

Debugging Packages

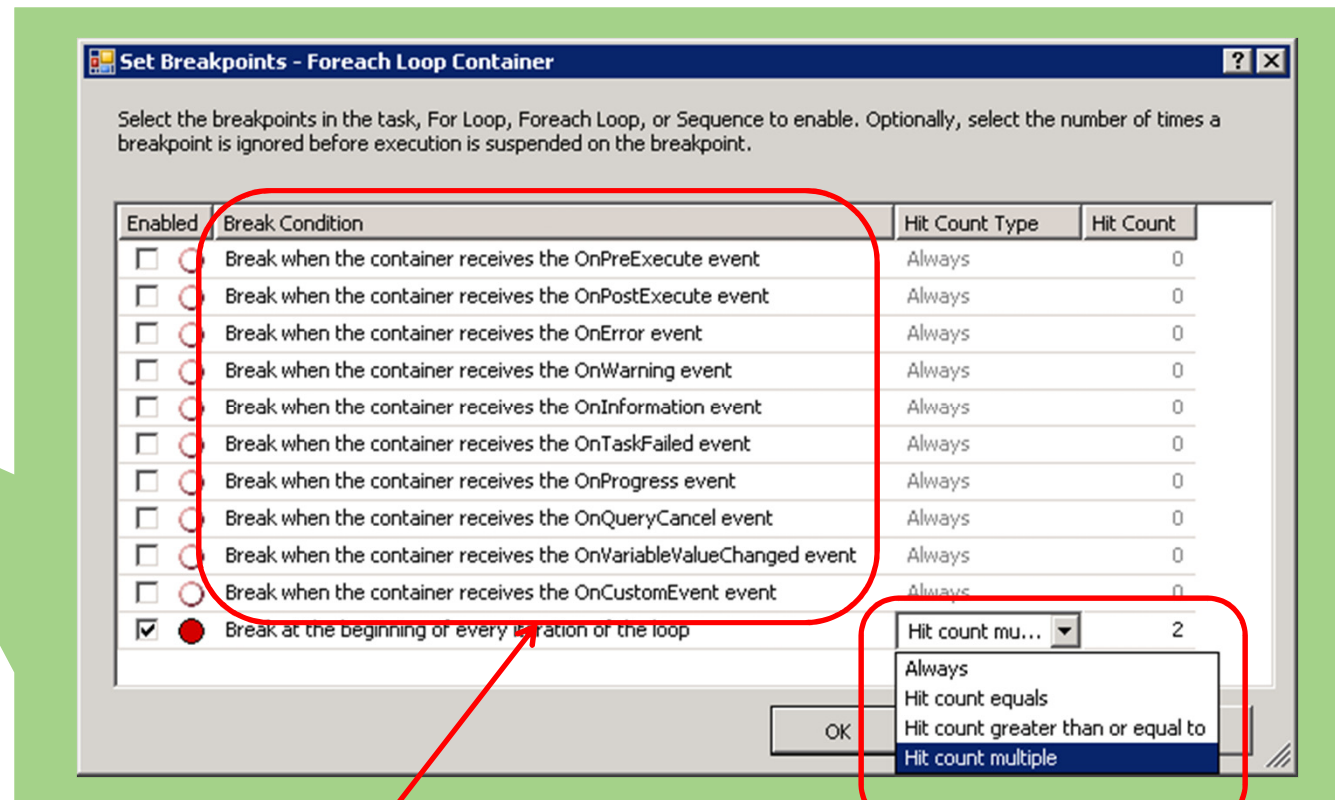
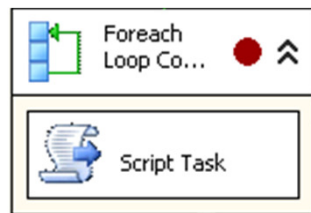
Exploring debugging tools in Integration Services



Overview

- Breakpoints
- Debug Windows
- Script Task Debugging
- Script Component Debugging
- Data Viewer

Breakpoints



Event-based
break conditions

Hit count type

Debug Windows

Locals

Locals		
Name	Value	Type
Variables		
System::ContainerStartTime	{5/22/2008 10:22:08 AM}	DateTime
System::LocaleID	{1033}	Int32
System::CancelEvent	{1464}	Int32
User::ContactName	{Gustavo Achong}	String
User::Contacts	{System.__ComObject}	__ComObject
System::ContainerStartTime	{5/22/2008 10:22:05 AM}	DateTime
User::Counter	{0}	Int32
System::CreationTime	{5/20/2008 10:08:41 AM}	DateTime
System::CreatorComputerName	{DI01}	String
System::CreatorName	{DATAINSPIRATION\{smisner}}	String
User::EmailAddress	{gustavo0@adventure-works.com}	String
System::ExecutionInstanceGUID	{{5D27568A-490B-49D7-90BC-C230CE1C83F3}}	String
System::InteractiveMode	{True}	Boolean
System::LocaleID	{1033}	Int32
System::MachineName	{DI01}	String
System::OfflineMode	{False}	Boolean
System::PackageID	{{7E029368-BBC8-49D5-90E8-D939A3FD8500}}	String
System::PackageName	{05 Control Flow}	String
System::StartTime	{5/22/2008 10:22:05 AM}	DateTime
System::UserName	{DATAINSPIRATION\{smisner}}	String
System::VersionBuild	{21}	Int32
System::VersionComments	{}	String
System::VersionGUID	{{A34911AA-96AB-470C-B1B9-96AD7CADCF0D}}	String
System::VersionMajor	{1}	Int32
System::VersionMinor	{0}	Int32
ExecutionDuration	0	
ExecuteStatus	Executing	
ExecutionResult	Success	

