



Prophet 21
WORLD WIDE USER GROUP



SQL SERVER TIPS & TRICKS

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DISCLAIMER

- This conference is an attempt by P21WWUG members to assist each other by demonstrating ways that we utilize the Prophet21 system and other related products.
- The P21WWUG and the individuals conducting the classes and round tables take no responsibility for potential issues that arise as a result of taking the advice given during the conference.
- The P21WWUG does not recommend using any SQL statements to update your database without having those statements first reviewed by Epicor or other experienced SQL professionals. Test any code in your Play Database!
- Using SQL statements to update your database may result in corrupting your database. Test any code in your Play Database!

Agenda

1. Introduction
2. What is SSMS?
3. Interface Settings
4. Keyboard Shortcuts
5. Using Variables/Temp Tables in SQL Code
6. Using Subqueries in SQL Code
7. SQL Server Agent Jobs
8. Database/Table Size

WHAT IS SSMS?

- SQL Server Management Studio is often referred to as SSMS
- Can be downloaded for free from Microsoft
- Can use newer versions of SSMS with older versions of SQL Server
- Does not have to be installed only on the SQL Server
 - Can install on Desktop/Laptop machines and connect to SQL Database over network

INTERFACE SETTINGS

- Show line numbers for the SQL Code
 - Tools>Options>Text Editor>All Languages>Line Numbers
- Copy column headers by default when copying from SSMS
 - Tools>Options>Query Results>Results to Grid>Include Column Headers
 - Can also copy individually when RMB grid results>Copy with Headers (Ctrl+Shift+C)
- Map Mode Scroll Bars can preview code – useful for large queries
 - Tools>Options>Text Editor>All Languages>Scroll Bars>Use map mode
 - Can also show Preview Tooltip
- Shrink Tab Text to easily distinguish more tabs – Tab Names
 - Tools>Options>Text Editor>Editor Tab and Status Bar>Tab Text>Include Database Name, File Name, Login Name, Server Name

KEYBOARD SHORTCUTS

- CTRL+R – Show/Hide the Results Pane
- CTRL+K followed by CTRL+C – Comments Selected Line(s)
- CTRL+K followed by CTRL+U – Uncomments Selected Line(s)
- CTRL+TAB – switches to last query tab used
- ALT+F1 – Shows DB Info about selected Object such as tables
- ALT+D – Sets focus to the database selection dropdown
- ALT+SHIFT+UP/ALT+SHIFT+DOWN – Mark row for editing multiple rows at a time
 - Can use SHIFT+LEFT/RIGHT to highlight more items
 - Requires SQL 2012 or newer

SQL SNIPPETS

- SQL Snippets allow you to create code that can quickly and easily be reused inside management studio
- <https://docs.microsoft.com/en-us/sql/ssms/scripting/add-transact-sql-snippets?view=sql-server-2017>



SQL SERVER AGENT JOBS

- SQL Jobs can run SQL Code at scheduled intervals
- Don't have to be scheduled
- Can be set to Disabled
- Jobs can contain more than one step and more than one schedule
- Jobs can send alerts if they fail
- Examples
 - Automate backup and restore to an End of Month backup
 - Backup Live database and restore over Play database
 - Can also change background color, turn off alerts, TPCx, Credit Card Processing, Emailing, etc.
 - Check to verify Scheduled Import Service Manager is running
 - Send emails

DATABASE / TABLE SIZE

- Database size can be a concern if you have limited disk space or are experiencing degraded performance
- Some tables in the P21 database have information that can be purged
 - **WARNING: ONLY DELETE DATA THAT YOU ARE SURE IS SAFE TO DELETE AND YOU NO LONGER NEED**
- View Database object sizes

```
CREATE TABLE #temp(
  rec_id int IDENTITY (1, 1),
  table_name varchar(128),
  nbr_of_rows int,
  data_space decimal(15,2),
  index_space decimal(15,2),
  total_size decimal(15,2),
  percent_of_db decimal(15,12),
  db_size decimal(15,2)

-- Get all tables, names, and sizes
EXEC sp_msforeachtable @command1="insert into #temp(nbr_of_rows,
data_space, index_space) exec sp_mstablespace ?",
@command2="update #temp set table_name = '?' where rec_id = (select
max(rec_id) from #temp)"

-- Set the total_size and total database size fields
UPDATE #temp
SET total_size = (data_space + index_space), db_size = (SELECT
SUM(data_space + index_space) FROM #temp)

-- Set the percent of the total database size
UPDATE #temp
SET percent_of_db = (total_size/db_size) * 100

-- Get the data
SELECT *
FROM #temp
ORDER BY total_size DESC

drop table #temp
```



USING VARIABLES/TEMP TABLES IN SQL CODE

- Declare/Set/Use
 - Declare @my_variable varchar(100)
 - Variable names are user defined
 - Variables can be varchar, int, decimal, etc.
 - Set @my_variable = 'Spencer'
 - Select fname, lname from dbo.people where fname = @my_variable
- Variable Tables
 - Declare @my_table table (fname varchar(100), lname varchar(100))
 - Insert into @my_table(fname, lname) values('Spencer', 'Welch')
 - Select * from @my_table
 - Used during single query
- Temporary Tables
 - Create table #my_temp_table (fname varchar(100), lname varchar(100))
 - Insert into #my_temp_table(fname, lname) values('Spencer', 'Welch')
 - Select * from #my_temp_table
 - Used during single SESSION
- Global Temporary Tables
 - Create table ##my_temp_table (fname varchar(100), lname varchar(100))
 - Insert into ##my_temp_table(fname, lname) values('Spencer', 'Welch')
 - Select * from ##my_temp_table
 - Similar to a permanent table, available to all sessions

USING SUBQUERIES IN SQL CODE

- Subqueries are queries that are nested inside of another query
- Often used to get a min/max/sum value from line level when only wanting header level results
- Example:

```
select
    oe_hdr.order_no
    ,line_info.total_price
from
    oe_hdr
    inner join (
        select
            oe_line.order_no
            ,total_price = sum(oe_line.extended_price)
        from
            oe_line
        group by
            oe_line.order_no) line_info on oe_hdr.order_no = line_info.order_no
```