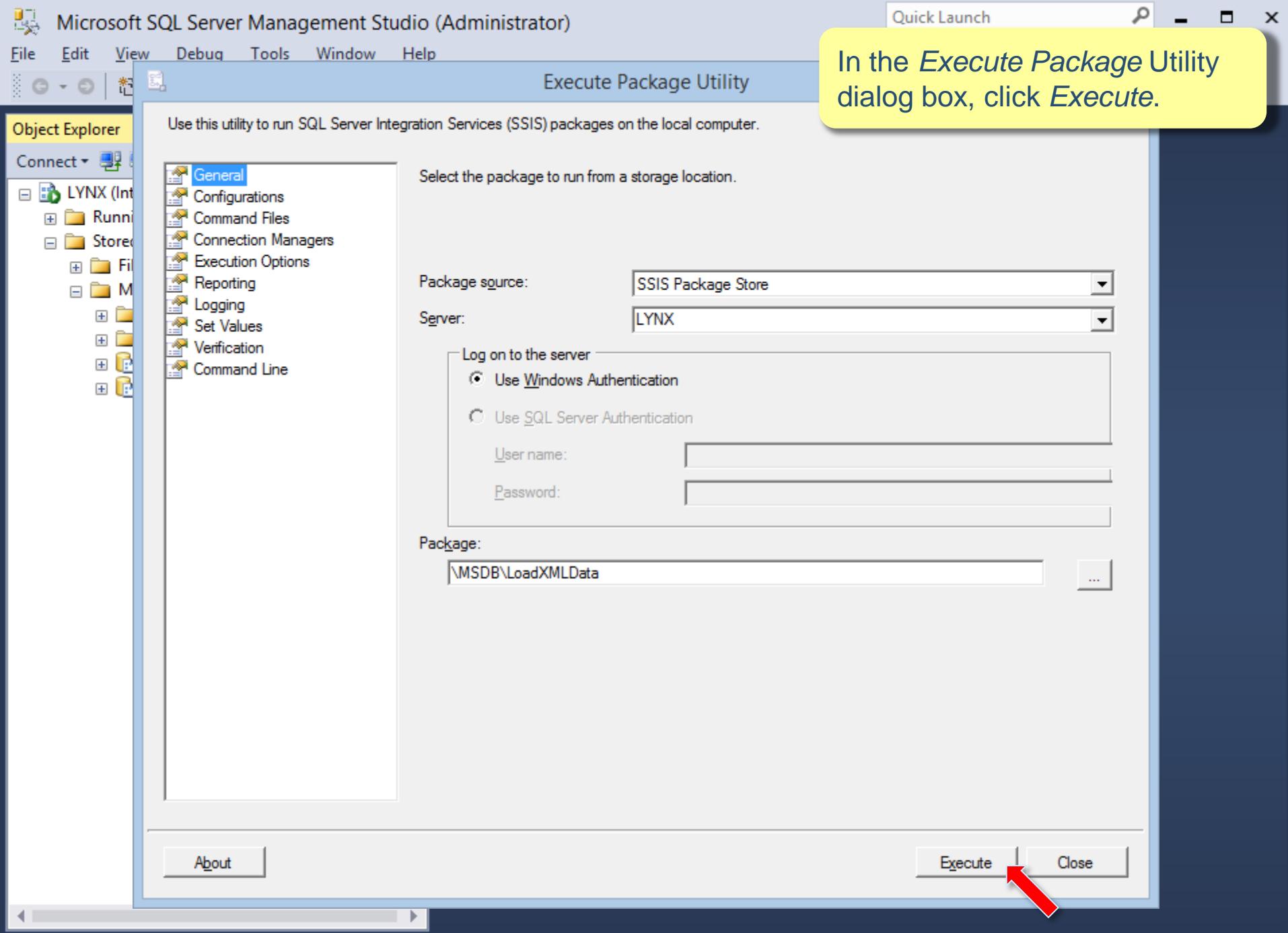
▶ Progress: Prepare for Execute - 66 percent complete  
▶ Progress: Prepare for Execute - 100 percent complete  
Information: Pre-Execute phase is beginning.  
▶ Progress: Pre-Execute - 0 percent complete  
▶ Progress: Pre-Execute - 33 percent complete  
Information: The Maximum insert commit size property of the OLE DB destination "Destination - HighIncomeCustomers" is set to 0.  
Information: Destination Editor (Connection Manager Page).  
▶ Progress: Pre-Execute - 66 percent complete  
Information: The processing of file "D:\Temp\DeploymentTutorialInstall\NewCustomers.txt" has started.  
▶ Progress: Pre-Execute - 100 percent complete  
Information: Execute phase is beginning.  
Information: The total number of data rows processed for file "D:\Temp\DeploymentTutorialInstall\NewCustomers.txt" is 38.  
Information: The final commit for the data insertion in "Destination - HighIncomeCustomers" has started.  
Information: The final commit for the data insertion in "Destination - HighIncomeCustomers" has ended.  
Information: Post Execute phase is beginning.  
▶ Progress: Post Execute - 0 percent complete  
▶ Progress: Post Execute - 33 percent complete  
▶ Progress: Post Execute - 66 percent complete  
Information: The processing of file "D:\Temp\DeploymentTutorialInstall\NewCustomers.txt" has ended.  
▶ Progress: Post Execute - 100 percent complete  
Information: "Destination - HighIncomeCustomers" wrote 31 rows.  
Information: Cleanup phase is beginning.  
▶ Progress: Cleanup - 0 percent complete  
▶ Progress: Cleanup - 33 percent complete  
▶ Progress: Cleanup - 66 percent complete  
▶ Progress: Cleanup - 100 percent complete  
◀ Finished, 11:14:18, Elapsed time: 00:00:00.812  
◀ Finished, 11:14:18, Elapsed time: 00:00:01.719  
◀ Finished, 11:14:18, Elapsed time: 00:00:01.781

Stop Close

Ready







Microsoft SQL Server Management Studio (Administrator)

File Edit View Debug Tools Window Help

New Query DTS DML DML XPS

Quick Launch

Object Explorer

Connections

Package Execution Progress

You can see the execution progress details in the *Package Execution Progress* window.

