



Welcome to
**“Get Geeky: An Introduction to SQL
Queries for MIP Users”**
February 20, 2018

Sponsored by TeamNFP & Your MIP Business Partner
Host and Presenter: Q Johnson,
Managing Member, TeamNFP Software

Moderator: Jan Triplett, Marketing Director, TeamNFP Software





Housekeeping Items

- Please mute yourself
- Use the “Chat” window if you have a question or technical issue
- CPE attendance Certificates — please provide your info
- Recording & slides will be available — send request
- Short demos after the session on request



Our Mining Expedition

- Select our tools
- Safety is paramount
- A walk around the mine camp
- Inspecting the map of the mine
- Into the mine to do some digging

- ⚙️ **SQL Management Studio**
 - ▶ Should have installed with SQL Server
 - ▶ Fairly easy to use, including IntelliSense completion tool
 - ▶ Requires access to server

- ⚙️ **Query Express**
 - ▶ Free, Public Domain tool
 - ▶ Still fairly user-friendly
 - ▶ Can work from your workstation



Safety is Paramount

- ⚙ Back-up
- ⚙ Just say 'no' to SA
- ⚙ SafeKey to the rescue

- ⚙️ There's more in the database than just tables
- ⚙️ A walk around the mine camp
 - ▶ Views
 - ▶ Stored Procedures
 - ▶ Security (Roles and Users)

- ⚙️ Finally - the tables
- ⚙️ Naming for the various families of tables
 - ▶️ tblAPxxx and tblARxxx for AP and AR
 - ▶️ tblPRxxx for Payroll
 - ▶️ EN, ER, IC, FA, etc.
 - ▶️ TE and DL for the un-posted and posted Session, Document, and Trans tables.
 - ▶️ tblGLBLBalance

- ⚙ Chart of Accounts tables
 - ▶ tblSegmentInfo
 - ▶ tblAcctCode_#
 - ▶ tblDistCode, tblDistCodeDetail
 - ▶ tblGroup_#, tblGroupAssign_#
 - ▶ tblOffsetAssign
 - ▶ tblCloseAssign
 - ▶ tblComboEdit

- ⚙ Organization\Default Table Structure

- SQL Syntax – There just aren't THAT many words!
 - ▶ SELECT – the column names
 - ▶ FROM – the table names (properly qualified by DB name, owner)
 - ▶ WHERE - filtering
 - ▶ ORDER BY – sorting stuff out
 - ▶ GROUP BY – the key to aggregate (SUM, COUNT, etc.) queries
 - ▶ INTO – append records to a table
 - ▶ DELETE – records from a table
 - ▶ UPDATE / SET – modify data in a table
 - ▶ JOINS – for including more than one table
 - ▶ UNION – multiple queries feed a single result set

⚙️ SELECT

- ▶ SELECT @@Version
- ▶ SELECT 'My server is running ' + @@Version

⚙️ SELECT with FROM

- ▶ SELECT tblAPVendor.sVendorID FROM tblAPVendor
- ▶ SELECT sVendorID, sName FROM tblAPVendor

⚙️ Now add WHERE

- ▶ Select sVendorID FROM tblAPVendor WHERE sStatus = 'A'
- ▶ Valid comparison operators =, !=, Like , Between, <, >, IN

Now add ORDER BY

- ▶ `SELECT sVendorID, sMainState FROM tblAPVendor WHERE sStatus = 'A' ORDER BY sMainState, sVendorID`

Now add GROUP BY

- ▶ `SELECT sMainState, COUNT(sMainState) FROM tblAPVendor WHERE sStatus = 'A' GROUP BY sMainState ORDER BY sMainState`
- ▶ HAVING – the aggregate filter

With Aliasing

- ▶ `SELECT sMainState As State, COUNT(sMainState) As StateCount FROM tblAPVendor WHERE sStatus = 'A' GROUP BY sMainState ORDER BY sMainState`

⚙️ JOINS – making tables work together

- ▶ Scope of JOIN is two tables
- ▶ Tables must have common column ON which to JOIN
- ▶ More tables? ... More JOINS
- ▶ Types of JOINS
 - INNER JOIN – retrieve all rows where tables share common value in the joining column
 - LEFT OUTER JOIN – retrieve all rows from first table whether or not the value in the joining column has a match in second table
 - RIGHT OUTER JOIN – just reverse “first” and “second” above

⚙ Using JOIN to add another table

- ▶

```
SELECT sVendorID, sName, sCodeIDf_0 [GL Code], sTitle [GL Title]
FROM tblAPVendor Vend
INNER JOIN tblAcctCode_0 GL
ON GL.sCodeID = Vend.sCodeIDf_0
```

