IBM IPv6/VSE 1.2
What's New?

Jeffrey Barnard
Barnard Software, Inc.

IBM IPv6/VSE 1.2

Trademarks and Copyrights

blah blah, blah blah, blah blah ...

Only lawyers read this stuff ...

IBM IPv6/VSE 1.2

IPv6/VSE 1.2 available with z/VSE 6.1

IPv6/VSE 1.1 available with z/VSE 5.2

IPv6/VSE 1.1 not supported on z/VSE 6.1
   Or later releases of z/VSE

IBM IPv6/VSE 1.2

Reminder ...

While the product is named IPv6/VSE, the product supports both IPv4 and IPv6 communications. IPv6/VSE provides a full-function IPv4 stack and applications as well as a full-function IPv6 stack and applications. The TCP/IP stack's (IPv4 and IPv6) can be run together in a dual stack configuration.
IBM's IPv6/VSE supports both IPv4 and IPv6 protocols and has been available since May 28, 2010.

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Big Stuff

- Firewall built into the stack

- HOTSWAP OSA Express fail over

- Improved SSL/TLS support

- Virtual IP addressing

- Reduce TCP/IP stack CPU Usage

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Firewall

- Helps secure and protect z/VSE resources

- Filter IPv4 and IPv6 packets

  - IP address, protocol

  - TCP or UDP port number

  - ICMP Type and Code

- Operates in Stealth mode

- Library member contain Firewall Rules

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HOTSWAP

- HOTSWAP command defines hot spare device

- If primary OSA Express adapter fails HOTSWAP device takes over

- Multiple HOTSWAP devices can be used

- Very fast

- No sockets (sessions, data transfers, etc) lost

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SSL Support

- Support for latest IBM IJBSSL
  - DY47688 (5.2), DY47689 (6.1)
  - OpenSSL 1.0.2h
- TLS v1.2
- DH/ECC SSL/TLS Sockets

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SSL Support

- Major Performance Improvements

- BSTTATLS/BSTTPRXY Multi-Tasking

  - Up to 16 concurrent SSL/TLS tasks

- OpenSSL 1.0.2h

  - Reduces time to establish an SSL/TLS socket

  - 60% to 80% reduction

  - TN3270(E) logon is visibly faster

  - Throughput improved too

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Virtual IP Addressing

- Allows multiple IP addresses for a DEVICE

- IP address assigned to a Virtual DEVICE

- Virtual DEVICE associated with a real DEVICE

- Effectively allows a stack to be on multiple networks using a single OSAX device

- Requires using Layer 2 OSA Express support

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Reduced TCP/IP Stack CPU Usage

- Parts of each stack written in C

- Dignus Systems/C compiler used

- Recompiled with DCC -O3 option

- 5%-30% reduction in CPU used

- Of course, YMMV

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Little Stuff

TCP fast retransmit support
64-bit UDP buffer support
New USSTAB emulation variables
REXX emulation of ftpbatch and email jobs
DLBL ON|OFF support in SAM File System
SAM FS options to force FTP type
BSTTVNET now listens on up to 16 ports
BSTTVNET LU allocation by port
BSTTPOPC REXX POP client application

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Little Stuff

BSTTVNET Multiple USSTAB menus
64-bit Transmit Buffer Support
Running IJBCRYPT under BSTTATLS

Lots of other 'littler things'

BSI IPv6/VSE

Anything coming?

Of course there is.

Things discussed here may or may not appear in the IBM IPv6/VSE product

Things discussed here are already available from BSI

We do not discuss features that do not exist

Yes, I can not discuss some cool stuff because it is not finished yet!

BSI IPv6/VSE

SSH Secure Copy Facility

New BSTTFTPS FTP Server Security Options

New PDF Generation Facility

BSI IPv6/VSE

- "We need ssh on z/VSE"

- Really?

- What would you do with ssh?

- Well ... I need to transfer a file.

- Really?

A Better Solution

- BSTTSCPY (IPv6/VSE Secure Copy)
- z/VSE based SSH Secure Copy Facility
    - Similar to scp Linux/Unix command
- Transfers data to/from a remote host SSH server.

