Insights
Epicor Customer Conference 2017

DMT PowerShell Scripts: Lessons Learned

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Set Your Course for Growth

EPICOR.

About Rowmark & Epicor

- *Rowmark* is a manufacturer of engravable sheet plastic for Laser and Rotary Engraving, Sublimation and materials for awards and sign markets.
- Went Live with Epicor 9.05 in January, 2013
- Went Live with Epicor 10.0 January, 2015
- Through Multiple acquisitions in 2014 & 2015, Rowmark now operates most of it's distribution network.
- Rowmark has heavily leveraged Epicor for operations, including using DMT & PowerShell to automate several functions.
- At Insights 2016 a very good DMT PowerShell presentation with sample scripts was presented. I had a few ideas and I decided to give it a shot

Audience Poll

Which version of Epicor are you running?

A. Epicor 10.1
B. Epicor 10.0
C. Epicor 9
D. Vantage 8
E. Prior to Vantage 8

What tools are you familiar with?

A. DMT
B. PowerShell
C. Windows Task Scheduler
D. Cloud Based Social Platforms
Slack, HipChat, Socialcast, Jive, etc

Agenda

1. Introduction
2. What You Need
3. How It Works
4. What We Did
5. Struggles
6. Step by Step Examples
7. Wrap Up

What You Need

What You Need

- DMT License
- Windows Server with PowerShell (WS 2008+)
- Windows Task Scheduler
- PowerShell Reference (google.com)
- DotNetIt GitHub Sample Scripts https://github.com/DotNetIT/EpicorDMTScripts
- Email Server (Optional)
- BONUS: SocialCast.com, Slack, HipChat, Jive, Zapier
- PowerShell Novice.
- Problems to solve.

How It Works

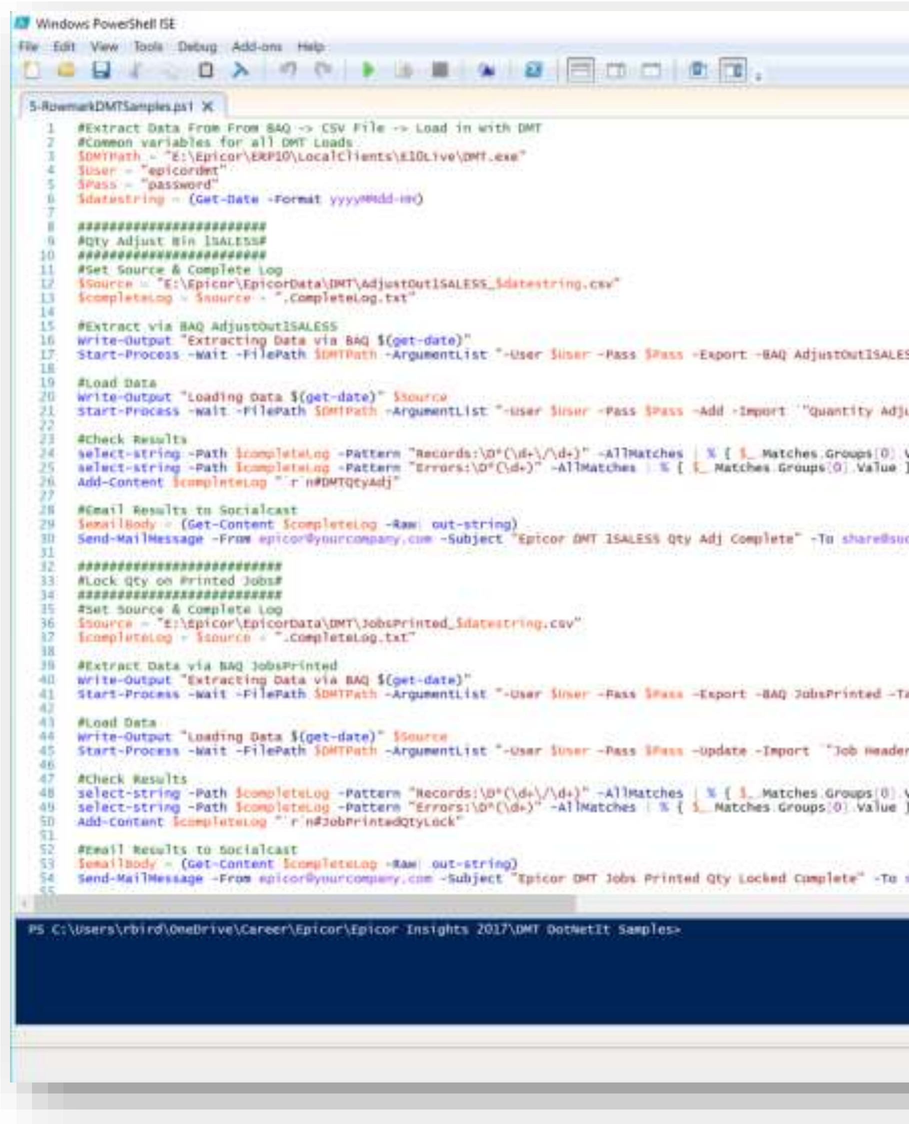
How It Works

- This is standard PowerShell.
- Since DMT has built in a command line interface, PowerShell can be used to call the appropriate commands in a nice script.
- The Sample Scripts demonstrate five basic functions:
  - DMT Load
  - DMT BAQ Extract
  - SQL Extract
  - Logging
  - Email
- Get the DMT Arguments:
  CMD Line:
  ```
  DMT.exe /?
  ```
  PowerShell:
  ```
  Start-Process DMT.exe /?
  ```
- Depending on what is needed the PowerShell script can be constructed in different ways.

