



# SQL Server Integration Services (SSIS)



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# SQL Server Integration Services (SSIS)



- What is SQL Server Integration Services?
- What are the components?
- What can it be used for?
- How is it constructed?



# SQL Server Integration Services (SSIS)



- SSIS is an Enterprise Scale ETL (Extraction, Transformation and Load) Tool which allows Development of Data Integration and Workflow Solutions
- Data Interface Tool Allowing Importation of Data into Lucity System
- Major Components of SSIS Package
  - Connection Managers
  - Control Flow
  - Data Flow



# SQL Server Integration Services (SSIS)



- Connection Managers  
Contains all Package Connections (Source(s), SMTP, Destination(s), etc.)
- Control Flow  
Allows Ordering of Workflow to Ensure Tasks/Components Execute in the Appropriate Order
- Data Flow  
Manages Data Flow from Sources to Destinations and Performs Transformations (Lookups, Data Cleansing etc.).



# SQL Server Integration Services (SSIS)



## Scheduled

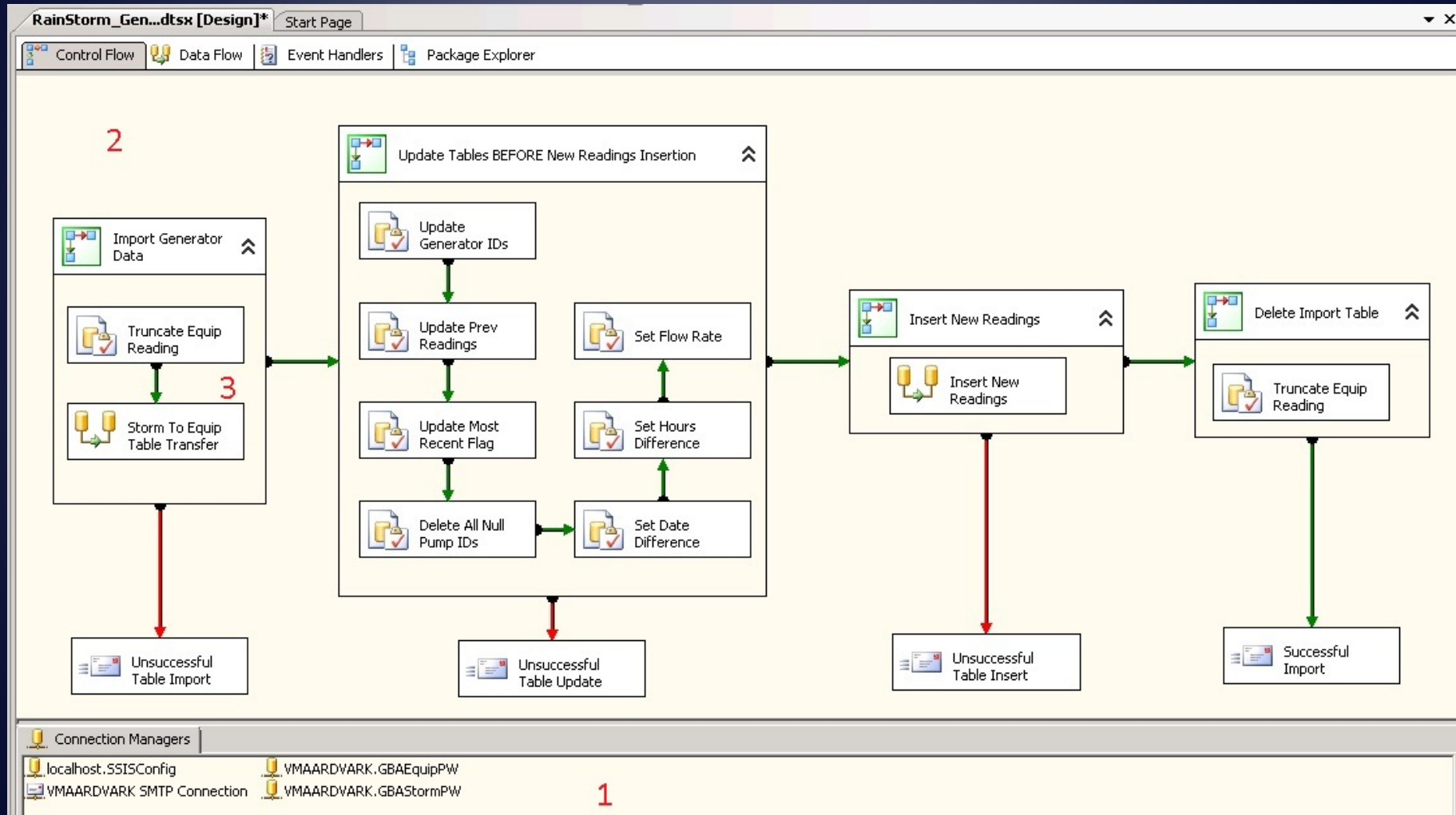
- Rainstorm Pump Readings
- Rainstorm Generator Readings
- Stormwater Fuelings
- Transit Fuelings
- Water Meter Import