- http://bsitcpip.blogspot.com ipv6vse-ssh-secure-copy-for-zvse.html

Basic Overview
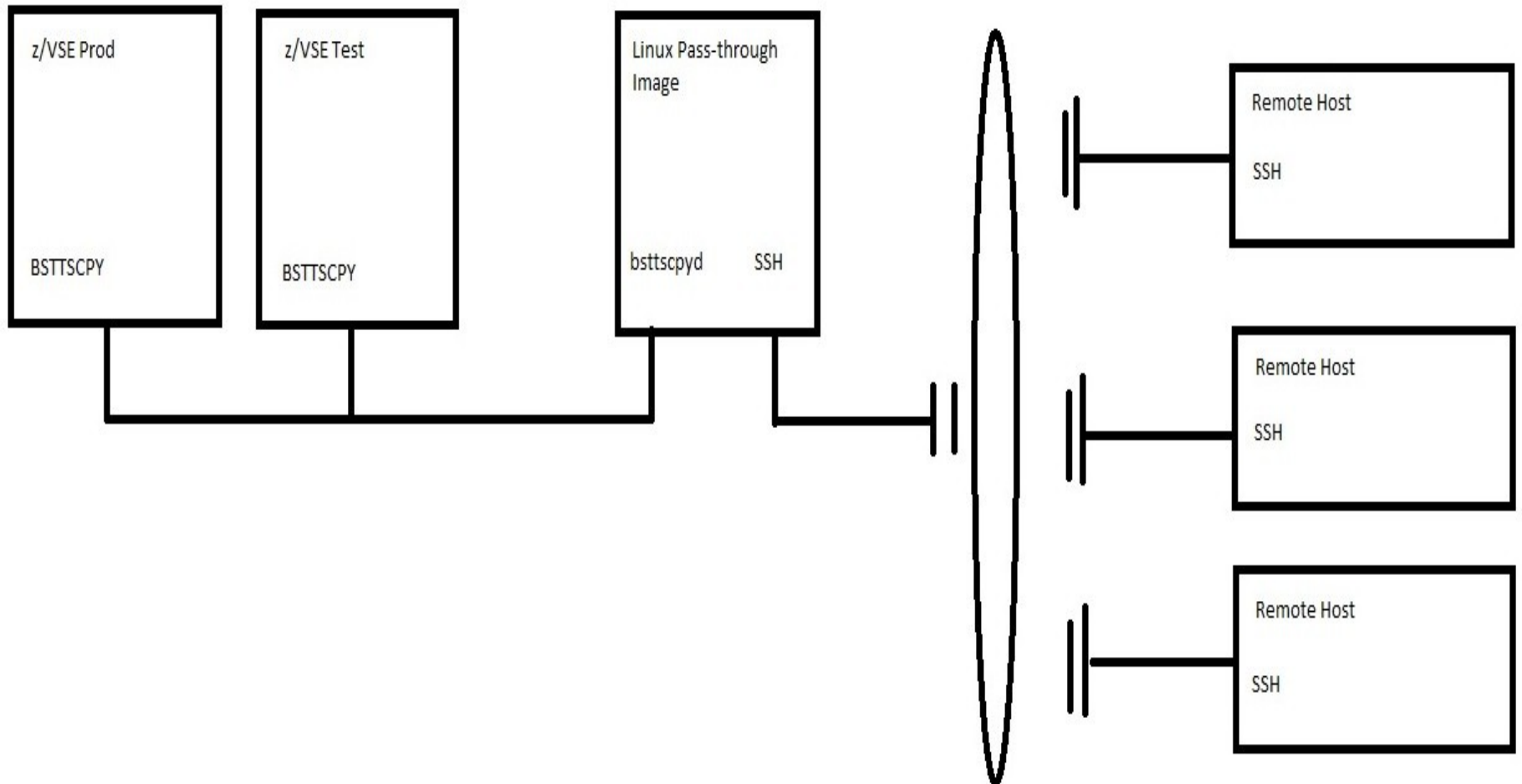
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New BSTTFTPS FTP Server Security

- BSTTFTS1, uses the IBM BSSTISX routine for user and access validation

  – Drops in, no changes to security rules!

- BSTTFTS2, uses standard RACROUTE interface for user and access validation

- IPv4 and IPv6 IP address validation still done with BSTTSCTY.T security member

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New PDF Generation Facility

- Based on Open Source TXT2PDF project

- Entirely REXX based

- Annotations, Outline generation

- Color control, Several background options

- Viewer control, Drawing primitives

- BMP and JPEG support

- Encryption and Compression

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Questions?

Jeff Barnard

jeff@bsitcpip.com

http://bsitcpip.blogspot.com