What We Did

What We Did

- Automated Quantity Adjustments nightly out of a certain bin.
- Customization Bug Workaround – Correct ShipHead Invoice Status when it doesn’t match the ShipDtls
- Lock Qty for any Printed Jobs to prevent MRP Job Change Suggestions
- Evaluate and update OrderHed UD field for user friendly Order Status for custom e-commerce site every hour.
- Set Parts Inactive, if currently RunOut when Inventory is zero.
- Non DMT: MultiCompany Process Stall Check every 15 minutes



```
#Extract Data From From BAQ -> CSV File -> Load in with DMT
#Common variables for all DMT Loads
$DMTPath = "E:\Epicor\ERP10\LocalClients\E10Live\DMT.exe"
$User = "epicordmt"
$Pass = "password"
$datestring = (Get-Date -Format yyyyMMdd-HH)

#########################
#Qty Adjust Bin 1SALESS#
#########################
#Set Source & Complete Log
$Source = "E:\Epicor\EpicorData\DMT\AdjustOut1SALESS_$datestring.csv"
$completeLog = $Source + ".CompleteLog.txt"

#Extract via BAQ AdjustOut1SALESS
Write-Output "Extracting Data via BAQ $(get-date)"
Start-Process -Wait -FilePath $DMTPath -ArgumentList "-User $User -Pass $Pass -Export -BAQ AdjustOut1SALES

#Load Data
Write-Output "Loading Data $(get-date)" $Source
Start-Process -Wait -FilePath $DMTPath -ArgumentList "-User $User -Pass $Pass -Add -Import `"Quantity Adju

#Check Results
select-string -Path $completeLog -Pattern "Records:\D*(\d+\/\d+)" -AllMatches | % { $_.Matches.Groups[0].V
select-string -Path $completeLog -Pattern "Errors:\D*(\d+)" -AllMatches | % { $_.Matches.Groups[0].Value }
Add-Content $completeLog "`r`n#DMTQtyAdj"

#Email Results to Socialcast
$emailBody = (Get-Content $completeLog -Raw | out-string)
Send-MailMessage -From epicor@yourcompany.com -Subject "Epicor DMT 1SALESS Qty Adj Complete" -To share@suc

############################
#Lock Qty on Printed Jobs#
############################
#Set Source & Complete Log
$Source = "E:\Epicor\EpicorData\DMT\JobsPrinted_$datestring.csv"
$completeLog = $Source + ".CompleteLog.txt"

#Extract Data via BAQ JobsPrinted
Write-Output "Extracting Data via BAQ $(get-date)"
Start-Process -Wait -FilePath $DMTPath -ArgumentList "-User $User -Pass $Pass -Export -BAQ JobsPrinted -Ta

#Load Data
Write-Output "Loading Data $(get-date)" $Source
Start-Process -Wait -FilePath $DMTPath -ArgumentList "-User $User -Pass $Pass -Update -Import `"Job Header

#Check Results
select-string -Path $completeLog -Pattern "Records:\D*(\d+\/\d+)" -AllMatches | % { $_.Matches.Groups[0].V
select-string -Path $completeLog -Pattern "Errors:\D*(\d+)" -AllMatches | % { $_.Matches.Groups[0].Value }
Add-Content $completeLog "`r`n#JobPrintedQtyLock"

#Email Results to Socialcast
$emailBody = (Get-Content $completeLog -Raw | out-string)
Send-MailMessage -From epicor@yourcompany.com -Subject "Epicor DMT Jobs Printed Qty Locked Complete" -To s
```

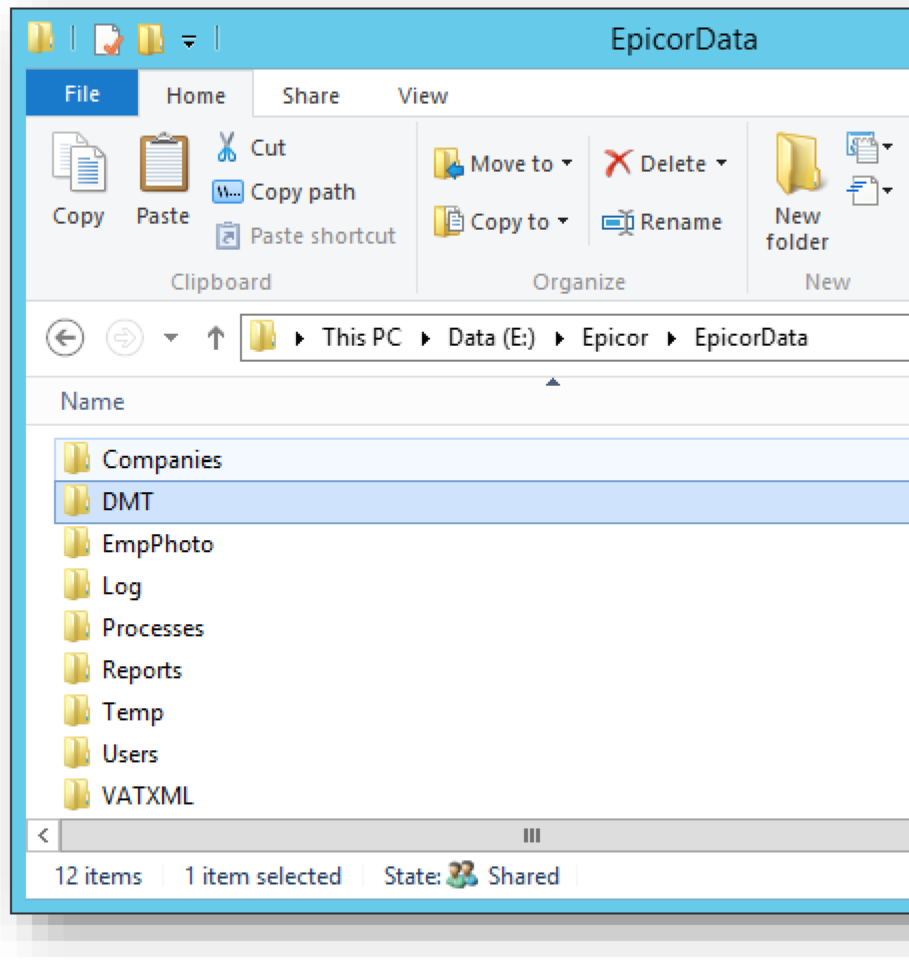
```
PS C:\Users\rbird\OneDrive\Career\Epicor\Epicor Insights 2017\DMT DotNetIt Samples>
```