LoadXMLData

- Information: The package is attempting to configure from the XML file "D:\Temp\DeploymentTutorialInstall\LoadXMLDataConfig.dtsconfig".
- Information: The package is attempting to configure from the XML file "D:\Temp\DeploymentTutorialInstall\LoadXMLDataConfig.dtsConfig".
- Validation has started
- Validation is completed
- Start, 11:22:29
  - Information: The package is attempting to configure from the XML file "D:\Temp\DeploymentTutorialInstall\LoadXMLDataConfig.dtsconfig".
  - Information: The package is attempting to configure from the XML file "D:\Temp\DeploymentTutorialInstall\LoadXMLDataConfig.dtsConfig".
  - Validation has started
  - Validation is completed
  - Start, 11:22:29
    - Information: The package is attempting to configure from the XML file "D:\Temp\DeploymentTutorialInstall\LoadXMLDataConfig.dtsconfig".
    - Information: The package is attempting to configure from the XML file "D:\Temp\DeploymentTutorialInstall\LoadXMLDataConfig.dtsConfig".
- Create or truncate table
  - Start, 11:22:29
  - Validation has started
  - Validation is completed
    - Progress: Executing query "IF NOT EXISTS (SELECT \* FROM sys.tables WHERE type..."). - 100 percent complete
    - Finished, 11:22:30, Elapsed time: 00:00:00.500
- Load XML Data
  - Start, 11:22:30
  - Validation has started
    - Information: Validation phase is beginning.
    - Progress: Validating - 0 percent complete
    - Progress: Validating - 25 percent complete
    - Progress: Validating - 50 percent complete
    - Progress: Validating - 75 percent complete
    - Progress: Validating - 100 percent complete
  - Validation is completed
    - Warning: The output column "OrderID" (81) on output "orders" (79) and component "XML Source" (71) is not subsequently used in the Data Flow task. Remove this column if it is no longer needed.
    - Warning: The output column "CustomerID" (82) on output "orders" (79) and component "XML Source" (71) is not subsequently used in the Data Flow task. Remove this column if it is no longer needed.

Stop Close

Ready

Microsoft SQL Server Management Studio (Administrator)

