



VFILE

Coming to a Reader Near You

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disclaimer

This presentation discusses directions, developments, and deliverables. It should not be taken as guaranteed future functionality or features. The audience must not expect any eventual result to match what is presented here.

- Some have been implemented
- Some are still in development
- Some are statements of direction
- Some may change based on customer feedback





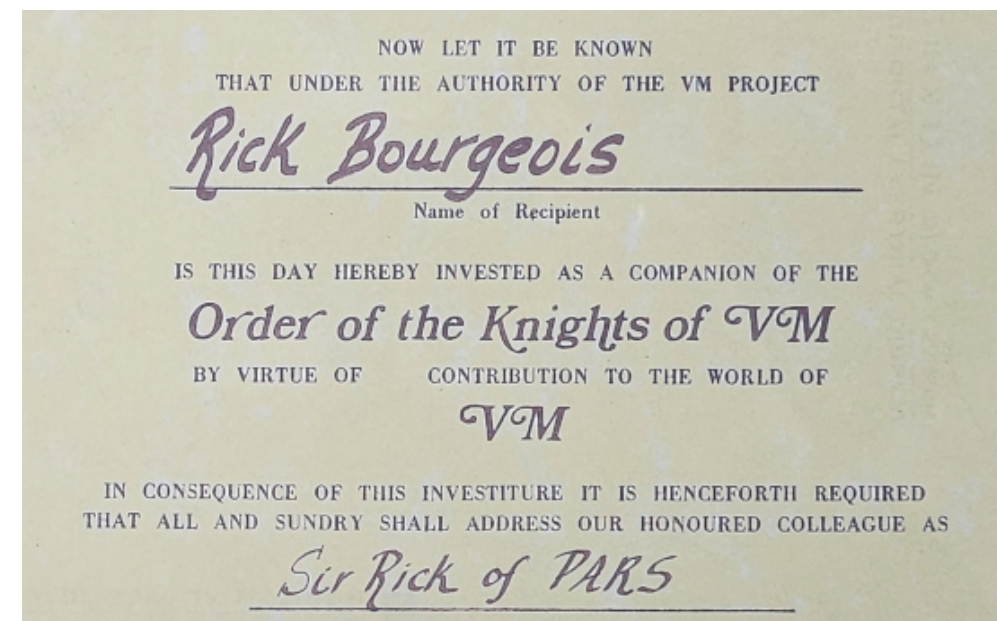
agenda

- Who are we?
- Background: UFT Protocol, UFT Project
- Motivation and Inspiration: why we made VFILE
- What's it all about? (product details)
- Availability



About VSSI

- The VPARS and VTAPE people
- Historically TPF
- Solid product support reputation
- Support cost included in the license
- Customer base is typically Fortune 100
- Doing all we can to help the Z community





About VSSI

- The VPARS and VTAPE people





How many of you ...

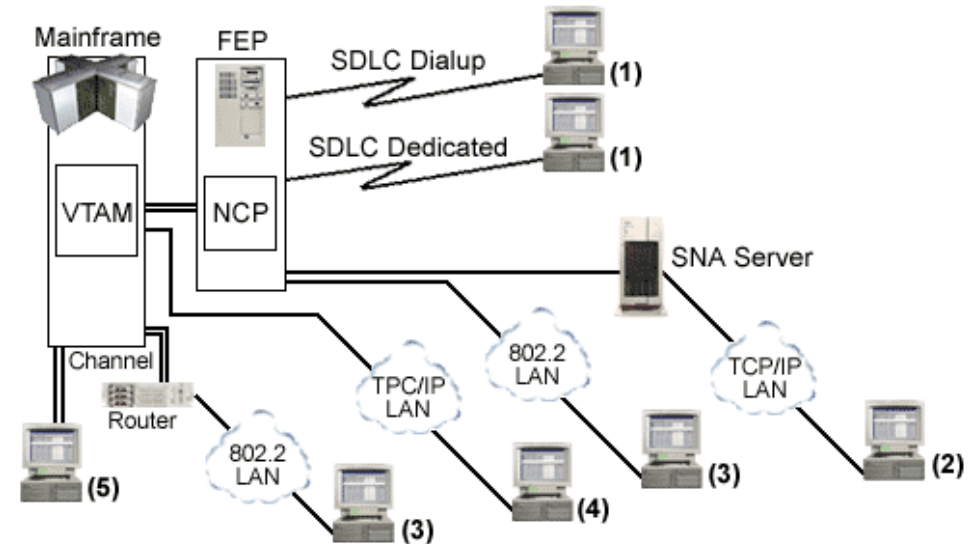
How many of you ...