## Unscheduled

- Storm Picture Updates
- Data Changes
- History Changes
- Large Data Additions
- One Time Data Imports



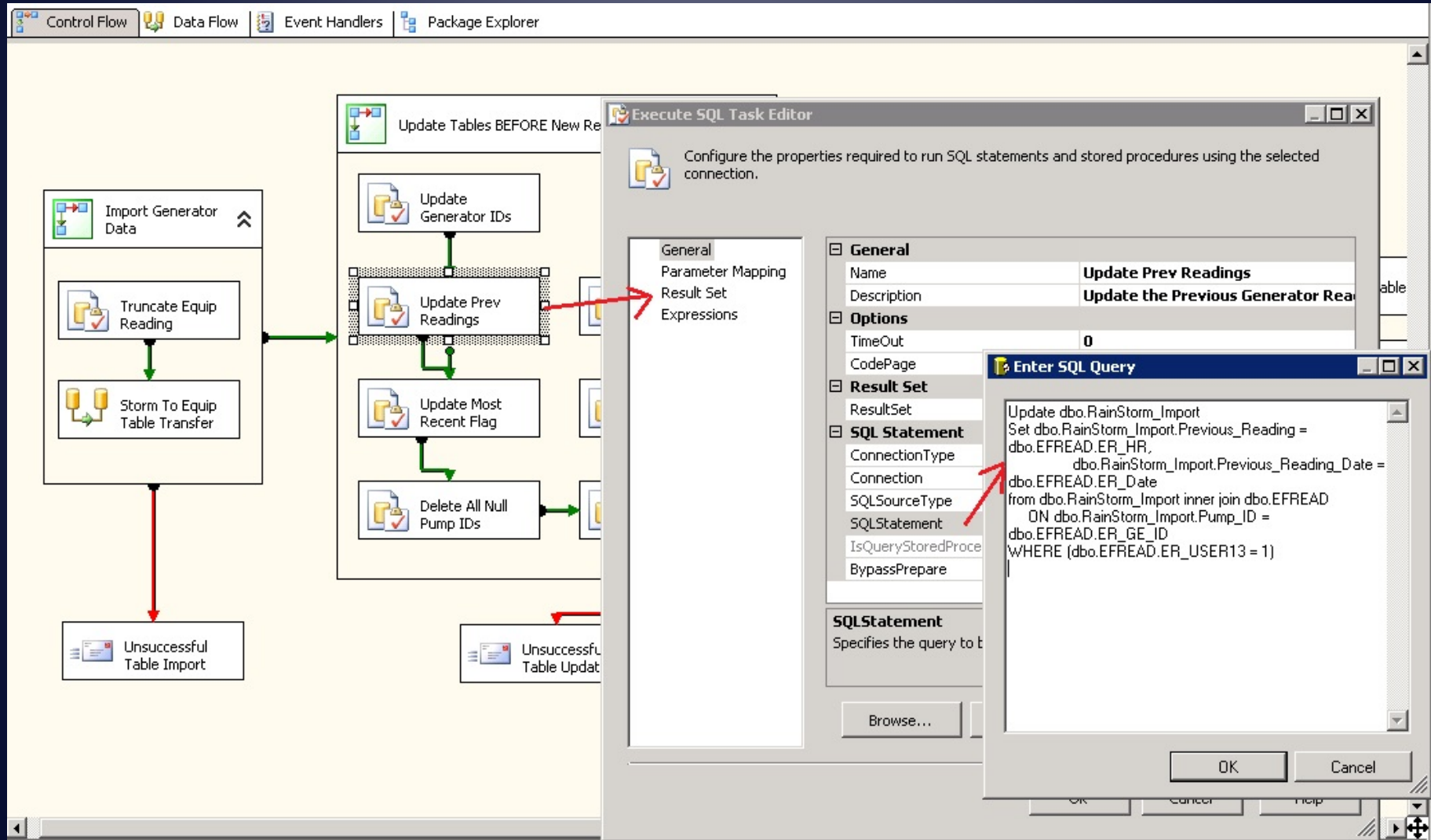
# SQL Server Integration Services (SSIS)