File Edit View Debug Tools Window Help

New Query DMS DDL DML

Object Explorer

Conn

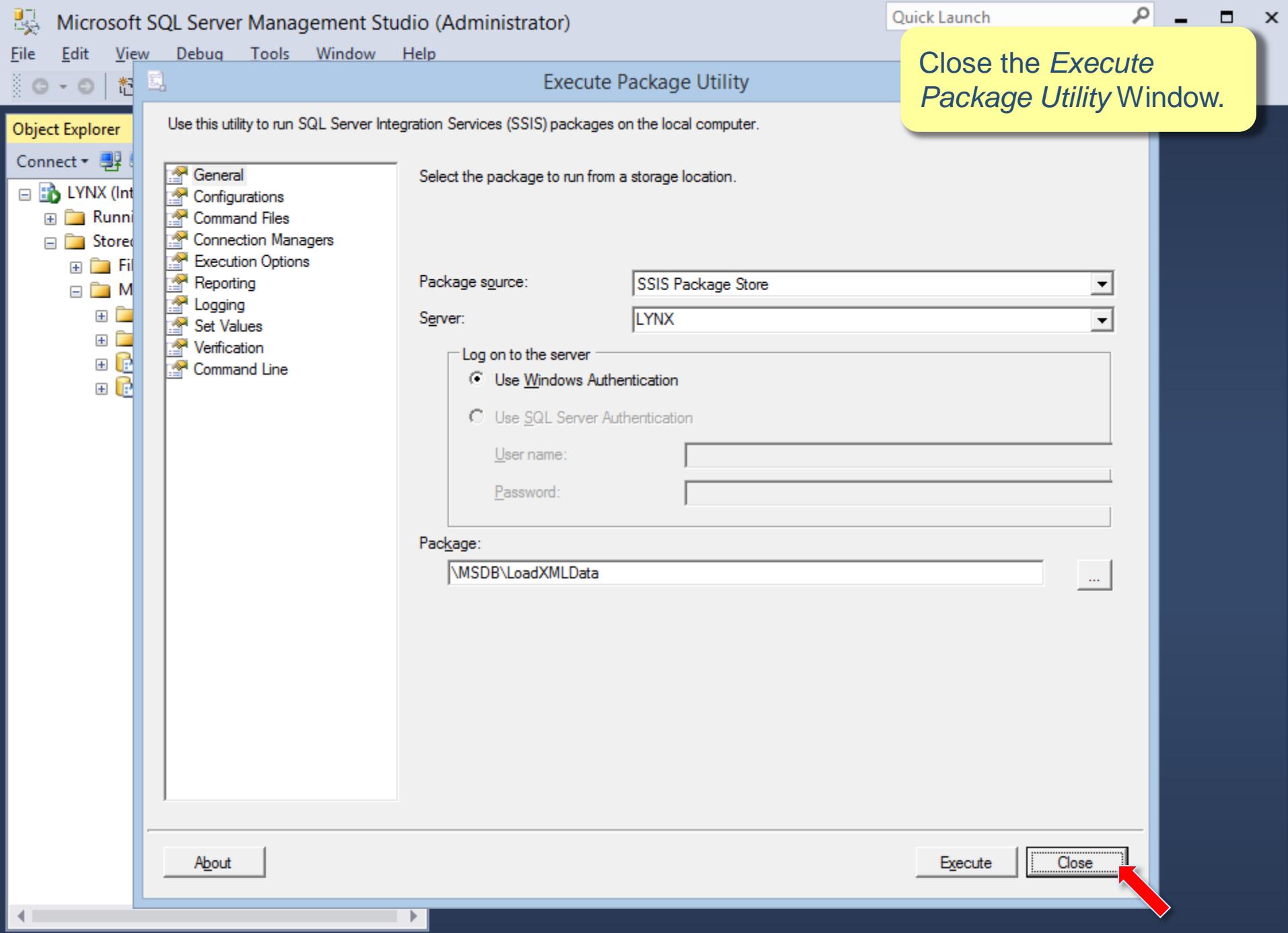
Package Execution Progress

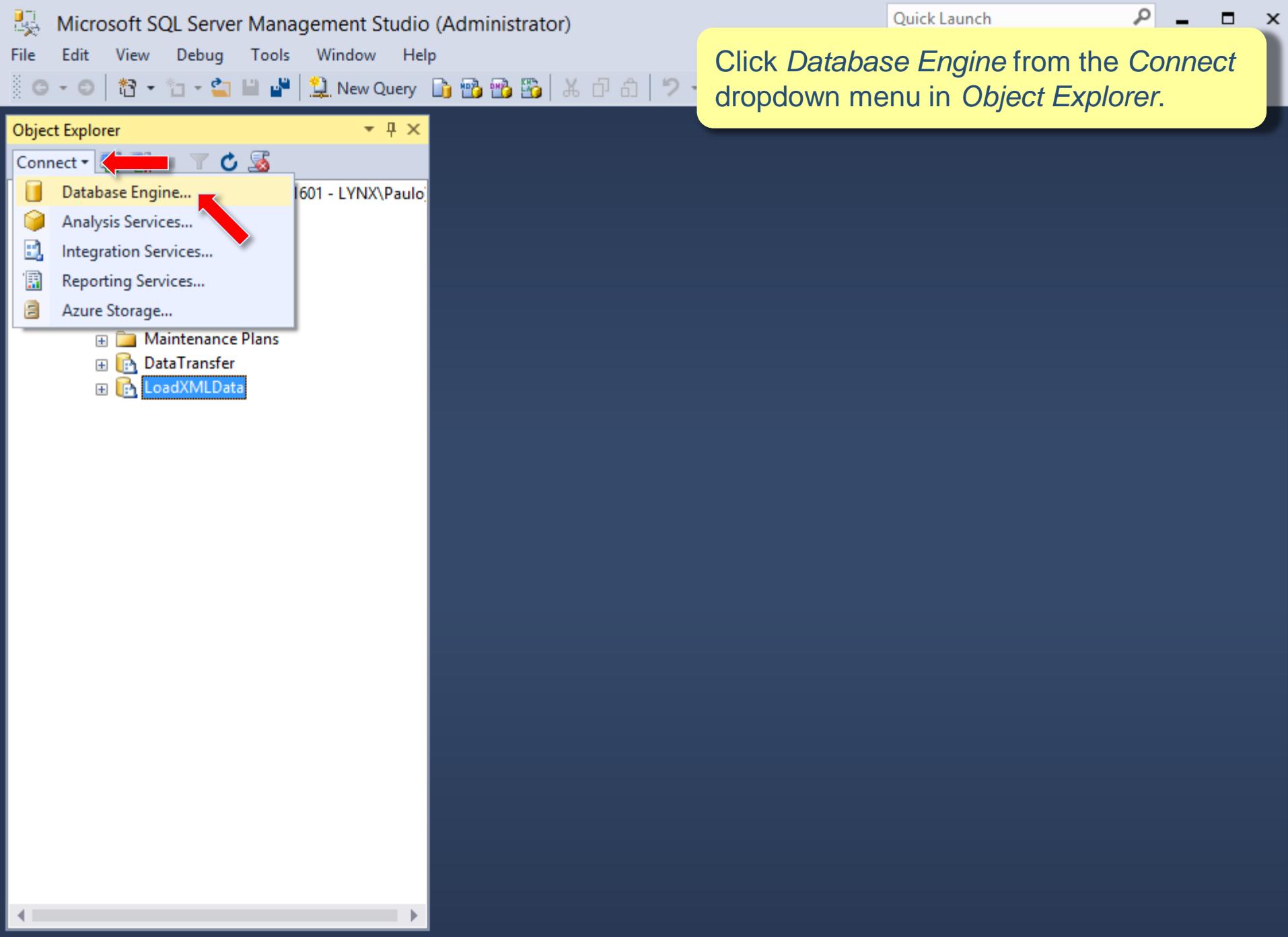
Execution results show that 21 rows were loaded into the OLE DB Destination.

