

Windows Inter Process Communications

PxPlus 2016 (v13)



Windows Inter Process Communications

- Inter-process Pipe data exchange
- READ/WRITE Window data



Inter-process Pipe Data Exchange

- Pipe I/O available since version 5 for Linux/Unix
 - PxPlus 2016 now supports PIPE I/O on Windows
 - Pipe file identified by >, <, or | in first character of file name

OPEN (HFN) "<command"

Reads output of command

OPEN (HFN) ">command"

Sends data to command

OPEN (HFN) "|command"

Allow bi-directional exchange with command



Inter-process Pipe Data Exchange

- Typical uses for Pipe I/O
 - Use OS commands to return information such as IPCONFIG to get MAC address
 - Run OS Batch commands
 - PxPlus WindX uses Bi-directional pipes to provide SSH using PLINK *(part of putty)*
- Sample application using 'tasklist' command



READ/WRITE Window Data

- Two new directives provide direct data transfers between processes on **SAME** Windows machine

WRITE WINDOW DATA **data\$** TO **handle** WITH CTL **ctlval**
READ WINDOW DATA **data\$** FROM **handle**

Variable	WRITE	READ
data\$	Data being sent	Data Received
handle	Window handle to receive data	Window handle that sent data
ctlval	CTL to be sent along with data	<i>n/a</i>



READ/WRITE Window Data

- Typical “sending” logic:

```
WRITE WINDOW DATA data$ TO handle WITH CTL 1234
```

- Typical “receiving” logic:

```
WHILE 1  
  INPUT (0) *  
  IF CTL = 1234 THEN  
    READ WINDOW DATA data$ FROM handle  
  WEND
```



READ/WRITE Window Data

- Implementation notes:
 - No limit to the size of data that can be sent other than available memory
 - Target window handle can be either passed in or use FindWindow(“caption”) method in *obj/winapi
 - CTL should be unique
 - Receiving program **MUST** issue a READ WINDOW DATA directive for each CTL event it receives
 - Input queue and READ DATA queue are independant



READ/WRITE Window Data

● Typical Uses

● Communicating with Background process

- Provides mechanism to queue up requests to long-running background logic
- Use by systems to log transactions
- Interfaces to peripherals such as Telephone systems, document printers, etc.

● Common processing logic for CS style implementations

- For example a Broadcast message routine



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 2016 (version 13) release.

- [OPEN Directive](#)
- [WRITE WINDOW DATA Directive](#)
- [READ WINDOW DATA Directive](#)