⚙️ Now add a third table

- ▶

```
SELECT sVendorID, sName, sCodeIDf_0 [GL Code], sTitle [GL Title], sDistCodeIDf [Dist Code], sDescription [Desc]
FROM tblAPVendor Vend
INNER JOIN tblAcctCode_0 GL
ON GL.sCodeID = Vend.sCodeIDf_0
INNER JOIN tblDistCode Dist
ON Dist.sDistCodeID = Vend.sDistCodeIDf
```

⚙ The LEFT JOIN

- ▶ SELECT sAdressee, sVendorID
FROM tblIDLDocument Doc
LEFT JOIN tblAPVendor Vend
ON Vend.sVendorID = Doc.sPlayerNumIDf
WHERE Doc.sTransSourceIDf = 'CD'
- ▶ SELECT DISTINCT sAdressee, sVendorID
FROM tblIDLDocument Doc
LEFT JOIN tblAPVendor Vend
ON Vend.sVendorID = Doc.sPlayerNumIDf
WHERE Vend.sVendorID IS NULL
Doc.sTransSourceIDf = 'CD'

AND

- I'm in with the IN crowd

- ▶ WHERE Doc.sTransSourceIDf
IN ('CD', 'CDS', 'APC', 'APS')

- Sub Queries!

- ▶ SELECT sAddressee FROM tblIDLDocument
WHERE sAddressee NOT IN
(SELECT sName from tblAPVendor)
sTransSourceIDf IN ('CD', 'CDS')

AND

- SQL Syntax – There just aren't THAT many words! (cont')

- ▶ UNION – multiple queries feed a single result set

```
SELECT Ven.sName Name, Ven.sMainState State  
FROM tblAPVendor Ven  
WHERE sStatus = 'A'
```

UNION ALL

```
SELECT Cust.sName Name, Cust.sBillingState State  
FROM tblARCcustomer Cust  
WHERE sStatus = 'A'  
ORDER BY State
```

- ▶ Try using what you learned here for your own curiosity.
- ▶ And/or do your homework:
 - Payroll Users: run a query to list all your processing groups and how many active employees are members of each. Confirm that those add up to all your active employees
 - Everyone: write queries to produce a list of AP Invoice sessions you did each month of 2017 and how many invoice documents were in each session. Confirm that those 12 add up to the whole year's invoices
 - The adventuresome: how many UDFs have you set up of each type?
 - Really adventuresome: how many reports has your organization set up of each Report Type
 - We'll have the SQL you need for the answer key on our web site by next Monday

- Come back for our next webinar on April 17
- We'll have a look at whatever question you bring as a result of your efforts
- And we'll show a few project ideas and you can tell us which ones you want us to demonstrate for you
 - ▶ Transaction data mining (like GL report)
 - ▶ Account balance data mining (like Financial Statements)
 - ▶ Whose timesheets are missing?
 - ▶ Who are the stale vendors? (no activity since ...)
 - ▶ What years have transaction history in your system?
 - ▶ Compare our data to data in another MIP Org DB (or two or three)
 - ▶ Build your own Data Dictionary with Information Schema
 - ▶ Need a Cash Basis Check Register?

- Useful sights for Quick and Easy learning
 - ▶ <http://www.w3schools.com/sql/default.asp>
 - ▶ <http://sqlzoo.net/>
 - ▶ <http://www.tizag.com/sqlTutorial/index.php> (many flavors)
 - ▶ <http://www.functionx.com/sqlserver/> (more of a SQL Server only spot and lots of technical assistance include installation and security – dense, but apparently complete)
 - ▶ Google “SQL Primer” or “SQL Tutorial” for a lot more



How About Your Examples?

• Question and Answer Session

"Q" Johnson

www.TeamNFP.com

(512) 255-7566





3 Action Items

- Provide your information if you want an attendance certification for CPE credit
- Ask your TeamNFP Business Partner about our specially priced bank fraud prevention software bundle (Positive Pay & Check Clearing TM8)
- Remember, any 2 TeamNFP software products bought together ALWAYS earn you a 10% discount!



Thanks & Next TeamNFP/Partner Webinar

- Thanks to our TeamNFP Business Partners who helped get the word out. They sell and work hard to help you make the most of Abila's MIP and TeamNFP software.
- Next Webinar: "Get Geekier: Advanced SQL for MIP Users", <http://bit.ly/culturehiring>
- Tuesday, April 17, 2018 3 p.m. CDT
- Presenter Q. Johnson





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Web: www.TeamNFP.com

Toll-Free: 866-748-2933