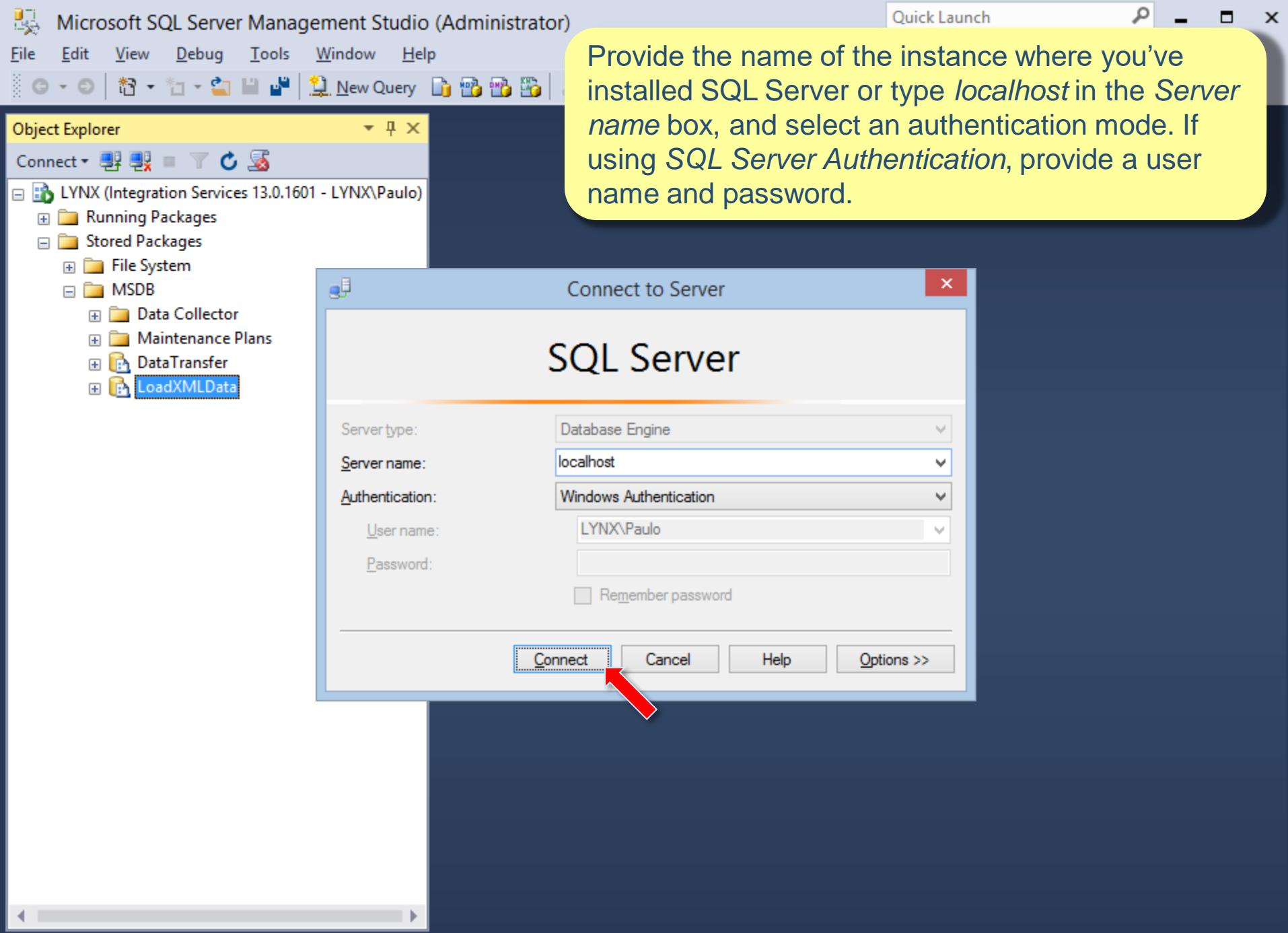
- ▶ Progress: Prepare for Execute - 0 percent complete
- ▶ Progress: Prepare for Execute - 25 percent complete
- ▶ Progress: Prepare for Execute - 50 percent complete
- ▶ Progress: Prepare for Execute - 75 percent complete
- ▶ Progress: Prepare for Execute - 100 percent complete
- Information: Pre-Execute phase is beginning.
- ▶ Progress: Pre-Execute - 0 percent complete
- ▶ Progress: Pre-Execute - 25 percent complete
- ▶ Progress: Pre-Execute - 50 percent complete
- ▶ Progress: Pre-Execute - 75 percent complete
- ▶ Progress: Pre-Execute - 100 percent complete
- Information: Execute phase is beginning.
- Information: Post Execute phase is beginning.
- ▶ Progress: Post Execute - 0 percent complete
- ▶ Progress: Post Execute - 25 percent complete
- ▶ Progress: Post Execute - 50 percent complete
- ▶ Progress: Post Execute - 75 percent complete
- ▶ Progress: Post Execute - 100 percent complete
- Information: "OLE DB Destination" wrote 21 rows.
- Information: Cleanup phase is beginning.
- ▶ Progress: Cleanup - 0 percent complete
- ▶ Progress: Cleanup - 25 percent complete
- ▶ Progress: Cleanup - 50 percent complete
- ▶ Progress: Cleanup - 75 percent complete
- ▶ Progress: Cleanup - 100 percent complete
- ◀ Finished, 11:22:30, Elapsed time: 00:00:00.750
- ◀ Finished, 11:22:30, Elapsed time: 00:00:01.360
- ◀ Finished, 11:22:30, Elapsed time: 00:00:01.375