- Need files from one system onto a *different* system
- But might not have account/credentials (on target system)
- Struggle with upload/download (avoiding IND\$FILE)
- Find manual invocation inefficient
- Require solid automation around file logistics



Remember NJE?

- Houston Automatic Spooling Program
- HASP became JES2
- ASP became JES3
- RSCS v1 then v2 on VM



The world was point-to-point

NJE today remains point-to-point

... but no Linux, Windows, ...



Historical NJE Networks

- VNET – major internal IBM network
- BITNET/EARN/NETNORTH – academic
- Multi-Platform (VM, MVS, DEC VMS, Unix, others)

But then came consumer Internet (and BITNET died)

Packet-switched rather than virtual circuit: FTP, later HTTP

No store-and-forward (except for email)



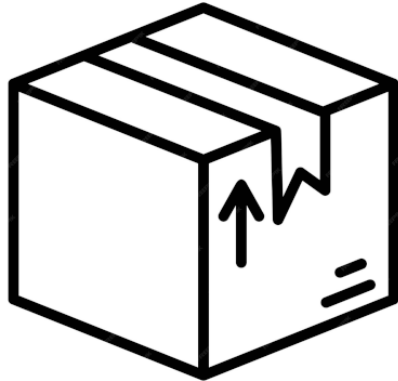
UFT - alternative to NJE

- Not correspondence (not SMTP, not email)
- No second-layer topology (just internet routing)
- Open standard protocol (not proprietary)
- Significantly simpler client operation (e.g., laptops)
- No credentials needed on target system (“delivery dock”)
- Does not require special support: VTAM, CTC, GCS, etc
- More participating peers (more platforms) than NJE



UFT Rationale

Parcels do not fit into a correspondence model



Attaching files to email is clumsy, counter-intuitive, prone to fail.



The Challenge

- NJE-like file transfer but more platforms
- To not require username/password on the receiving end (no credential scatter)
- Have a peer-based trust model, keeping with NJE-style node management
- But no store-and-forward (no layered topology)
- Also ... customers to send in dumps w/o FTP





The Solution: VFILE



- Traditional mainframe/DC operation
- Strong on automation and less complex
- Covers more platforms than IBM NJE
- Simpler to manage than IBM NJE
- Minimizes credential scatter
- Transfers files seamlessly (no session startup/teardown)



The Delivery Dock



- Concept of “spool space” (common on Z, not so elsewhere)
- Isolated from user file space (contrast with FTP, et al)
- Files can be delivered without the sender needing a key to your house (that is, no credentials on target host)
- Similar concept to an email inbox ... *but* ... not tuned for correspondence (that is, general purpose)