Struggles

- Primary issue I had was being a PowerShell novice and not understanding the syntax requirements
  - How to call a DMT Import argument with spaces.
    - *Example scripts did not have multi word Import arguments.*
    - *PowerShell's Escape character: The Backtick AKA Grave Accent*
  - DMT Epicor User Scope
    - *Create a DMT user for automated loads that has the appropriate company and module access.*

What We Did, Step By Step

- Install DMT on your Epicor App Server
- Create a DMT folder in the EpicorData folder for DMT Load and Log files.
- Each script basically does 4 steps:
  - Extract Data to be loaded by DMT with a BAQ
    - *BAQ Contains Calculation Fields for New or Updated values.*
  - Load the extracted BAQ csv file via DMT
  - Check the DMT Log File
  - Email the DMT Load results & Log file.



EpicorData

This PC ▸ Data (E:) ▸ Epicor ▸ EpicorData

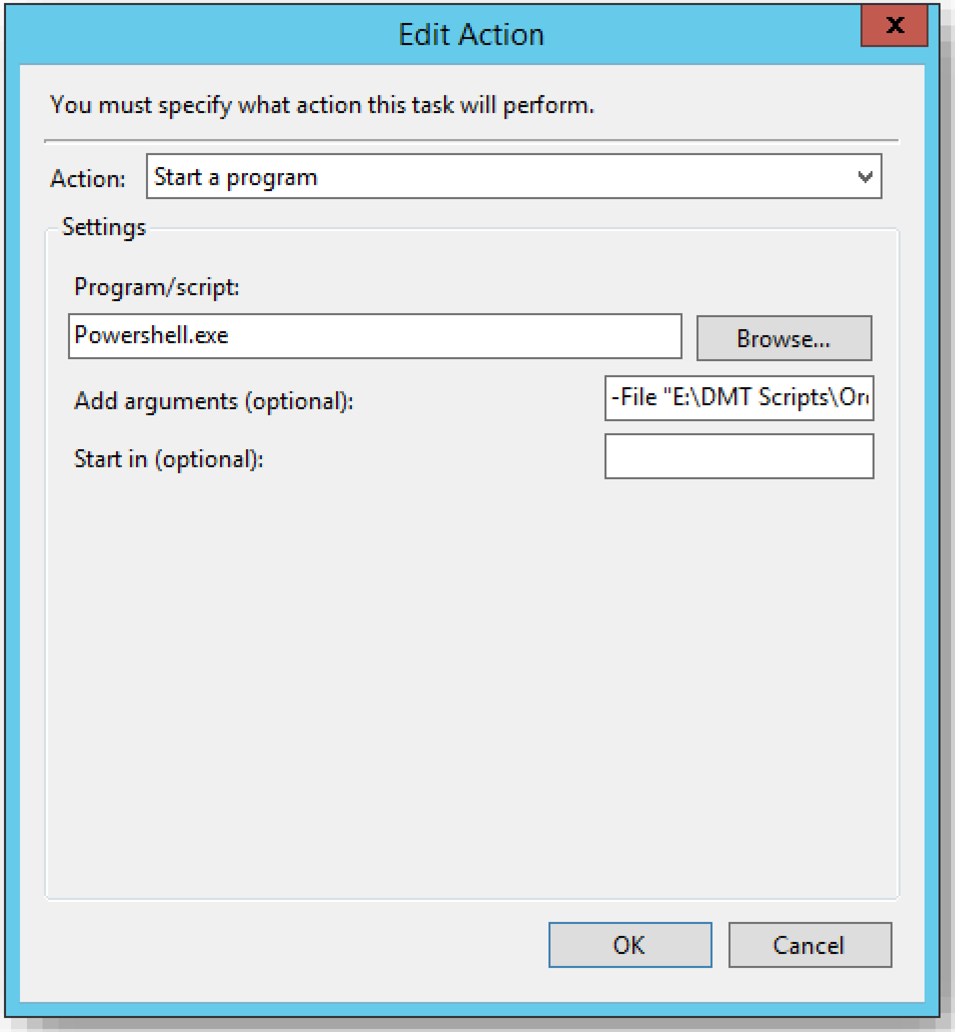
Name

Companies
DMT
EmpPhoto
Log
Processes
Reports
Temp
Users
VATXML

12 items | 1 item selected | State: Shared

What We Did, Step By Step

- Schedule the PowerShell Script:
  - Open the Windows Task Scheduler
  - Create Basic Task
    - *Configure the Trigger (Time or Server Events)*
    - *Configure the Action as 'Start a program'*
    - *Set Program/script to 'Powershell.exe'*
    - *Set the arguments to '-File "[the location of your PS script]"*
- Depending on your scheduling needs you may create one PowerShell script on one or more schedules or multiple scripts on one or more schedules.



Edit Action

You must specify what action this task will perform.