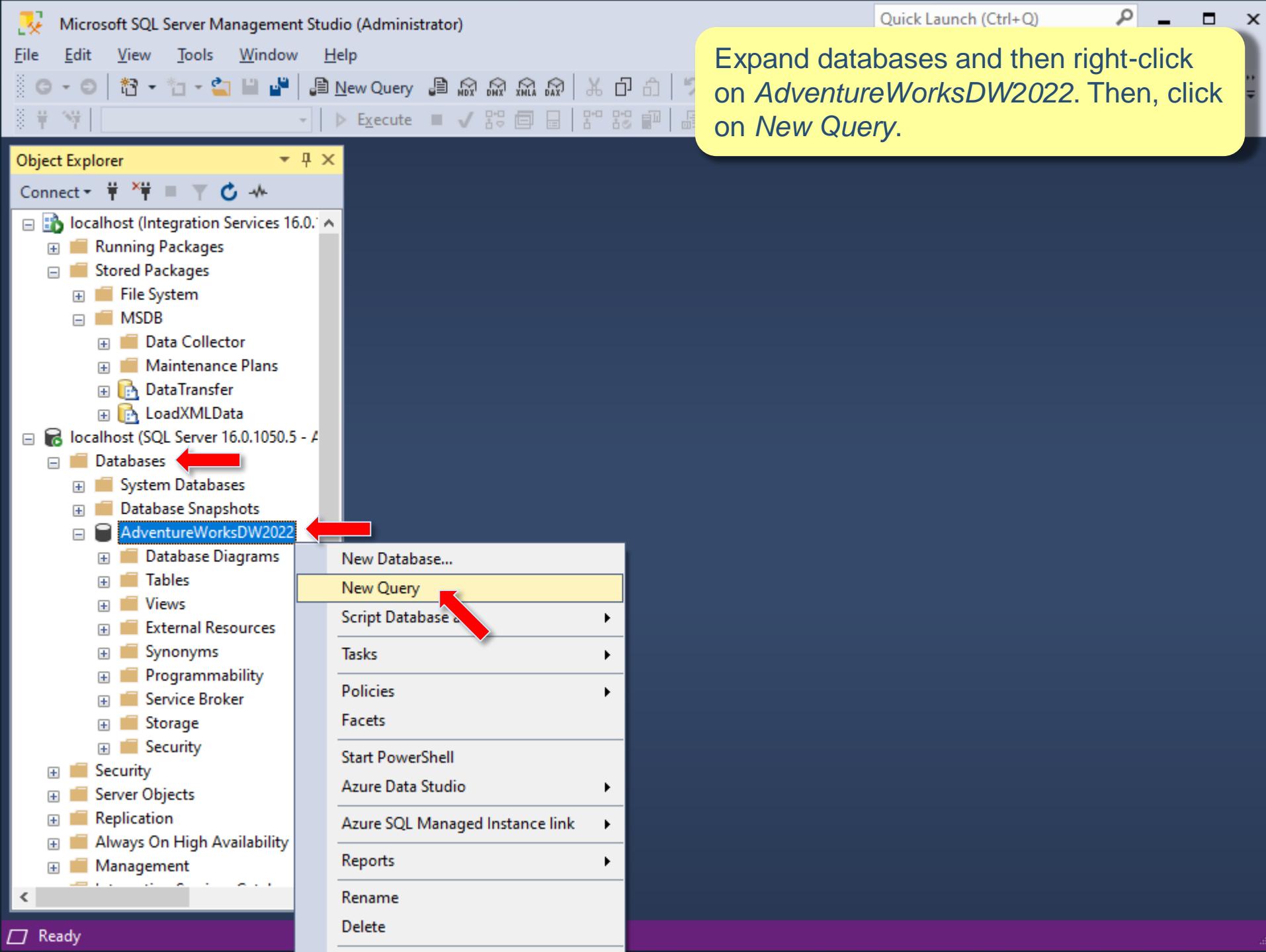
Stop Close

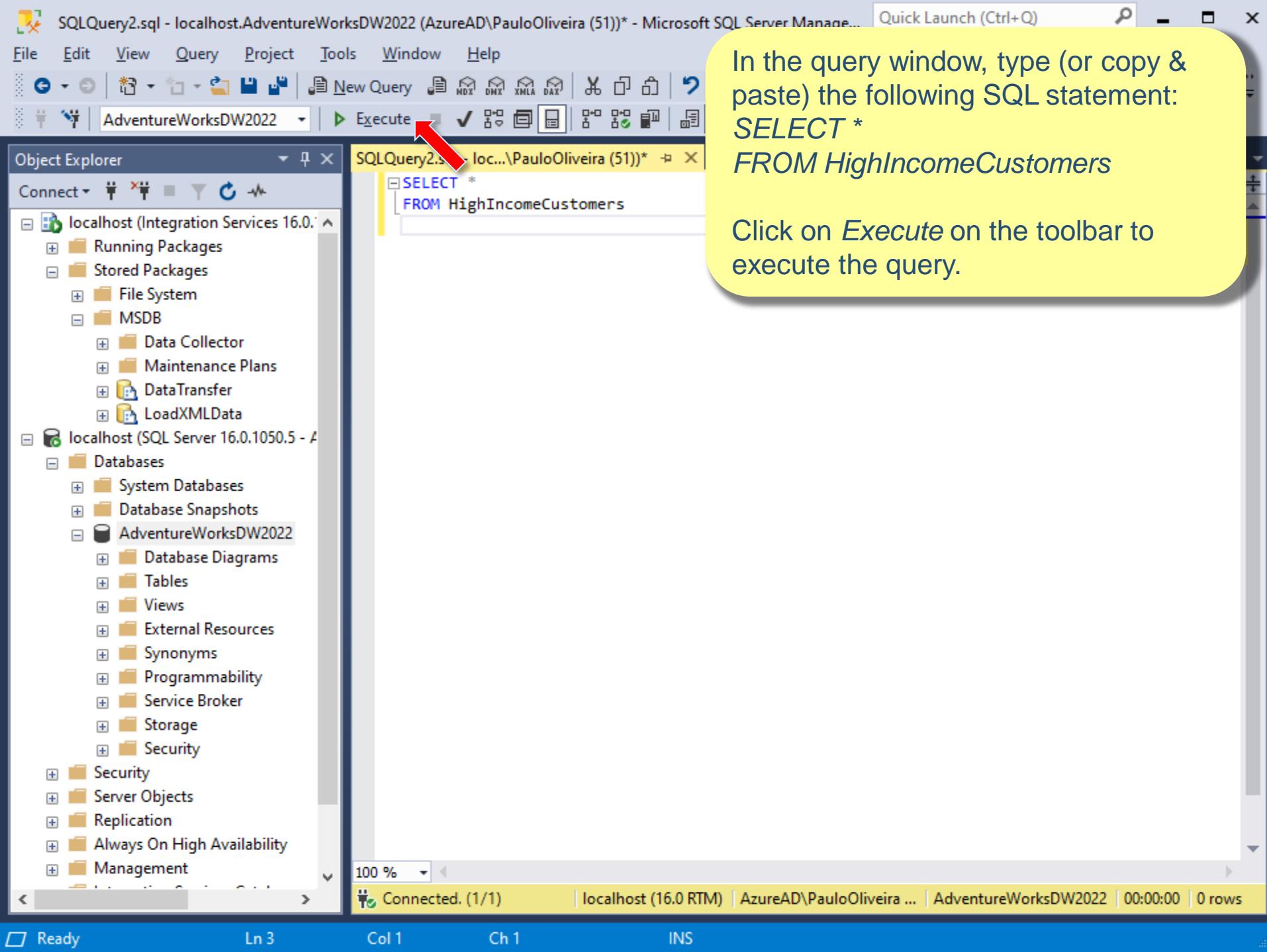
Ready











In the query window, type (or copy & paste) the following SQL statement:  
**SELECT \***

**FROM HighIncomeCustomers**

Click on *Execute* on the toolbar to execute the query.

