Data Services and Data Quality: Export substitution parameters to CSV
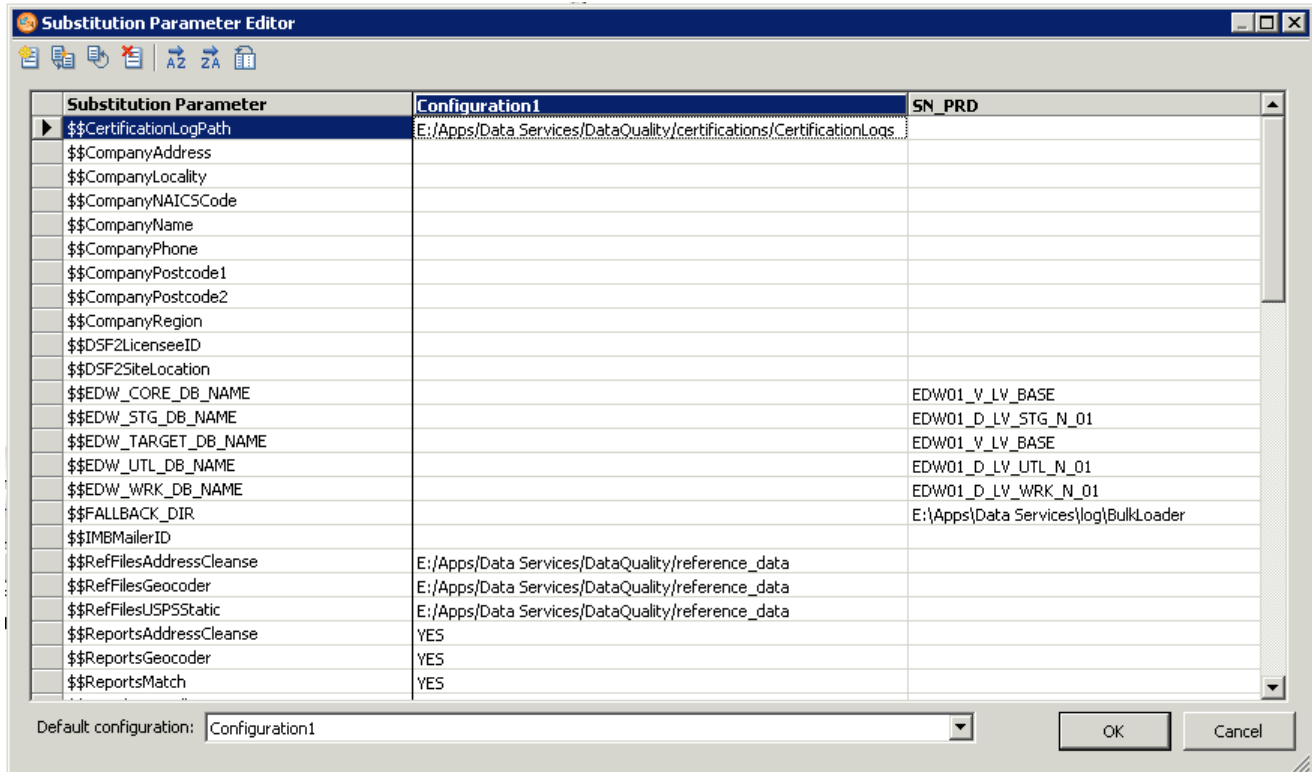
Posted by Chethan Lingaraju Jul 10, 2015

Why do we need substitution parameters in excel?