Action: Start a program

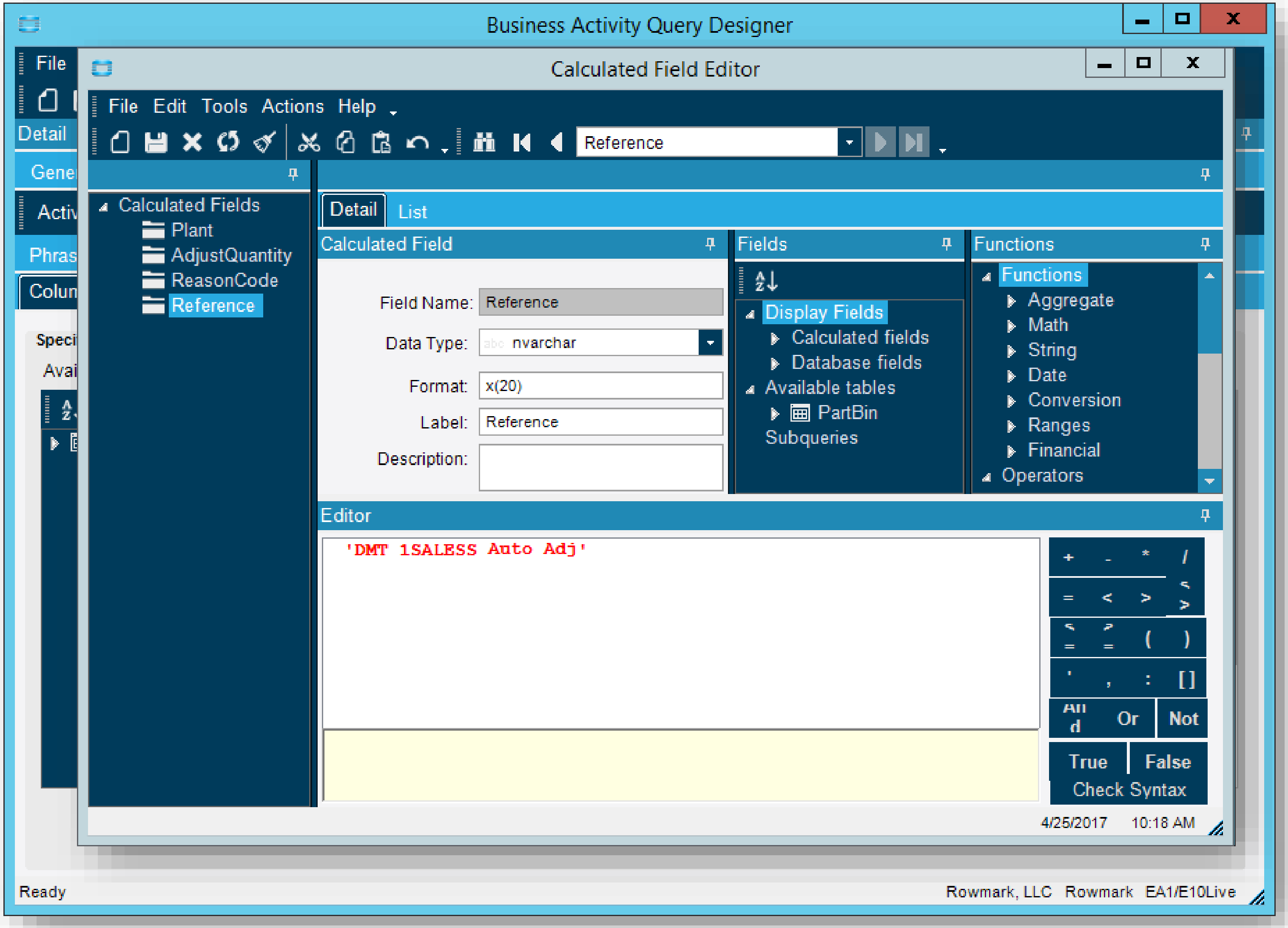
Settings

Program/script: Powershell.exe

Add arguments (optional): -File "E:\DMT Scripts\Or

Start in (optional):

What We Did, Step By Step: The Quantity Adjust BAQ



Field Name: Reference

Data Type: nvarchar

Format: x(20)