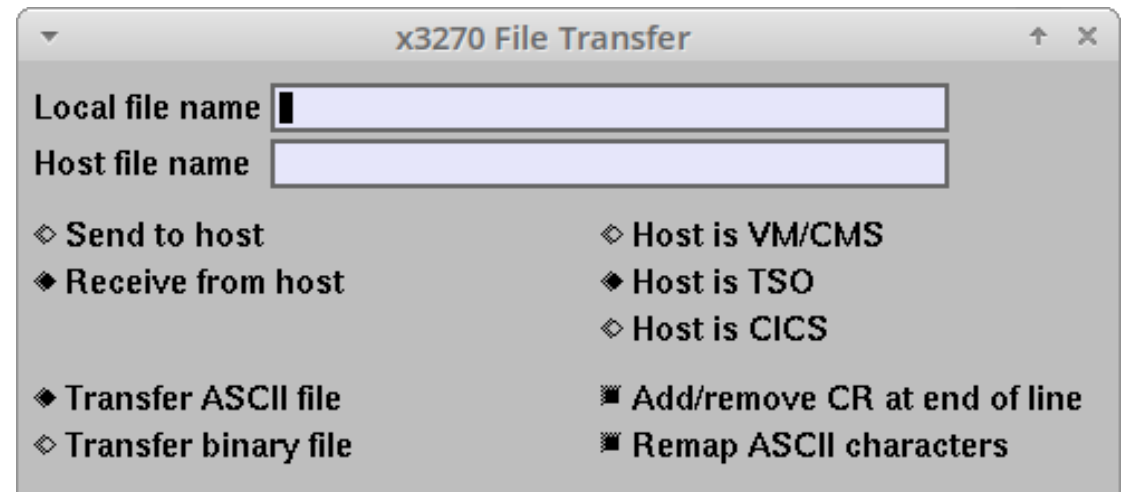


VFILE Rationale



Avoiding IND\$FILE, which is ...

- Disruptive
- Unreliable
- Clumsy



A better method ...

```
sf file_to_upload user@host
```

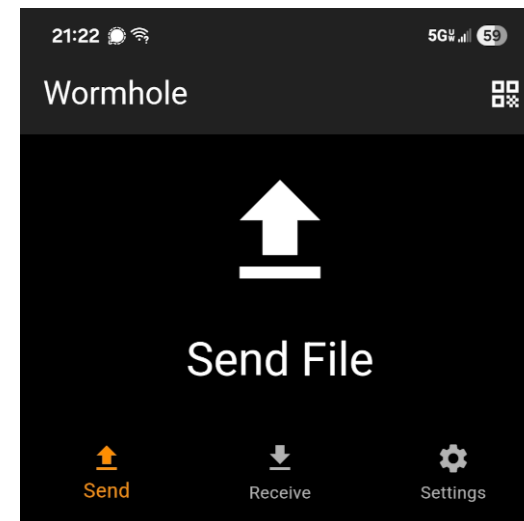
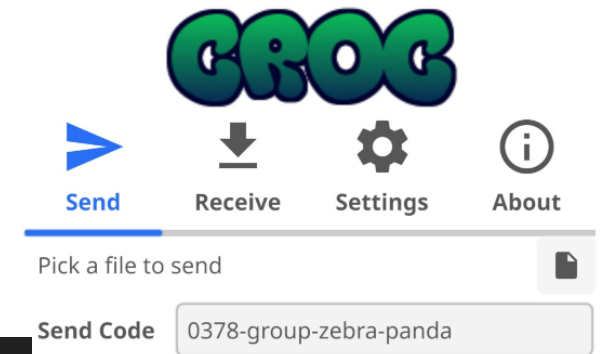


VFILE Rationale



Better than consumer apps, which ...

- Are limited in scope
- Use untrusted channels
- Require manual verification





Demo Time



```
UFTMON3464I VFMON starting
From ttech@pioneer: hello?
From rmt@win10: hi
From TROTHR@vma: *GONE I am not here right now, but your message has been recorded.
From TROTHR@rmtzvm: *GONE I am not here right now, but your message has been recorded.
UFTSRV094I file 0402 spooled to trothr origin maint@vma
From TROTHR@vma: *GONE I am not here right now, but your message has been recorded.
From TROTHR@rmtzvm: *GONE I am not here right now, but your message has been recorded.
UFTSRV094I file 0403 spooled to trothr origin trothr@vma
From TROTHR@vma: *GONE I am not here right now, but your message has been recorded.
From TROTHR@rmtzvm: *GONE I am not here right now, but your message has been recorded.
From TROTHR@vma: *GONE I am not here right now, but your message has been recorded.
From TROTHR@rmtzvm: *GONE I am not here right now, but your message has been recorded.
From TROTHR@vma: *GONE I am not here right now, but your message has been recorded.
From TROTHR@rmtzvm: *GONE I am not here right now, but your message has been recorded.
From TROTHR@vma: *GONE I am not here right now, but your message has been recorded.
From TROTHR@rmtzvm: *GONE I am not here right now, but your message has been recorded.
From TROTHR@rmtzvm: working
From TROTHR@vma: *GONE I am not here right now, but your message has been recorded.
From TROTHR@rmtzvm: *GONE I am not here right now, but your message has been recorded.
UFTSRV094I file 0404 spooled to trothr origin rmt@pioneer
From TROTHR@vma: *GONE I am not here right now, but your message has been recorded.
From TROTHR@rmtzvm: *GONE I am not here right now, but your message has been recorded.
From TROTHR@vma: This R a test for the workshop.
```