The query returns 31 rows of data. The return result contains any rows from the text file, Customers.txt, that have values larger than 100000 in the *YearlyIncome* column.

	FirstName	MiddleInitial	LastName	BirthDate	MaritalStatus	Gender	EmailAddress
1	Tabitha	A	Rubio	1958-10-05 00:00:00.000	S	F	trubio@adatum.com
2	Marvin		Castro	1958-12-12 00:00:00.000	S	M	mcastro@adatum.com
3	Miguel	M	Lopez	1956-06-22 00:00:00.000	M	M	mlopez@adventure-works.com
4	Paula	L	Suarez	1955-10-17 00:00:00.000	M	F	psuarez@adventure-works.com
5	Christina		Kelly	1964-10-14 00:00:00.000	S	F	ckelly@adventure-works.com
6	Chris		Kelly	1964-10-14 00:00:00.000	S	M	ckelly@adatum.com
7	Christine		Kelly	1964-10-14 00:00:00.000	S	F	kelly@adventure-works.com
8	Casey		Bhat	1938-06-13 00:00:00.000	M	F	cbhat@adatum.com
9	Tony	R	Goel	1937-07-28 00:00:00.000	S	M	tgoel@alpineskihouse.com
10	Brianna		Wilson	1939-08-02 00:00:00.000	S	F	bwilson@alpineskihouse.com
11	Henry	A	Rodriguez	1956-03-16 00:00:00.000	M	M	hrodriguez@alpineskihouse.c...
12	Harold		Varma	1954-08-25 00:00:00.000	S	M	hverma@cpndl.com
13	Kaitlyn	S	Davis	1953-02-13 00:00:00.000	S	F	kdavis@cpndl.com
14	Gloria	F	Jimenez	1958-08-20 00:00:00.000	M	F	gjimenez@cohovineyard.com
15	Melissa		James	1957-03-28 00:00:00.000	S	F	mjames@cohovineyard.com
16	Stephanie	E	Carter	1956-02-22 00:00:00.000	M	F	scarter@cohovineyard.com
17	Colleen	C	Ye	1937-09-13 00:00:00.000	S	F	cye@cohovineyard.com
18	Bradley		Deng	1947-04-14 00:00:00.000	M	M	bdeng@cohovineyard.com
19	Heather	A	Liu	1967-02-11 00:00:00.000	M	F	hliu@cohovineyard.com
20	Robert		Edwards	1968-01-24 00:00:00.000	M	M	redwards@cohovineyard.com
21	Jeffery	J	Xu	1964-02-03 00:00:00.000	M	M	jxu@cohovineyard.com

Query executed successfully | localhost (16.0 MB) | AzureAD\PauloOliveira ... | AdventureWorksDW2022 | 00:00:00 | 31 rows

SQLQuery2.sql - localhost.AdventureWorksDW2022 (AzureAD\PauloOliveira (51))\* - Microsoft SQL Server Manage...

File Edit View Query Project Tools Window Help

New Query MDX DMX XMLA DAX

AdventureWorksDW2022 Execute

Object Explorer

localhost (Integration Services 16.0.0.0)

- Running Packages
- Stored Packages
- File System
- MSDB
  - Data Collector
  - Maintenance Plans
  - DataTransfer
  - LoadXMLData

localhost (SQL Server 16.0.1050.5 - A)

- Databases
  - System Databases
  - Database Snapshots
  - AdventureWorksDW2022
    - Database Diagrams
    - Tables
    - Views
    - External Resources
    - Synonyms
    - Programmability
    - Service Broker
    - Storage
    - Security
- Security
- Server Objects
- Replication
- Always On High Availability
- Management

SQLQuery2.sql - loc...\\PauloOliveira (51)\*

```
SELECT *  
FROM HighIncomeCustomers
```

100 %

Results Messages

CustomerID	CustomerType	NumberCarsOwned	AddressLine1	AddressLine2	City	State	ZIP	Phone
1	1	1	574 Atlanta Highway		Montgomery	AL	36104	1 (11) 500 555-0116
2	2	2	4584 Hamilton Ave.		Chandler	AZ	85225	1 (11) 500 555-0158
3	4	4	8680 Newell Ave.		Burbank	CA	91502	1 (11) 500 555-0171
4	4	4	878 Amador Ct		Burbank	CA	91502	1 (11) 500 555-0137
5	4	4	9919 MacArthur Avenue		Burbank	CA	91502	402-555-0161
6	4	4	9365 G St.	9365 G St.	Burbank	CA	91502	402-555-0161
7	4	4	9919 MCArthur Ave.		Burbank	CA	91502	402-555-0161
8	4	4	Viejas Outlet Center		Alpine	CA	91901	167-555-0116
9	3	3	9819 Sunshine Drive		Chula Vista	CA	91910	277-555-0195
10	4	4	9966 Vallet Crest Dr.		Chula Vista	CA	91910	406-555-0136
11	4	4	7243 St. George Dr.		City Of Co...	CA	90040	1 (11) 500 555-0197
12	4	4	Stonewood Mall		Downey	CA	90241	1 (11) 500 555-0184
13	4	4	3086 Indigo Ct		El Cajon	CA	92020	1 (11) 500 555-0151
14	4	4	Corp Ofc Accts Payable		El Segundo	CA	90245	1 (11) 500 555-0171
15	4	4	1745 Marina Hill Pkwy.		Glendale	CA	91203	1 (11) 500 555-0185
16	4	4	3197 Thomhill Place		Glendale	CA	91203	1 (11) 500 555-0154
17	4	4	9571 Live Oak Dr.		Glendale	CA	91203	153-555-0195
18	4	4	1246 Glenside Ct.		La Jolla	CA	92806	1 (11) 500 555-0112
19	4	4	1663 Park Glen Court		Lakewood	CA	90712	345-555-0167
20	3	3	3284 Bynum Way		Lakewood	CA	90712	426-555-0112
21	4	4	9443 Oaxaca		Lakewood	CA	90712	114-555-0184