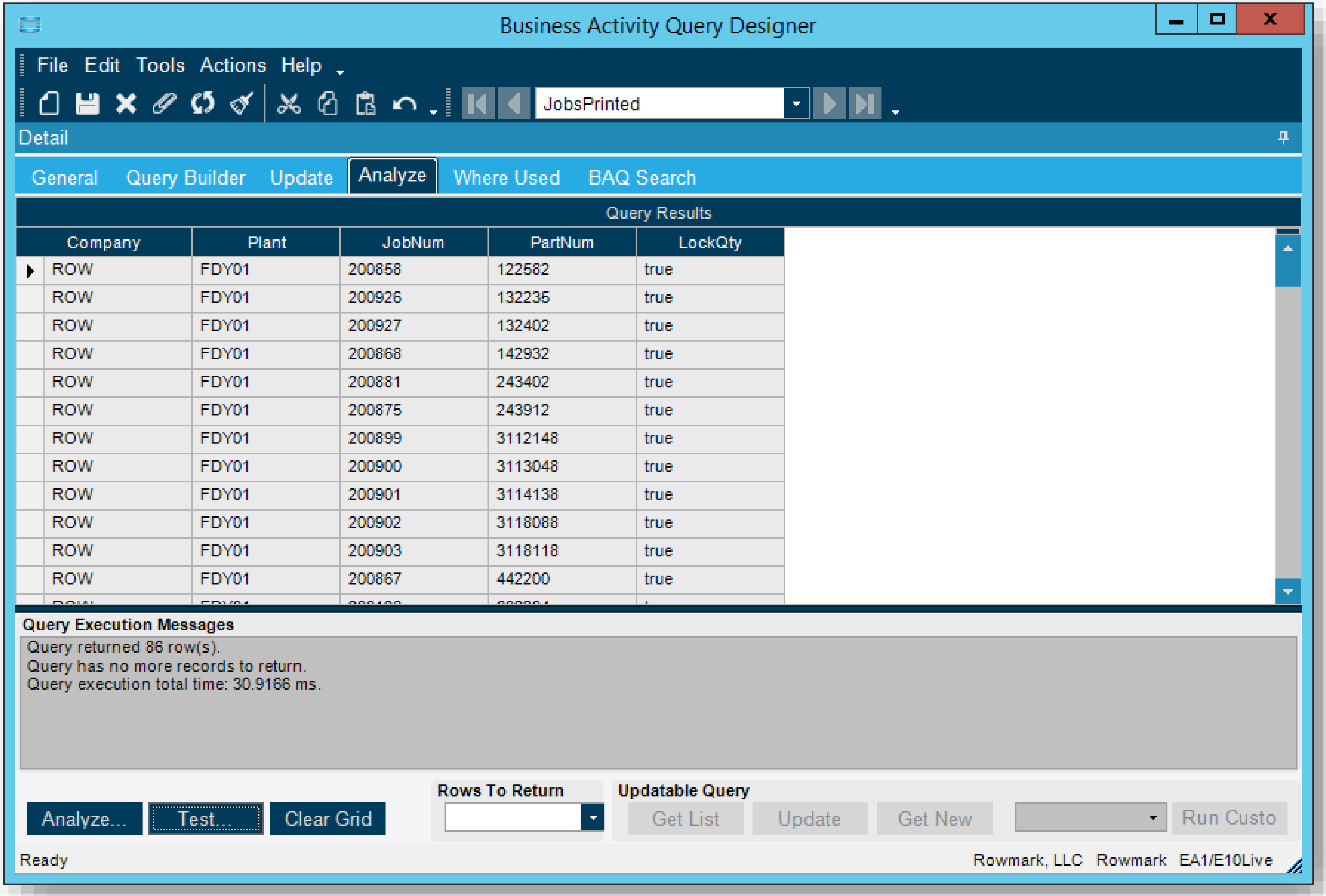
Label: Reference

Description:

```
'DMT 1SALESS Auto Adj'
```

4/25/2017 10:18 AM

What We Did, Step By Step: Lock Job Quantity BAQ



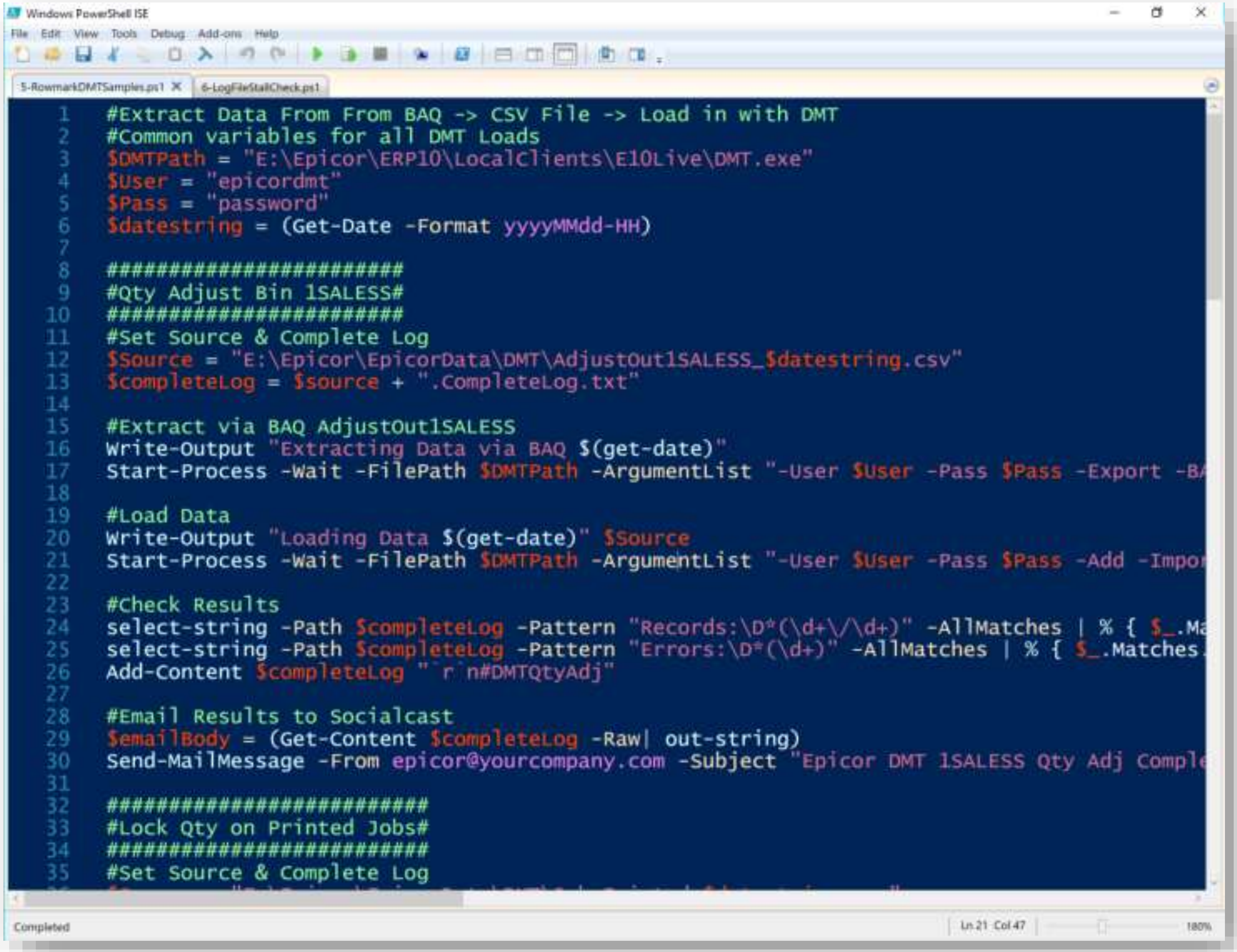
Query Results

Company	Plant	JobNum	PartNum	LockQty
ROW	FDY01	200858	122582	true
ROW	FDY01	200926	132235	true
ROW	FDY01	200927	132402	true
ROW	FDY01	200868	142932	true
ROW	FDY01	200881	243402	true
ROW	FDY01	200875	243912	true
ROW	FDY01	200899	3112148	true
ROW	FDY01	200900	3113048	true
ROW	FDY01	200901	3114138	true
ROW	FDY01	200902	3118088	true
ROW	FDY01	200903	3118118	true
ROW	FDY01	200867	442200	true