Watch

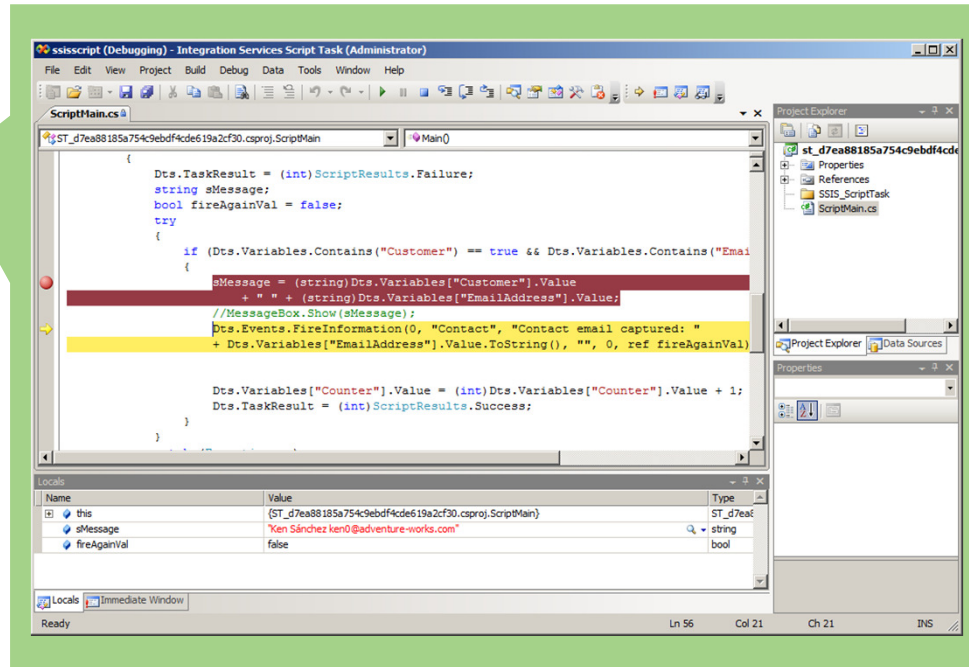
Watch 1		
Name	Value	Type
User::Counter	{0}	Int32

Right-click and select
Add Watch

User::Counter	{0}
Type	Int32
Value	0

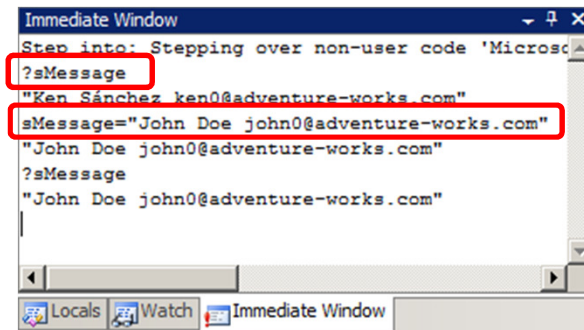
Right-click and select
Edit Value

Debugging the Script Task



Important:
Run project in
32-bit mode to debug scripts

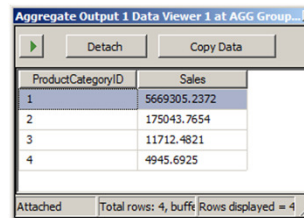
Query a variable
Modify a variable



Debugging a Script Component

No support for breakpoints!

- Add a data viewer



ProductCategoryID	Sales
1	5669305.2372
2	175043.7654
3	11712.4821
4	4945.6925

- Call an event method in the code

```
this.ComponentMetaData.EventMethod(  
    informationCode, subComponent, description,  
    helpFile, helpContext, ref fireAgain)
```

- Use SSIS logging by calling the Log method in the code

```
this.Log(messageText, dataCode, dataBytes)
```

