

# BSI TCP/IP Update

## TCP/IP-TOOLS

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# General

- // SETPARM UCMSG='YES'
- // SETPARM MSGMODE='QUIET'
- // SETPARM MAXBUF='YES/NO'
- // SETPARM SVABUF='YES'
- ,OS390 on // EXEC card
  - INET, VNET, FTTPC, FTTPS

# BSTTFTPS/BSTTFTPC

- METER nnn
- VALIDATE ON | OFF
- Logoff messages
- SEND command
- SITE PWRCMD
- Optional BSSTISX IBM External Security
- RDW and STRU R support

# BSTTFTPS

- SMNT VSAM DLBL=
- SMNT SAM
  - SAM File System

# BSTTLPRC

- IBM ON
- VALIDATE ON | OFF
- BANNER

# BSTTMTPC

- multiple RCPT TO:/CC:/BCC: commands
- support 2nd subject command SUB2
- PRTY command to set message priority

# BSTREXC

- TIMEOUT command

# BSTTVNET

- TERMINAL SPECIFIC by IP Address
- TN3270E support with Bind Image/Unbind
- BSTTUSST USSTAB Menu Re-designed
- VM/CMS TELNET connections
- NOP packets
- PRINTER Command supports SCS LU1 (SNA) printers
- DIRECT, LPR, FTP, IPP Printers
- TIMEOUT nnn



# BSTTVNET

- Coming Soon
- ITAM
  - Internet Telecommunications Access Method
- Direct access to VTAM applications
- Non-SNA Local 3270 Support
  
- Who needs VTAM?

# BSTTPING

- New Utility
- Batch PING
- RC=0 is Ping Completed
- RC=8 is Ping Failed

# BSTTBCMD

- New Utility
- Batch Command Processing
- Send Command to BSTTINET
- Print Response on SYSLST

# FLEX-ES Utilities

- Free utilities now part of TCP/IP-TOOLS
  - No license required to use these utilities
- BSTTFMNT FLEX-ES FakeTape Mount
- BSTTFCMD FLEX-ES Command
- BSTTFREQ FLEX-ES Request REXX EXEC
  - Pass command to FLEX-ES
  - Process response

# BSTTINET

- Updated HOST command to replace/delete
- DOS ADD/DEL/PRINT ipaddr mask
- Increased PROXYARP table to 32 entries
- network interfaces supported to 32 (from 8)
- RAW socket support
- IOCTL command interface
- Report Home Facility

# BSTTINET

- Added IP UDPINFO command
- Added FILTER ON/OFF
- Added REDIRECT ON/OFF
- Added GARBAGE ON/OFF
- Added CKSUM ON/OFF
- Added PORT nnn SUSPEND/RESUME
- Added IP RAWINFO command

# BSTTINET

- OSA Express driver support GA
  - Requires VSE/ESA 2.6+DY45881+DY46036
- Hipersocket driver support GA
  - Requires VSE/ESA 2.7
- VSE/ESA 1.3/1.4 support
  - Did I really say VSE/ESA 1.3?

# BSTTINET

- `intspeed.hta` Windows Script to adjust RWS
  - 95/98/98SE/ME/NT/2000 (no XP)
- Added CICS sample EZASOKET programs
- BSTTTCPV phase (`$EDCTCPV`) performance
  - Big improvement in DB2 performance
  - Native `writev()`
- Improved performance of inbound/outbound packets in device drivers
- Compiler update 10%-20% CPU reduction



# DMF Logging

- We currently log to DMF SMF record type 119
- BSTTFTPC (SMF 119 sr 3) FTP client data
- BSTTFTPS (SMF 119 sr 70) FTP server data
- BSTTVNET (SMF 119 sr 22 & 23)  
Telnet connect and disconnect
- BSTTINET (SMF 119 sr 1 & 2)  
TCP connect and disconnect
- Other records could be added as needed

# Debug Facilities

- TRACEIP ipaddr mask
  - Limits TRACE2 output
- TRACEID xx
  - Limits TRACE output to specific partition
- IP TRACE ON/OFF
  - Full internal trace
- IP TRACE2 ON/OFF
  - Packet trace
  - TRACE + TRACE2 = Packet + API

# Debug Facilites

- IP TRACE3 ON/OFF
  - Trace to memory buffer (8000 lines)
  - Uses MSG xx,D=FDUMP to print
- IP TRACE4 ON/OFF
  - Keep Alive tracing
- IP TRACE5 ON/OFF
  - API Entry/Exit only





# Simple Network Tuning

- Pick a Bottleneck
  - You are at the mercy of the slowest link
- VSE/ESA
  - Get a FAST CPU
  - Get a FAST I/O SubSystem
  - Select an Access Method
  - TCP/IP within VSE
    - » OSA Express (VSE/ESA 2.6) is best
    - » OSA/LCS limited by CPU and I/O Interupts

# Simple Network Tuning

- Remote Host (Known as a PC)
- Get a FAST CPU
- Max out the memory
- Maximum Segment Size
  - Windows likes 576, 1460 is better
- Receive Window Size
  - Windows default is 8K
  - 32K or 64K is much better
  - Must be exact multiple of MSS