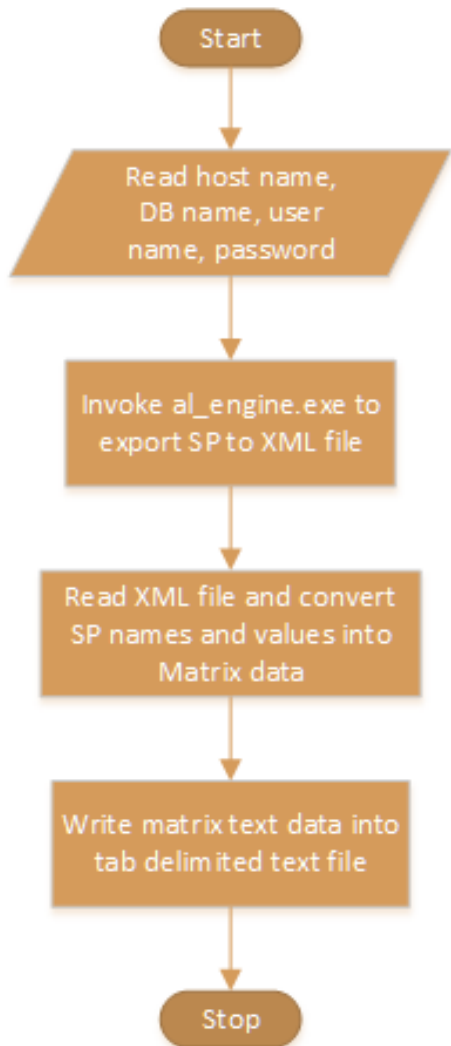In designer, we see substitution parameters in a grid view.

Whereas, when we have to export it, we will only have XML and ATL as option. These are not the straight forward information for humans to understand.

If there is a wider audience who wants to take a look at substitution parameters, instead of allowing everyone to login to designer, You can email them the substitution parameters in excel file

Idea behind the approach

Plan was to create a utility to export substitution parameters to CSV file from the repository. VB-Script was the easy way we could think of, as we were using Windows machine. Repository databases are hosted on SQL server.

Idea was to read repository database credentials from user. Export substitution parameters to XML file through al_engine.exe, and then convert it to CSV file.

```
        ┌──────────┐
        │  Start   │
        └──────────┘
              │
              ▼
      ╱─────────────────╲
     │  Read host name,  │
     │  DB name, user    │
     │  name, password   │
      ╲─────────────────╱
              │
              ▼
     ┌───────────────────┐
     │ Invoke al_engine.exe to │
     │ export SP to XML file   │
     └───────────────────┘
              │
              ▼
     ┌───────────────────┐
     │ Read XML file and convert │
     │ SP names and values into  │
     │     Matrix data           │
     └───────────────────┘
              │
              ▼
     ┌───────────────────┐
     │ Write matrix text data into │
     │ tab delimited text file     │
     └───────────────────┘
              │
              ▼
        ┌──────────┐
        │  Stop    │
        └──────────┘
```

Issues with comma separated values 😲

- If there is a comma in SP value, cell value gets to split and span to multiple columns in excel. Tab separator was ideal.
- Date value will automatically undergo format change in excel upon opening the file. Cell value has been formatted as text.

VB-Script Code:

' Don't worry if you don't understand. Just copy paste the code in notepad, save it with vbs as extension and double click 😎

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```
' Or download it from attachment.

Option Explicit
Dim SQLHost, SQLDB, SQLUN, SQLPWD

SQLHost = InputBox ("Enter target SQL Host,port:", "Export SP to tab delimited text file","")
SQLDB = InputBox ("Enter target SQL database:", "Export SP to tab delimited text file","")
SQLUN = InputBox ("Enter target SQL username:", "Export SP to tab delimited text file","")
SQLPWD = InputBox ("Enter target SQL password:", "Export SP to tab delimited text file","")

build_and_execute_command

SP_XML_to_CSV "SP.xml", "SP.txt"

Msgbox "Open generated tab delimited text file SP.txt in Excel." & vbCrLf & "If required, format it as table with
header.",  vbInformation  ,"Export SP to tab delimited text file"