Query Execution Messages

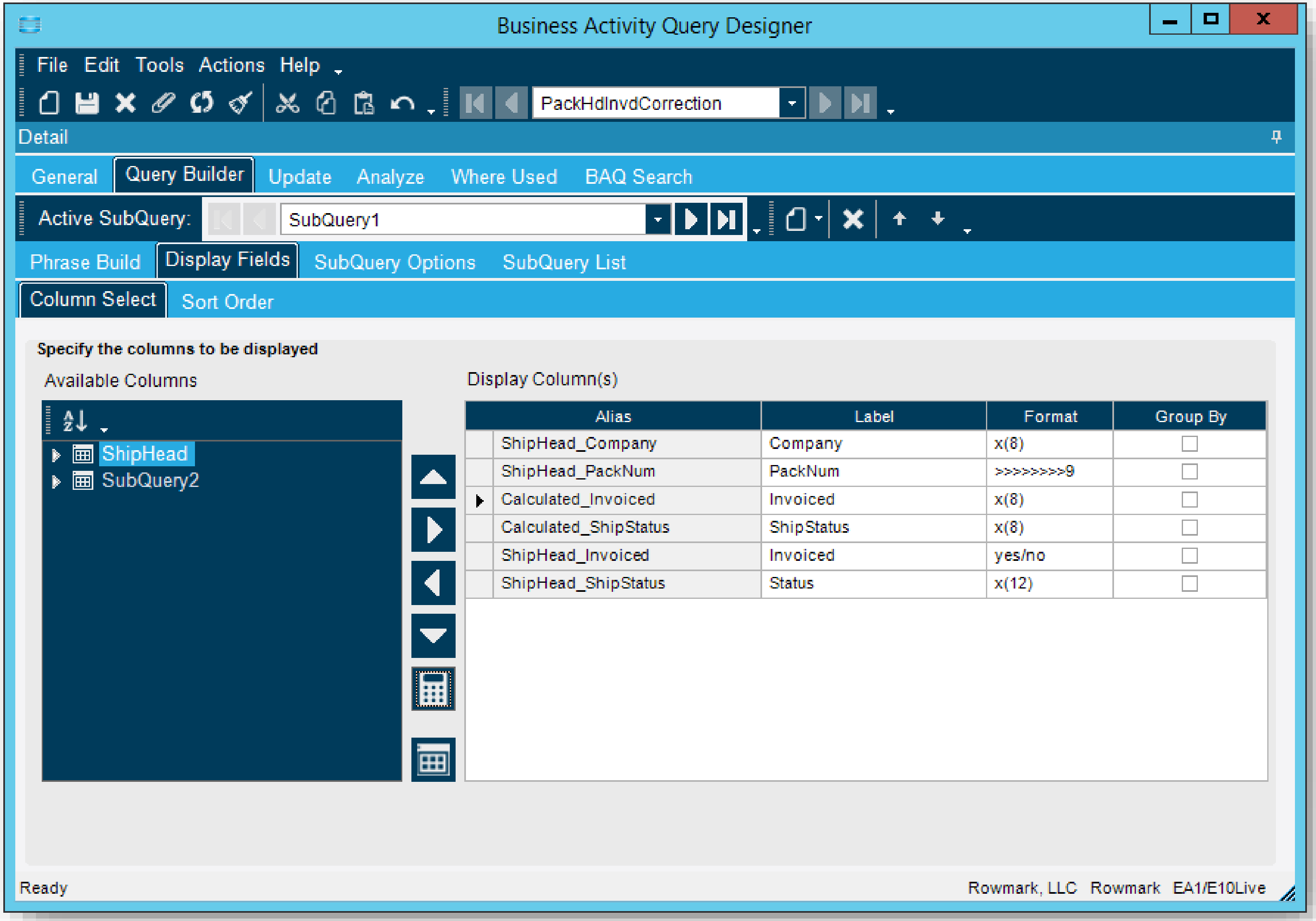
```
Query returned 86 row(s).
Query has no more records to return.
Query execution total time: 30.9166 ms.
```

What We Did, Step By Step: PowerShell Code



```
#Extract Data From From BAQ -> CSV File -> Load in with DMT
#Common variables for all DMT Loads
$DMTPath = "E:\Epicor\ERP10\LocalClients\E10Live\DMT.exe"
$User = "epicordmt"
$Pass = "password"
$datestring = (Get-Date -Format yyyyMMdd-HH)

########################
#Qty Adjust Bin 1SALESS#
########################
#Set Source & Complete Log
$Source = "E:\Epicor\EpicorData\DMT\AdjustOut1SALESS_$datestring.csv"
$completeLog = $source + ".CompleteLog.txt"

#Extract via BAQ AdjustOut1SALESS
Write-Output "Extracting Data via BAQ $(get-date)"
Start-Process -Wait -FilePath $DMTPath -ArgumentList "-User $User -Pass $Pass -Export -BA

#Load Data
Write-Output "Loading Data $(get-date)" $Source
Start-Process -Wait -FilePath $DMTPath -ArgumentList "-User $User -Pass $Pass -Add -Impor

#Check Results
select-string -Path $completeLog -Pattern "Records:\D*(\d+\/\d+)" -AllMatches | % { $_.Ma
select-string -Path $completeLog -Pattern "Errors:\D*(\d+)" -AllMatches | % { $_.Matches.
Add-Content $completeLog "`r`n#DMTQtyAdj"

#Email Results to Socialcast
$emailBody = (Get-Content $completeLog -Raw| out-string)
Send-MailMessage -From epicor@yourcompany.com -Subject "Epicor DMT 1SALESS Qty Adj Comple

##########################
#Lock Qty on Printed Jobs#
##########################
#Set Source & Complete Log
```