Query executed successfully | localhost (16.0 RTM) | AzureAD\PauloOliveira ... | AdventureWorksDW2022 | 00:00:00 | 31 rows

Ready Ln 3 Col 1 Ch 1 INS

SQLQuery2.sql - localhost.AdventureWorksDW2022 (AzureAD\PauloOliveira (51))\* - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

New Query

AdventureWorksDW2022 Execute

Object Explorer

localhost (Integration Services 16.0.0.0) Running Packages Stored Packages File System MSDB Data Collector Maintenance Plans DataTransfer LoadXMLData

localhost (SQL Server 16.0.1050.5 - A) Databases System Databases Database Snapshots AdventureWorksDW2022 Database Diagrams Tables Views External Resources Synonyms Programmability Service Broker Storage Security Security Server Objects Replication Always On High Availability Management

Quick Launch (Ctrl+Q)

Click New Query on the toolbar.

SQLQuery2.sql - loc...\\PauloOliveira (51)\*

```
SELECT *  
FROM HighIncomeCustomers
```

100 %

Results Messages

erFlag	NumberCarsOwned	AddressLine1	AddressLine2	City	State	ZIP	Phone
1	1	574 Atlanta Highway		Montgomery	AL	36104	1 (11) 500 555-0116
2	2	4584 Hamilton Ave.		Chandler	AZ	85225	1 (11) 500 555-0158
3	4	8680 Newell Ave.		Burbank	CA	91502	1 (11) 500 555-0171
4	4	878 Amador Ct		Burbank	CA	91502	1 (11) 500 555-0137
5	4	9919 Macarthur Avenue		Burbank	CA	91502	402-555-0161
6	4	9365 G St.	9365 G St.	Burbank	CA	91502	402-555-0161
7	4	9919 MCArthur Ave.		Burbank	CA	91502	402-555-0161
8	4	Viejas Outlet Center		Alpine	CA	91901	167-555-0116
9	3	9819 Sunshine Drive		Chula Vista	CA	91910	277-555-0195
10	4	9966 Vallet Crest Dr.		Chula Vista	CA	91910	406-555-0136
11	4	7243 St. George Dr.		City Of Co...	CA	90040	1 (11) 500 555-0197
12	4	Stonewood Mall		Downey	CA	90241	1 (11) 500 555-0184
13	4	3086 Indigo Ct		El Cajon	CA	92020	1 (11) 500 555-0151
14	4	Corp Ofc Accts Payable		El Segundo	CA	90245	1 (11) 500 555-0171
15	4	1745 Marina Hill Pkwy.		Glendale	CA	91203	1 (11) 500 555-0185
16	4	3197 Thomhill Place		Glendale	CA	91203	1 (11) 500 555-0154
17	4	9571 Live Oak Dr.		Glendale	CA	91203	153-555-0195
18	4	1246 Glenside Ct.		La Jolla	CA	92806	1 (11) 500 555-0112
19	4	1663 Park Glen Court		Lakewood	CA	90712	345-555-0167
20	3	3284 Bynum Way		Lakewood	CA	90712	426-555-0112
21	4	9443 Oaxaca		Lakewood	CA	90712	114-555-0184

Query executed successfully | localhost (16.0 RTM) | AzureAD\PauloOliveira ... | AdventureWorksDW2022 | 00:00:00 | 31 rows

Ready Ln 3 Col 1 Ch 1 INS

SQLQuery3.sql - localhost.AdventureWorksDW2022 (AzureAD\PauloOliveira (69))\* - Microsoft SQL Server Manage...

File Edit View Query Project Tools Window Help

New Query MDX DMX XMLA DAX

AdventureWorksDW2022 Execute

Object Explorer

Connect

localhost (Integration Services 16.0.):

- Running Packages
- Stored Packages
- File System
- MSDB
  - Data Collector
  - Maintenance Plans
  - DataTransfer
  - LoadXMLData

localhost (SQL Server 16.0.1050.5 - A):

- Databases
  - System Databases
  - Database Snapshots
  - AdventureWorksDW2022
    - Database Diagrams
    - Tables
    - Views
    - External Resources
    - Synonyms
    - Programmability
    - Service Broker
    - Storage
    - Security
- Security
- Server Objects
- Replication
- Always On High Availability
- Management

SQLQuery3.sql - loc...\\PauloOliveira (69)\* SQLQuery2.sql - loc...\\PauloOliveira (51)\*

SELECT \*  
FROM OrderDatesByCountryRegion

In the query window, type (or copy & paste) the following SQL statement:  
*SELECT \*  
FROM OrderDatesByCountryRegion*

Click on *Execute* on the toolbar to execute the query.