Function build_and_execute_command()
   Dim command, objShell, filesys
   set filesys=CreateObject("Scripting.FileSystemObject")
   Set objShell = WScript.CreateObject ("WScript.shell")
   command = """%LINK_DIR%\bin\al_engine.exe"" -NMicrosoft_SQL_Server -passphraseATL -z""" &
"SP_error.log"" -U" & SQLUN & " -P" & SQLPWD & " -S" & SQLHost & " -Q" & SQLDB & " -XX@" & "v" &
"@""" & "SP.xml"""
   export_execution_command "%LINK_DIR%\log\", "SP",command
   'objShell.run "%LINK_DIR%\log\" & "SP" & ".bat",0,true
   objShell.run "SP.bat",0,true
   filesys.DeleteFile "SP.bat", true
   if filesys.FileExists("SP_error.log") then
      msgbox ("Encountered issue while exporting SP from repo")
      build_and_execute_command = -1
   End if
   Set filesys = Nothing
End Function


Function export_execution_command(FilePath, FileName, FileContent)
   Dim objFSO, objFile, outFile
   Set objFSO=CreateObject("Scripting.FileSystemObject")
   'outFile = FilePath & FileName & ".bat"
   outFile = FileName & ".bat"
   Set objFile = objFSO.CreateTextFile(outFile,True)
   objFile.Write FileContent & vbCrLf
   objFile.Close
```

