CONTROLS - PIVOT

**Spreadsheet** provides some controls for data visualization. These controls include **Chart**, **Pivot** and **Dashboard**. Current sample shows how to use **Pivot** control.

For *data visualization controls* **SpreadCommander** adds new tab in **Console**; this tab contains *data visualization control*. Data shall be added with cmdlets *Out-Data* or *Out-DataSet*. Data will become a *data source* for *data visualization control* and will be displayed on console tab **Data**; this allows to review raw data. Script output will be sent into console tab **Book**. Console tab **Spreadsheet** can be used the same way as in *PowerShell scripts* for more thorough data analysis. *Data visualization control* can be designed in User Interface. For **Pivot** control use customization control at left side to put columns into *Row Area*, *Column Area* and *Data Area*.

Creating a **Pivot**

* Write a script that generates data and send data into console tab **Data** using cmdlet **Out-Data** or **Out-DataSet**.
* Select console tab **Pivot** and expand control **Customization** at left side.
* Put columns into corresponding areas - in this case - **County** int *Column Area*, **Year** into *Row Area*, **GDP** and **EPC** into *Data Area*.
* Make other changes as needed. For example - add *Format Conditions* using button *Format Conditions* on ribbon.

When **Pivot** is opened next time - it will be empty. This happens because data are not stored with **Pivot**. Re-execute script that provides data, and new data will be bound to the **Pivot**.

**Pivot** also includes tab **Chart**. Data source for the **Chart** is always selection in **Pivot** control. Please see sample for **Chart** in this project for details on using *Chart Designer*.

Controls cmdlets

Cmdlet *Out-Data*

**NAME**  
    Out-Data  
      
**SYNTAX**  
    Out-Data [[-DataRecord] <psobject>] [-DataSource <Object>] [-TableName <string>] [-SelectColumns <string[]>] [-SkipColumns <string[]>] [-IgnoreErrors] [-Formatting <string>] [-Replace] [-RelationName <string>] [-ParentTable <string>] [-ParentColumns <string[]>] [-ChildColumns <string[]>] [-PassThru] [-ResetDataSet] [<CommonParameters>]  
      
      
**PARAMETERS**  
**-ChildColumns <string[]>**  
        Create master-detail relationship. List of column names for relation. If not set - ParentColumns are using.  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-DataRecord <psobject>**  
        Data source for data tables. Data source shall implement interface IList or IListSource and final IList shall implement ITypedList.  
          
        Required?                    false  
        Position?                    0  
        Accept pipeline input?       true (ByValue)  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-DataSource <Object>**  
        Data source  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-Formatting <string>**  
        Format conditions for spreadsheet table  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-IgnoreErrors**  
        Ignore errors thrown when getting property values  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      NoErrors  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-ParentColumns <string[]>**  
        Create master-detail relationship. Comma-separated list of parent columns  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-ParentTable <string>**  
        Master table for master-detail relationship  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-PassThru**  
        Returns an object representing the item with which you are working. By default, this cmdlet does not generate any output.  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-RelationName <string>**  
        Name of master-detail relation  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-Replace**  
        Replace existing table if it exists.  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-ResetDataSet**  
        When set - current tables, relations etc. will be removed from the DataSet.  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      reset  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-SelectColumns <string[]>**  
        List of data source columns to export. If not provided - all columns will be exported.  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-SkipColumns <string[]>**  
        Skip listed columns from data source.  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-TableName <string>**  
        Table name  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      Table  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**<CommonParameters>**  
        This cmdlet supports the common parameters: Verbose, Debug,  
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,  
        OutBuffer, PipelineVariable, and OutVariable. For more information, see  
        about\_CommonParameters (https://go.microsoft.com/fwlink/?LinkID=113216).   
      
      
**INPUTS**  
    System.Management.Automation.PSObject  
      
      
**OUTPUTS**  
    System.Object  
      
**ALIASES**  
    None  
      
  
**REMARKS**  
    None

Cmdlet *Out-DataSet*

**NAME**  
    Out-DataSet  
      
**SYNTAX**  
    Out-DataSet [[-DataSource] <DataSet>] [-Replace] [-Formatting <string>] [-ResetDataSet] [-NoCopyTables] [-PassThru] [<CommonParameters>]  
      
      
**PARAMETERS**  
**-DataSource <DataSet>**  
        ADO.Net DataSet for Data tab.  
          
        Required?                    false  
        Position?                    0  
        Accept pipeline input?       true (ByValue)  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-Formatting <string>**  
        Format conditions for spreadsheet table  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-NoCopyTables**  
        When set - tables are removed from DataSource. This is more efficient but DataSource cannot be used later.  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-PassThru**  
        Returns an object representing the item with which you are working. By default, this cmdlet does not generate any output.  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-Replace**  
        Replace existing tables if they exist.  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      None  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**-ResetDataSet**  
        When set - current tables, relations etc. will be removed from the DataSet.  
          
        Required?                    false  
        Position?                    Named  
        Accept pipeline input?       false  
        Parameter set name           (All)  
        Aliases                      reset  
        Dynamic?                     false  
        Accept wildcard characters?  false  
          
**<CommonParameters>**  
        This cmdlet supports the common parameters: Verbose, Debug,  
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,  
        OutBuffer, PipelineVariable, and OutVariable. For more information, see  
        about\_CommonParameters (https://go.microsoft.com/fwlink/?LinkID=113216).   
      
      
**INPUTS**  
    System.Data.DataSet  
      
      
**OUTPUTS**  
    System.Object  
      
**ALIASES**  
    None  
      
  
**REMARKS**  
    None

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