100 %

Connected. (1/1) | localhost (16.0 RTM) | AzureAD\PauloOliveira ... | AdventureWorksDW2022 | 00:00:00 | 0 rows

Ln 3 Col 1 Ch 1 INS

The query returns 21 rows of data. The returned results are the rows from the XML data file, *orders.xml*. Each row is a summary by country/region; the row lists the name of a country/region, the number of orders for each country/region and the dates of the oldest and newest orders.

	ShipCountryRegion	ShipCountryRegionCount	OldestOrderDate	NewestOrderDate
1	Switzerland	16	1996-12-03 00:00:00.000	1998-05-06 00:00:00.000
2	Poland	7	1996-12-05 00:00:00.000	1998-04-23 00:00:00.000
3	Venezuela	45	1996-07-30 00:00:00.000	1998-05-05 00:00:00.000
4	USA	122	1996-07-22 00:00:00.000	1998-05-06 00:00:00.000
5	Portugal	13	1996-10-14 00:00:00.000	1998-04-08 00:00:00.000
6	Norway	6	1996-12-18 00:00:00.000	1998-04-10 00:00:00.000
7	Sweden	37	1996-07-24 00:00:00.000	1998-04-27 00:00:00.000
8	Italy	28	1996-08-07 00:00:00.000	1998-04-30 00:00:00.000
9	Argentina	16	1997-01-09 00:00:00.000	1998-04-28 00:00:00.000
10	Canada	30	1996-10-17 00:00:00.000	1998-04-24 00:00:00.000
11	Ireland	19	1996-09-05 00:00:00.000	1998-04-30 00:00:00.000
12	Brasil	81	1996-07-10 00:00:00.000	1998-05-04 00:00:00.000
13	France	76	1996-07-04 00:00:00.000	1998-05-06 00:00:00.000
14	Austria	40	1996-07-17 00:00:00.000	1998-05-05 00:00:00.000
15	Belgium	18	1996-09-10 00:00:00.000	1998-04-21 00:00:00.000
16	UK	56	1996-08-26 00:00:00.000	1998-04-29 00:00:00.000
17	Denmark	18	1996-10-29 00:00:00.000	1998-05-06 00:00:00.000
18	Germany	121	1996-07-19 00:00:00.000	1998-05-05 00:00:00.000
19	Spain	23	1996-08-14 00:00:00.000	1998-04-21 00:00:00.000
20	Finland	22	1996-07-26 00:00:00.000	1998-04-15 00:00:00.000
21	Mexico	28	1996-07-18 00:00:00.000	1998-05-05 00:00:00.000

Query executed successfully | localhost (16.0 RTM) | AzureAD\PauloOliveira ... | AdventureWorksDW2022 | 00:00:00 | 21 rows

SQLQuery3.sql - localhost.AdventureWorksDW2022 (AzureAD\PauloOliveira (69))\* - Microsoft SQL Server Management Studio

Quick Launch (Ctrl+Q)

File Edit View Query Project Tools Window Help

AdventureWorksDW2022 Execute

Object Explorer

Connect

localhost (Integration Services 16.0.0.0) Running Packages Stored Packages File System MSDB Data Collector Maintenance Plans DataTransfer LoadXMLData

localhost (SQL Server 16.0.1050.5 - A) Databases System Databases Database Snapshots AdventureWorksDW2022 Database Diagrams Tables Views External Resources Synonyms Programmability Service Broker Storage Security Security Server Objects Replication Always On High Availability Management

SQLQuery3.sql - loc...\\PauloOliveira (69)\* SQLQuery2.sql - loc...\\PauloOliveira (51)\*

SELECT \*  
FROM OrderDatesByCountryRegion

100 %

Results Messages

	ShipCountryRegion	ShipCountryRegionCount	OldestOrderDate	NewestOrderDate
1	Switzerland	16	1996-12-03 00:00:00.000	1998-05-06 00:00:00.000
2	Poland	7	1996-12-05 00:00:00.000	1998-04-23 00:00:00.000
3	Venezuela	45	1996-07-30 00:00:00.000	1998-05-05 00:00:00.000
4	USA	122	1996-07-22 00:00:00.000	1998-05-06 00:00:00.000
5	Portugal	13	1996-10-14 00:00:00.000	1998-04-08 00:00:00.000
6	Norway	6	1996-12-18 00:00:00.000	1998-04-10 00:00:00.000
7	Sweden	37	1996-07-24 00:00:00.000	1998-04-27 00:00:00.000
8	Italy	28	1996-08-07 00:00:00.000	1998-04-30 00:00:00.000
9	Argentina	16	1997-01-09 00:00:00.000	1998-04-28 00:00:00.000
10	Canada	30	1996-10-17 00:00:00.000	1998-04-24 00:00:00.000
11	Ireland	19	1996-09-05 00:00:00.000	1998-04-30 00:00:00.000
12	Brasil	81	1996-07-10 00:00:00.000	1998-05-04 00:00:00.000
13	France	76	1996-07-04 00:00:00.000	1998-05-06 00:00:00.000
14	Austria	40	1996-07-17 00:00:00.000	1998-05-05 00:00:00.000
15	Belgium	18	1996-09-10 00:00:00.000	1998-04-21 00:00:00.000
16	UK	56	1996-08-26 00:00:00.000	1998-04-29 00:00:00.000
17	Denmark	18	1996-10-29 00:00:00.000	1998-05-06 00:00:00.000
18	Germany	121	1996-07-19 00:00:00.000	1998-05-05 00:00:00.000
19	Spain	23	1996-08-14 00:00:00.000	1998-04-21 00:00:00.000
20	Finland	22	1996-07-26 00:00:00.000	1998-04-15 00:00:00.000
21	Mexico	28	1996-07-18 00:00:00.000	1998-05-05 00:00:00.000

Query executed successfully | localhost (16.0 RTM) | AzureAD\\PauloOliveira ... | AdventureWorksDW2022 | 00:00:00 | 21 rows

Congratulations!  
You've finished successfully the tutorial!