```
    export_execution_command = 0
End Function


Function SP_XML_to_CSV (xmlFile, csvFile)
    Dim ConfigList, SubParamList, objXMLDoc, Root, Config, SubParam, Matrix(1000,50)
    Dim i, j, iMax, jMax, Text, sessionFSO, OutFile, objShell
    Set sessionFSO = CreateObject("Scripting.FileSystemObject")
    Set OutFile    = sessionFSO.CreateTextFile(csvFile, 1)
    Set objShell = WScript.CreateObject ("WScript.shell")
    Set objXMLDoc = CreateObject("Microsoft.XMLDOM")
    objXMLDoc.async = False
    objXMLDoc.load(xmlFile)
    Set ConfigList = objXMLDoc.documentElement.getElementsByTagName("SVConfiguration")
    i = 1
    Matrix(0,0) = "Substitution Parameter"
    For Each Config In ConfigList
        Set SubParamList = Config.getElementsByTagName("SubVar")
        j = 1
        Matrix(0,i) = Config.getAttribute("name")
        For Each SubParam In SubParamList
            If i = 1 Then Matrix(j,0) = SubParam.getAttribute("name")
            Matrix(j,i) = "=""" & SubParam.text & """"
            j = j + 1
        Next
        i = i + 1
    Next
    iMax=i
    jMax=j
    For i=0 to jMax-1
        Text = ""
        For j=0 to iMax-1
            Text = Text & Matrix(i,j) & vbTab
        Next
        OutFile.WriteLine Text
    Next
    OutFile.Close
End Function
```

Usage screenshots:

Export SP to tab delimited text file

Enter target SQL Host,port:

OK

Cancel

MSSQLDB

Export SP to tab delimited text file
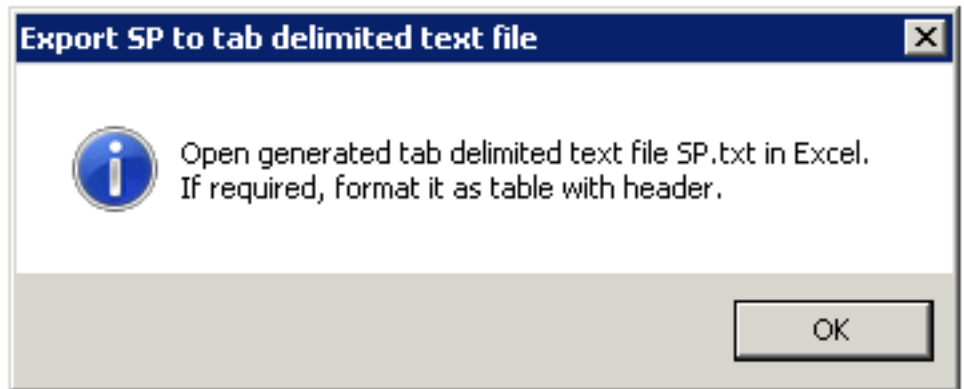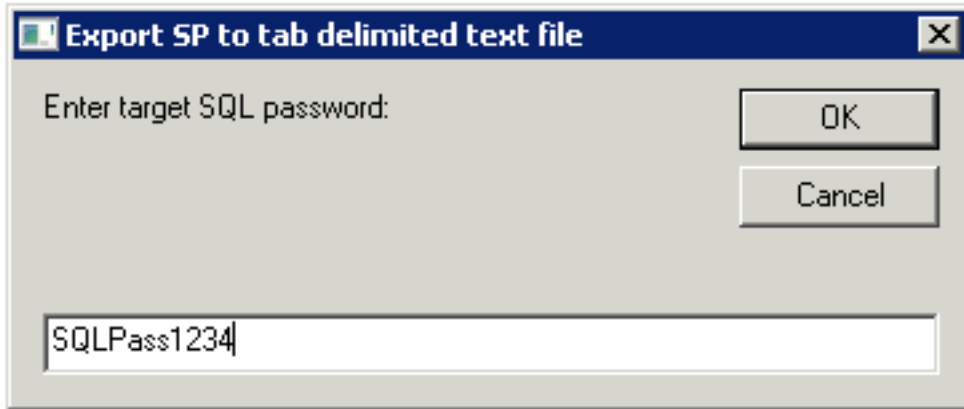
Enter target SQL database:

OK

Cancel

TestRepoDB

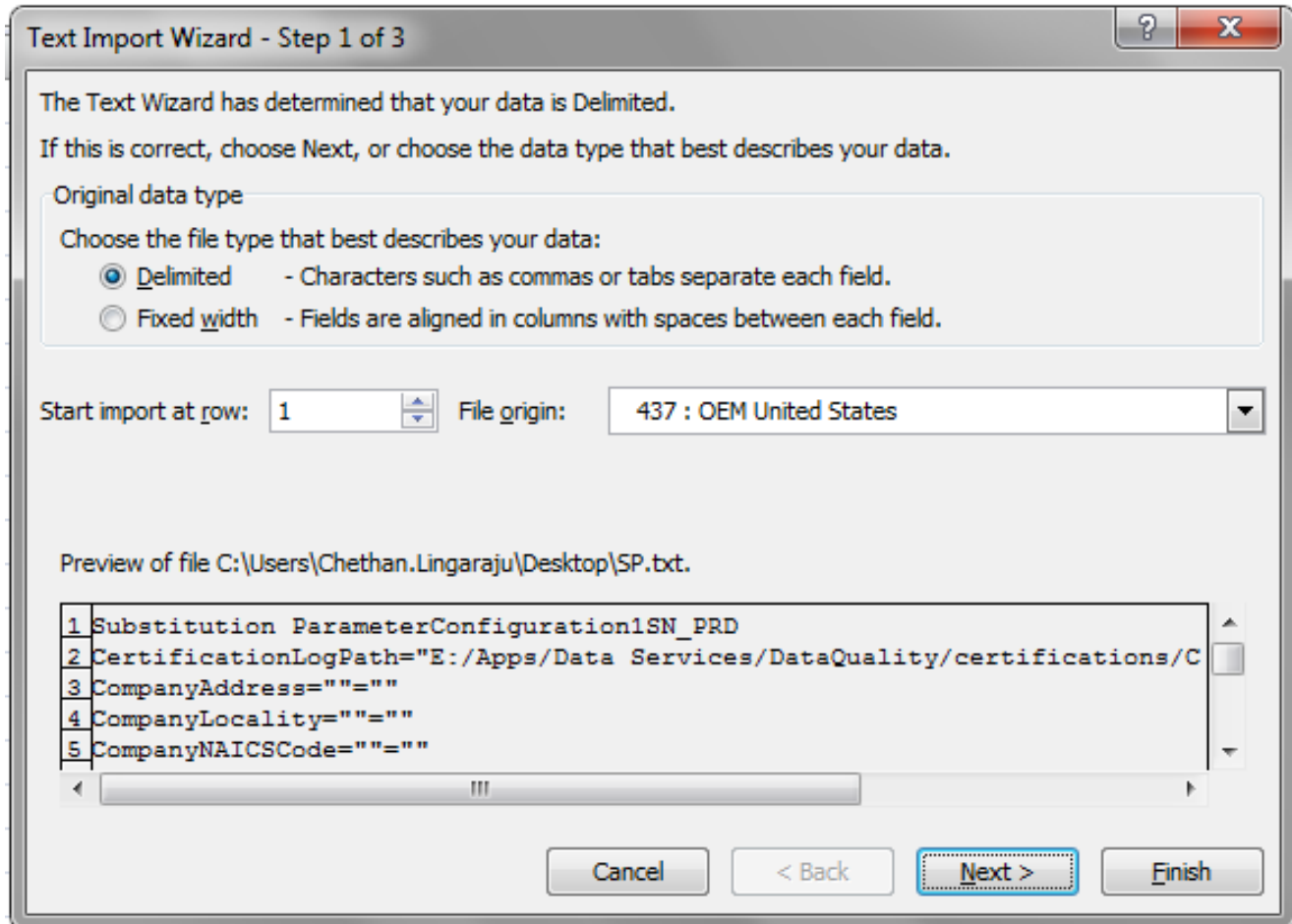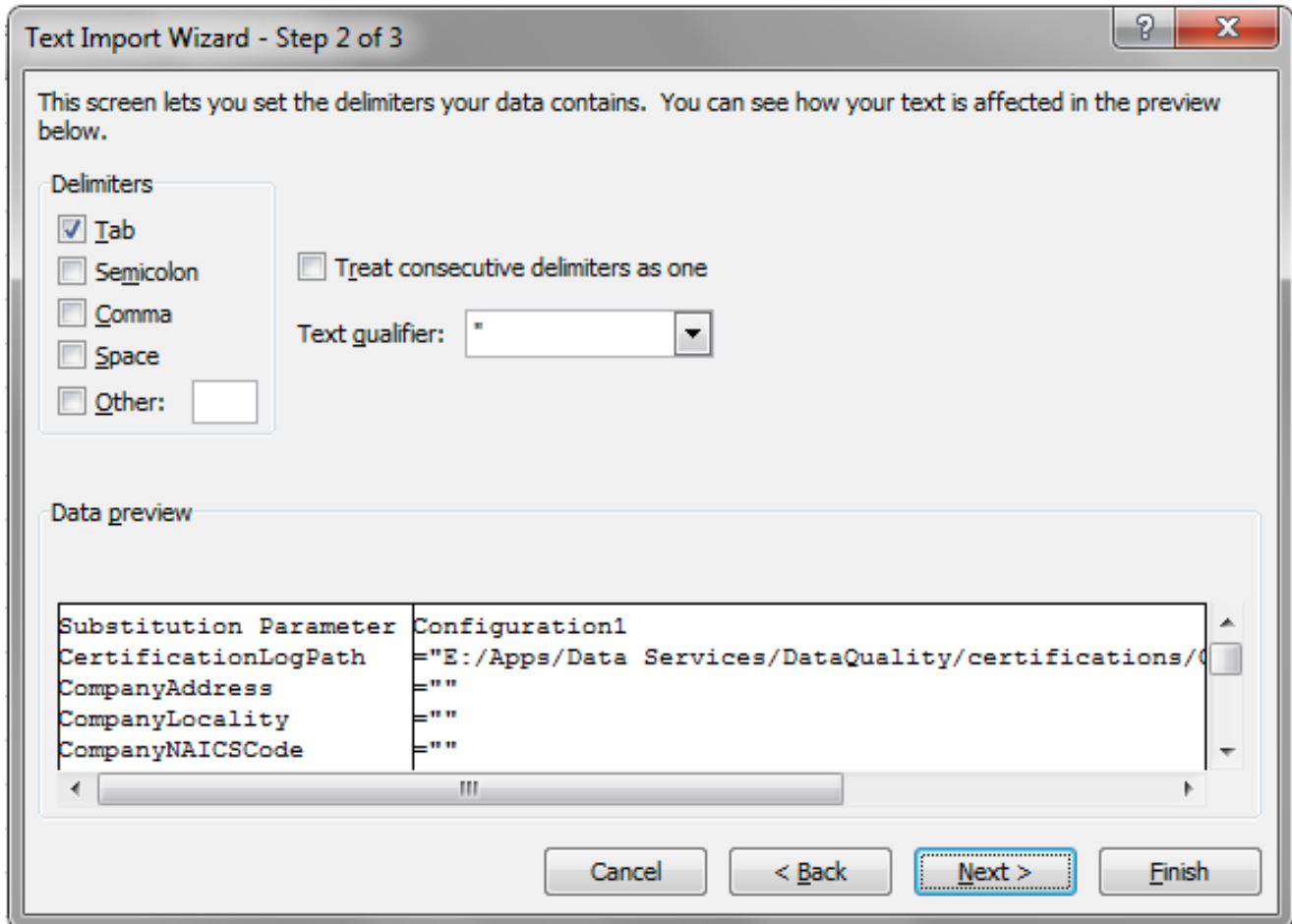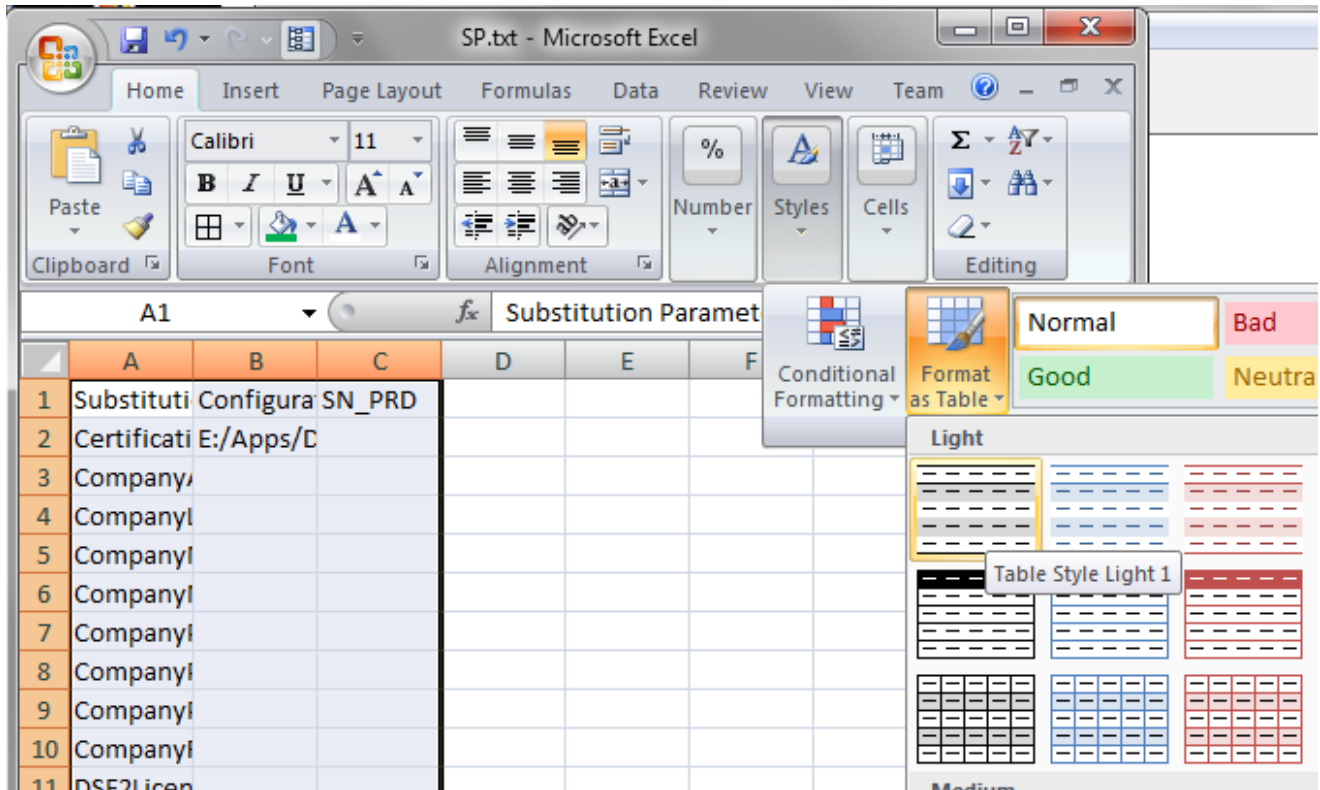**Export SP to tab delimited text file**