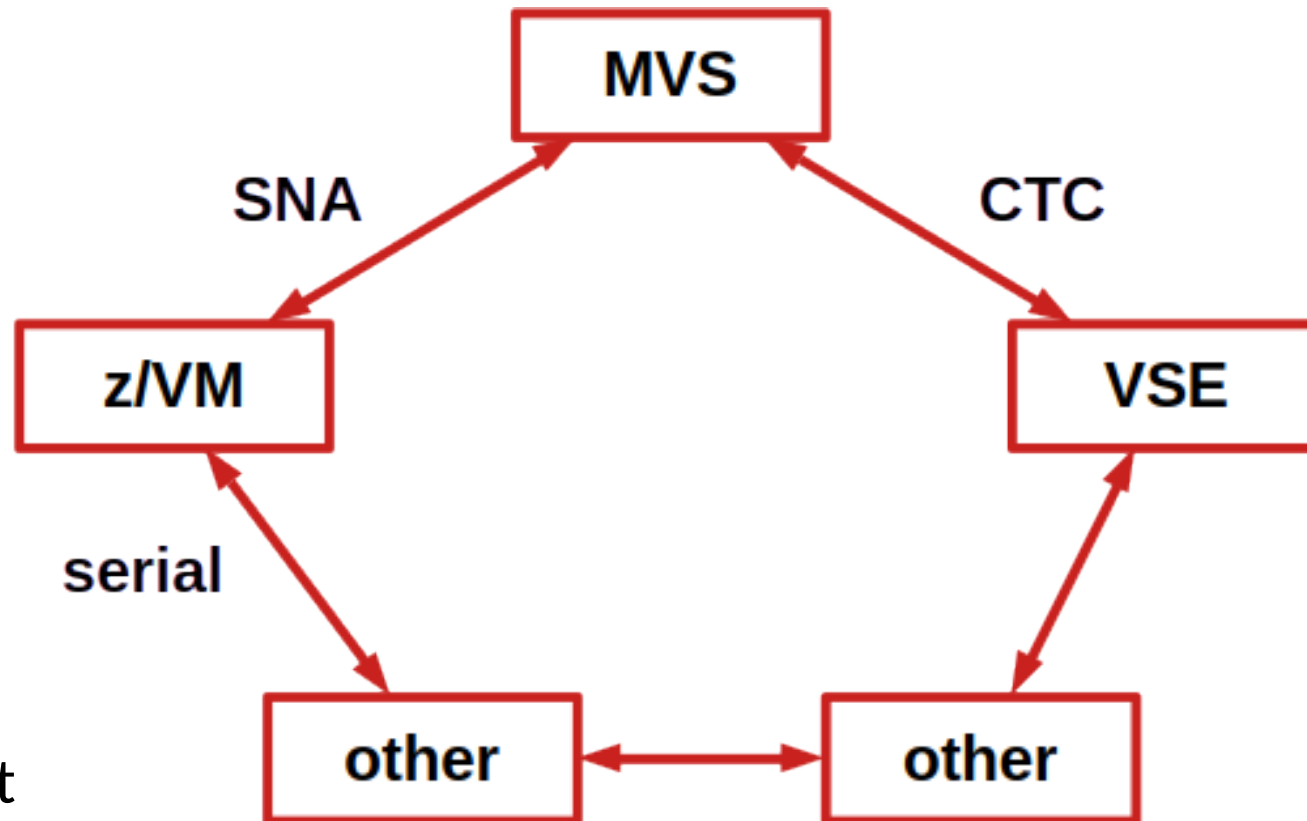
Demo Time



- vfmon – in its own window
- vfsend – sending a file
- vfls – similar to 'cp q rdr' on VM
- vfpeek – equivalent to 'peek' on CMS
- vfrec – equivalent to 'receive' on CMS
- vfrm – equivalent to 'cp purge rdr *spoolid*'
- vftell – equivalent to 'tell' on CMS



