

Enhanced Database Processing Improving SQL Performance

PxPlus 2017 (v14) & PxPlus 2018 (v15)

Enhanced Database processing

- New features to improve SQL performance and simplify development
 - System generates optimized SQL statements
 - Provide more SQL-Like logic for joining tables
 - Compatible with BOTH SQL and native tables
- Optimized UPDATE generation
- Optimized SELECT ... WHERE generation
- New JOIN style SELECT avoids multiple requests for related files



2017



2018

Improved SQL generation

2017

(External Databases only)

- Includes WHERE clause in SQL command
 - Adds filters if comparing literal against variable

Example:

```
SELECT * FROM "[ODB]Demo2017;Clients"  
WHERE State$="ON"
```

Yields SQL:

```
SELECT * FROM clients WHERE State = 'ON'
```

- Use STATIC clause to compare variables

Enhanced SELECT with JOIN

2018

- New SELECT syntax allows multiple files to be read in single statement
 - Syntax

```
SELECT list FROM "table1"  
      WITH SELECT list FROM "table2" WHERE table1_field = table2_field  
      WITH ...
```

- Reads data from multiple tables/files
 - No limit to files that can be joined
 - Use REC=xxxx\$ where common names exist
- WHERE clause defines common field values
 - Optimizes KEY usage where possible
- Generates SQL when used against tables in same Database

Dynamic Update Logic

2017

(External Databases only)

- Reduced SQL UPDATE directive for extracted records
 - Generate SQL to only update changed fields
 - Reduces network traffic and host load
 - Less to Validate
 - Less to Update
 - Less to Journalize
 - Logic only applied if record extracted
 - Ensures consistency of other fields
 - No SQL generated if nothing changes

Additional Resources

The help link(s) below refer to the current on-line help pages. The functionality may have been further updated since the PxPlus 2018 (version 15) release.

- [Select Directive](#)
- [Where/Static Where Clause for External Database Access](#)
- [Join Select – With \(Left Join\) / With Required \(Inner Join\)](#)