Enter target SQL username:

OK

Cancel

bodsadmin

In Excel, open the text file:

Select all the data data cells and format it as table
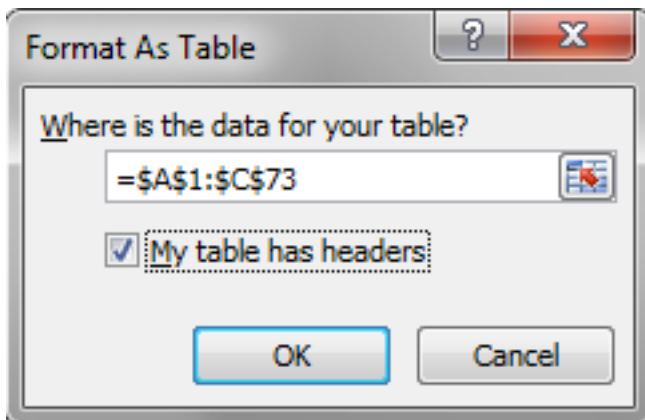
Finally, Data looks like this: 😎

	A	B	C
1	**Substitution Parameter** ▼	**Configuration1** ▼	**SN_PRD** ▼
2	CertificationLogPath	E:/Apps/Data Serv	
3	CompanyAddress		
4	CompanyLocality		
5	CompanyNAICSCode		
6	CompanyName		
7	CompanyPhone		
8	CompanyPostcode1		
9	CompanyPostcode2		
10	CompanyRegion		
11	DSF2LicenseeID		
12	DSF2SiteLocation		
13	EDW_CORE_DB_NAME		EDW01_V_LV_BASE
14	EDW_STG_DB_NAME		EDW01_D_LV_STG_N_01
15	EDW_TARGET_DB_NAME		EDW01_V_LV_BASE
16	EDW_UTL_DB_NAME		EDW01_D_LV_UTL_N_01
17	EDW_WRK_DB_NAME		EDW01_D_LV_WRK_N_01
18	FALLBACK_DIR		E:\Apps\Data Services\log\BulkLoader
19	IMBMailerID		
20	RefFilesAddressCleanse	E:/Apps/Data Serv	
21	RefFilesGeocoder	E:/Apps/Data Serv	
22	RefFilesUSPSStatic	E:/Apps/Data Serv	
23	ReportsAddressCleanse	YES	
24	ReportsGeocoder	YES	
25	ReportsMatch	YES	
26	SamplesInstall	E:/Apps/Data Serv	
27	SEM_CORE_DB_NAME		EDW_V_LV_SEMANTIC

If you don't have access to repository database or Jobserver, you can export substitution parameters to XML file manually from designer and use the function SP_XML_to_CSV from the given VB-Script.

Cheers😊

- (1.4 K)

1 View Tags: backup, metadata, configuration, integration, repository, administration, export, substitution, sap_data_services, al_engine, al_engine_parameter, sap_bods, metadata_repository, xml_to_flat_file, substitution_parameter, substitution_parameter_configuration, xml_file, xml_to_excel, atl_file

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