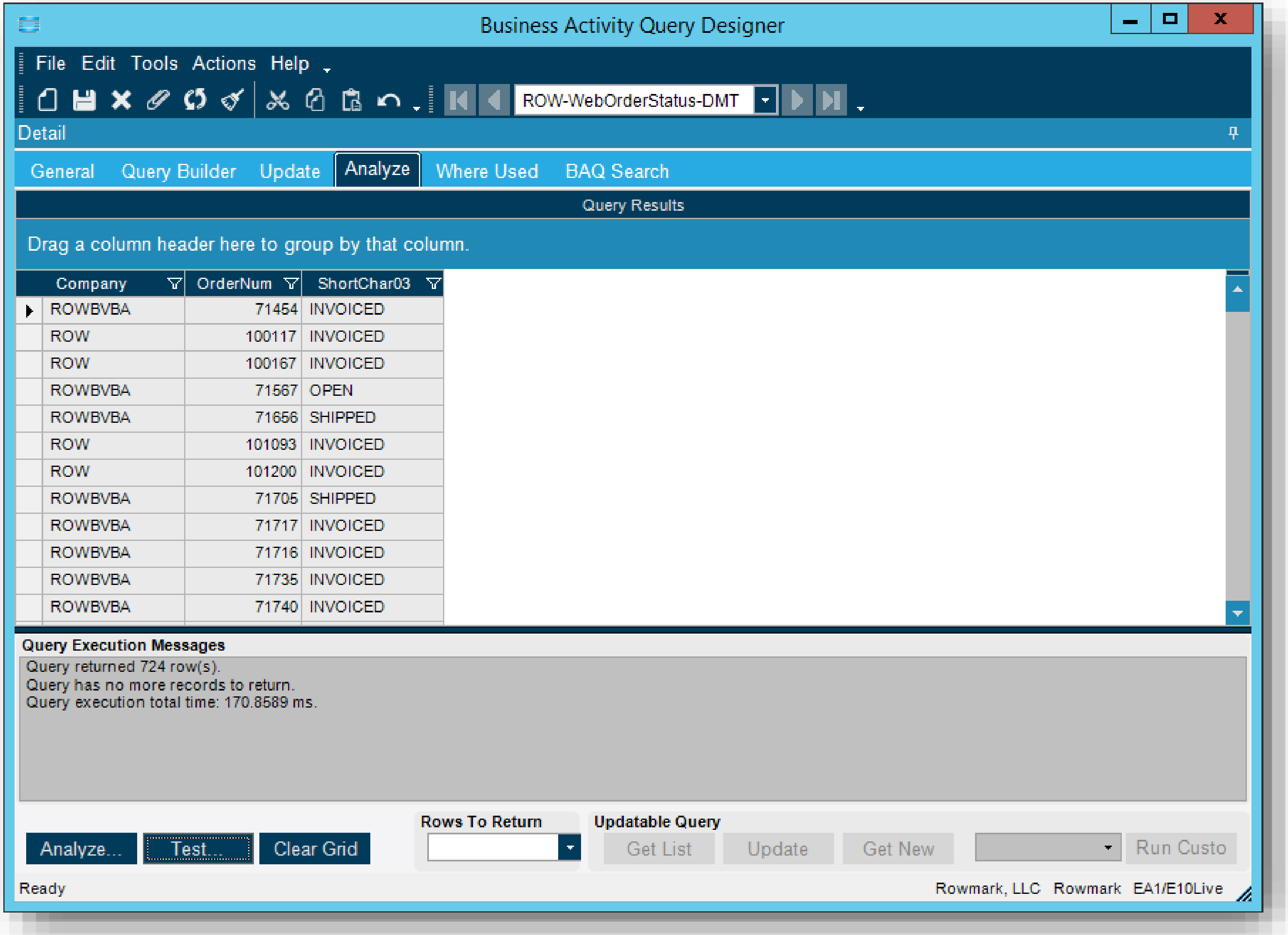
What We Did, Step By Step: The Pack Head Bug BAQ



Business Activity Query Designer
File Edit Tools Actions Help
PackHdInvdCorrection
Detail
General Query Builder Update Analyze Where Used BAQ Search
Active SubQuery: SubQuery1
Phrase Build Display Fields SubQuery Options SubQuery List
Column Select Sort Order
Specify the columns to be displayed
Available Columns
ShipHead
SubQuery2
Display Column(s)
Ready
Rowmark, LLC Rowmark EA1/E10Live

Alias	Label	Format	Group By
ShipHead_Company	Company	x(8)	□
ShipHead_PackNum	PackNum	>>>>>>>>9	□
Calculated_Invoiced	Invoiced	x(8)	□
Calculated_ShipStatus	ShipStatus	x(8)	□
ShipHead_Invoiced	Invoiced	yes/no	□
ShipHead_ShipStatus	Status	x(12)	□