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WU\_Water\_Mete...tsx [Design]\* Start Page

Control Flow Data Flow Event Handlers Package Explorer Script Transformations

Data Flow Task: Load TestMeter Data

Script Transformation

Access Microsoft Visual C# 2008, or Visual Basic 2008

Script

Input Columns

Inputs and Outputs

Connection Managers

Script Transformation

main.vb

(General) (Declarations)

```
If Not Row.UIRDIALCNSZCODE_IsNull Then

    Select Case Row.UIRDIALCNSZCODE Input Field
        Public ReadOnly Property UIRDIALCNSZCODE() As String

        Case "3/4"
            Row.MTUSER8 = 0.75 Output Fields
            Row.MTSIZE = 0.75

        Case "5/8" Input Field Value
            Row.MTUSER8 = 0.625 Output Field Values
            Row.MTSIZE = 0.625

        Case "7/8"
            Row.MTUSER8 = 0.875
            Row.MTSIZE = 0.875

        Case Else

            If IsNumeric(Row.UIRDIALCNSZCODE) Then
                Row.MTUSER8 = Row.UIRDIALCNSZCODE
                Row.MTSIZE = Row.UIRDIALCNSZCODE
            End If

        End Select

    Else

        Row.MTUSER8 = 0
        Row.MTSIZE = 0

    End If
```

{VB.NET or C#}

Connection Managers

Banner\_Meters

Lucity\_Water





# SQL Server Integration Services (SSIS)



The screenshot displays the Microsoft SQL Server Management Studio (SSMS) interface with the following components:

- Object Explorer:** Shows the server hierarchy for 'VMAARDVARK (SQL Server 10.50.2550 - ICTLAN\kcoons)'. The 'Jobs' folder is expanded, listing various jobs including 'RainStorm\_Import\_Job\_Generators'.
- Job Properties - RainStorm\_Import\_Job\_Generators:** A dialog box with tabs for 'General', 'Schedules', 'Alerts', 'Notifications', and 'Targets'. The 'General' tab is active, showing a 'Schedule list' table with one entry: ID 25, Name Storm.
- Job Schedule Properties - StormWater\_Generator\_Import:** A detailed configuration window for the selected job schedule. It includes the following settings:
  - Name:** StormWater\_Generator\_Import
  - Schedule type:** Recurring
  - One-time occurrence:** Date: 8/12/2013, Time: 10:10:16 AM
  - Frequency:** Occurs: Weekly, Recurs every: 1 week(s) on
  - Daily frequency:** Occurs once at: 3:00:00 AM
  - Duration:** Start date: 12/7/2012, End date: 8/12/2013
  - Summary:** Description: Occurs every week on Saturday at 3:00:00 AM. Schedule will be used starting on 12/7/2012.



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# QUESTIONS?



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