- Use a MessageBox

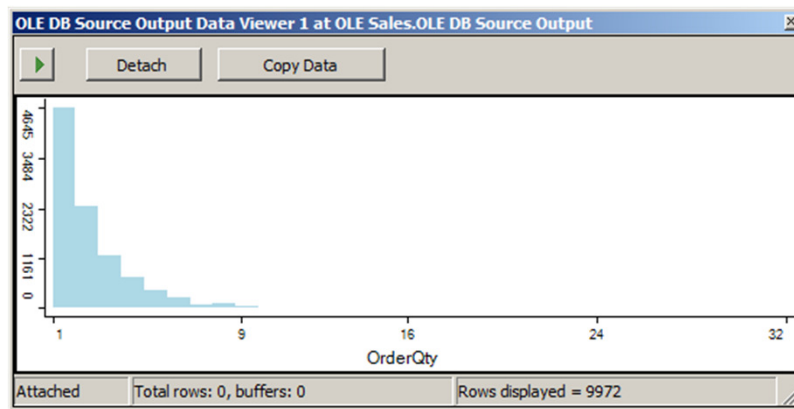
```
System.Windows.Forms.MessageBox.Show(messageString)
```

Data Viewer

- Grid

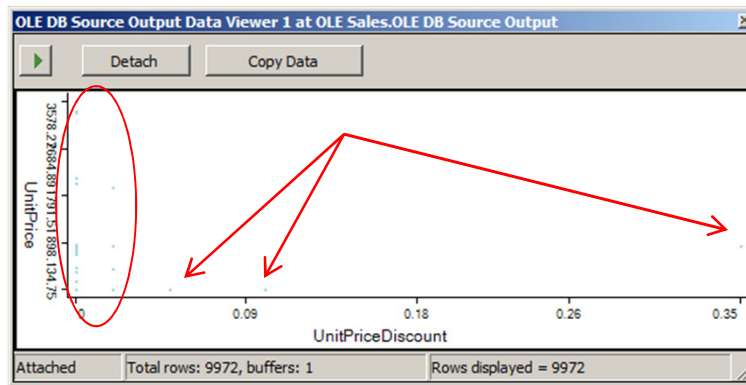
SalesOrderID	RevisionNumber	OrderDate	DueDate	ShipDate	Status	OnlineOrderFlag	SalesOrderNumber	PurchaseOrderNumber	AccountNumber	Cus...	Sal...	Te
43659	3	2005-07-01...	2005-07-13...	2005-07-0...	5	False	SO43659	PO522145787	10-4020-000676	29...	279	5
43660	3	2005-07-01...	2005-07-13...	2005-07-0...	5	False	SO43660	PO18850127500	10-4020-000117	29...	279	5
43661	3	2005-07-01...	2005-07-13...	2005-07-0...	5	False	SO43661	PO18473189620	10-4020-000442	29...	282	6
43662	3	2005-07-01...	2005-07-13...	2005-07-0...	5	False	SO43662	PO18444174044	10-4020-000227	29...	282	6
43663	3	2005-07-01...	2005-07-13...	2005-07-0...	5	False	SO43663	PO18009186470	10-4020-000510	29...	276	4
43664	3	2005-07-01...	2005-07-13...	2005-07-0...	5	False	SO43664	PO16617121983	10-4020-000397	29...	280	1

- Histogram

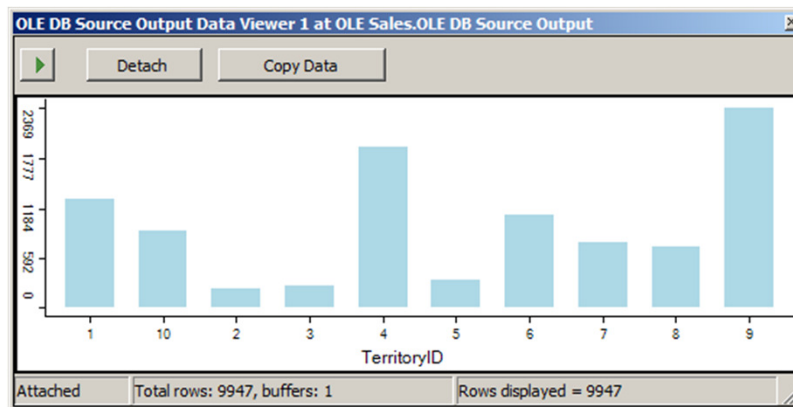


Data Viewer

- Scatter Plot



- Chart



Summary

- **Breakpoints**
 - Task or container, event-based conditions, configurable hit count for loops
- **Debug Windows**
 - Locals and watch windows, update variable value during runtime
- **Script Task Debugging**
 - Breakpoints in script, separate debug windows, 32-bit mode in BIDS
- **Script Component Debugging**
 - Data viewer, script options: event method, log method, message box
- **Data Viewer**
 - Grid, histogram, scatter plot, chart

References

- **Debugging Control Flow**
 - <http://msdn.microsoft.com/en-us/library/ms140274.aspx>
- **Debugging Script**
 - <http://msdn.microsoft.com/en-us/library/ms142157.aspx>
- **Debugging Data Flow**
 - <http://msdn.microsoft.com/en-us/library/ms137944.aspx>