What We Did, Step By Step: The Order Head UD Field BAQ

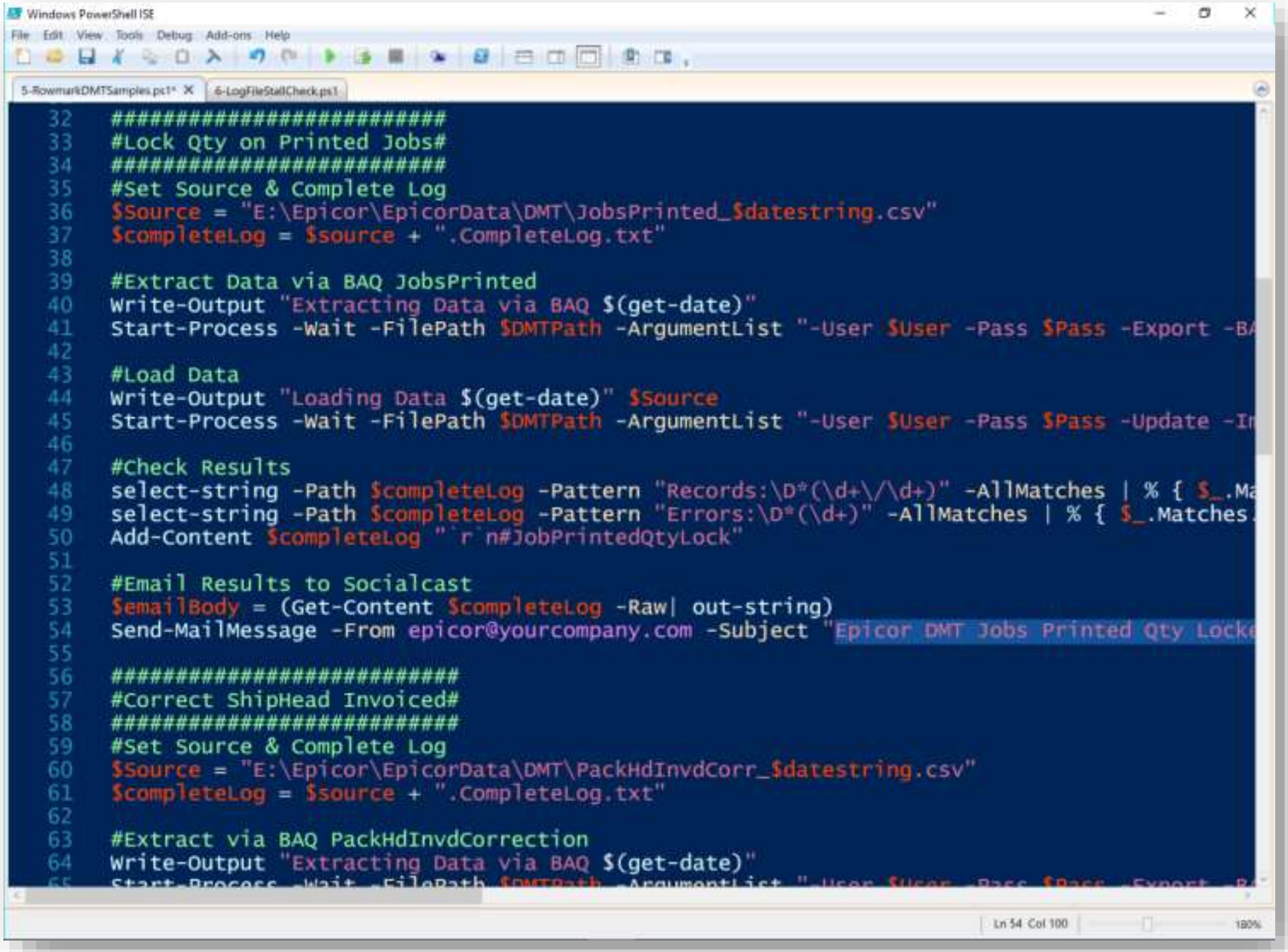

Business Activity Query Designer
File Edit Tools Actions Help
ROW-WebOrderStatus-DMT
Detail
General Query Builder Update Analyze Where Used BAQ Search
Query Results
Drag a column header here to group by that column.

Company	OrderNum	ShortChar03
ROWBVBA	71454	INVOICED
ROW	100117	INVOICED
ROW	100167	INVOICED
ROWBVBA	71567	OPEN
ROWBVBA	71656	SHIPPED
ROW	101093	INVOICED
ROW	101200	INVOICED
ROWBVBA	71705	SHIPPED
ROWBVBA	71717	INVOICED
ROWBVBA	71716	INVOICED
ROWBVBA	71735	INVOICED
ROWBVBA	71740	INVOICED

Query Execution Messages

```
Query returned 724 row(s).
Query has no more records to return.
Query execution total time: 170.8589 ms.
```

What We Did, Step By Step: PowerShell Code


Windows PowerShell ISE
File Edit View Tools Debug Add-ons Help
5-RowmarkDMTSamples.ps1* ✕
6-LogFileStallCheck.ps1
Ln 54 Col 100
180%

```
##########################
#Lock Qty on Printed Jobs#
##########################
#Set Source & Complete Log
$Source = "E:\Epicor\EpicorData\DMT\JobsPrinted_$datestring.csv"
$completeLog = $source + ".CompleteLog.txt"

#Extract Data via BAQ JobsPrinted
Write-Output "Extracting Data via BAQ $(get-date)"
Start-Process -Wait -FilePath $DMTPath -ArgumentList "-User $User -Pass $Pass -Export -BA

#Load Data
Write-Output "Loading Data $(get-date)" $Source
Start-Process -Wait -FilePath $DMTPath -ArgumentList "-User $User -Pass $Pass -Update -In

#Check Results
select-string -Path $completeLog -Pattern "Records:\D*(\d+\/\d+)" -AllMatches | % { $_.Ma
select-string -Path $completeLog -Pattern "Errors:\D*(\d+)" -AllMatches | % { $_.Matches.
Add-Content $completeLog "`r`n#JobPrintedQtyLock"

#Email Results to Socialcast
$emailBody = (Get-Content $completeLog -Raw| out-string)
Send-MailMessage -From epicor@yourcompany.com -Subject "Epicor DMT Jobs Printed Qty Locke

###########################
#Correct ShipHead Invoiced#
###########################
#Set Source & Complete Log
$Source = "E:\Epicor\EpicorData\DMT\PackHdInvdCorr_$datestring.csv"
$completeLog = $source + ".CompleteLog.txt"

#Extract via BAQ PackHdInvdCorrection
Write-Output "Extracting Data via BAQ $(get-date)"
Start-Process -Wait -FilePath $DMTPath -ArgumentList "-User $User -Pass $Pass -Export -BA
```

Wrap Up: Benefits

Q&A

Thank You!