Traditional NJE

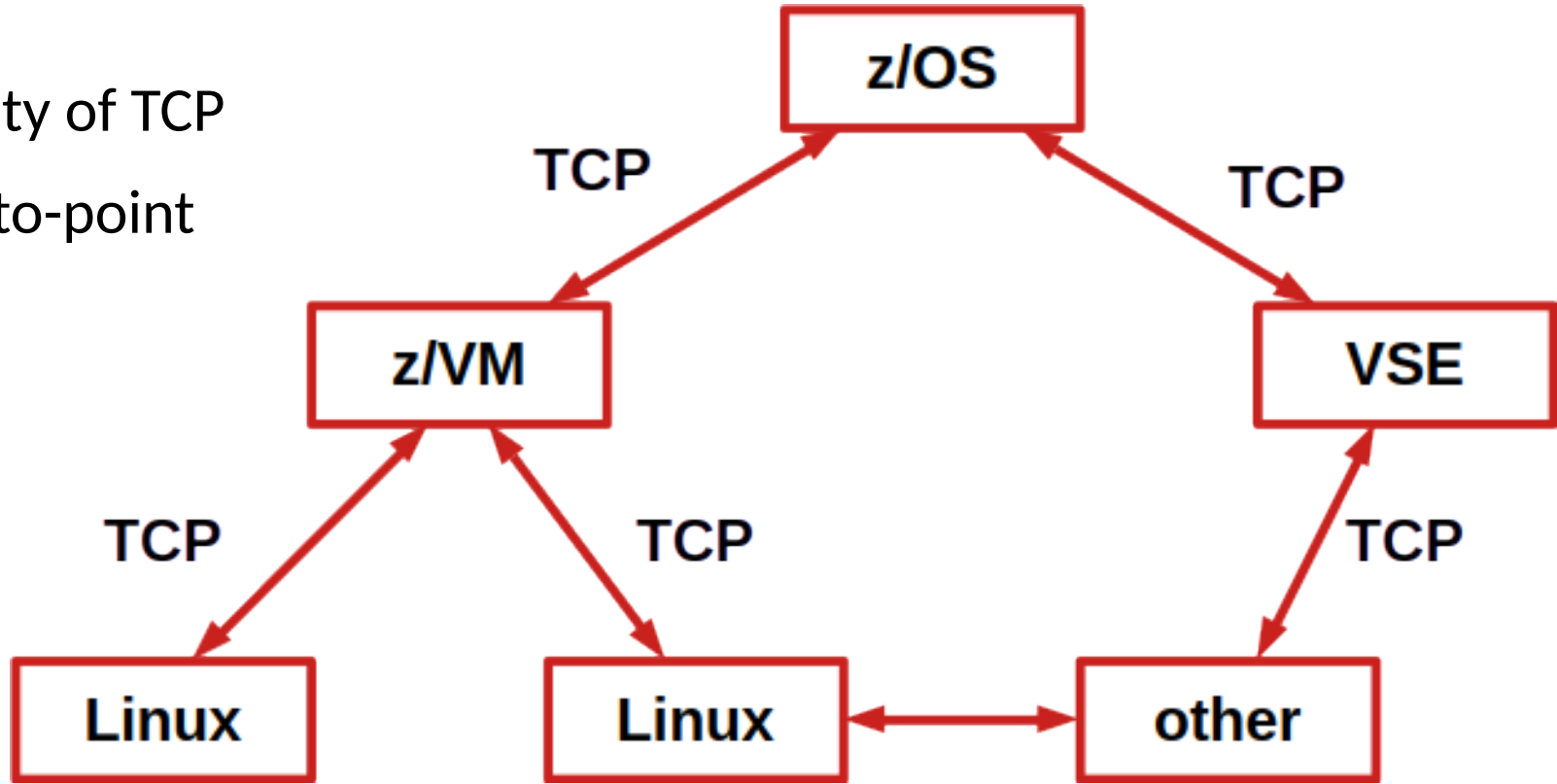


- All point-to-point
- Various link types



Modern NJE

- The ubiquity of TCP
- Still point-to-point





no NJE

VFILE Network



z/OS

- No fixed links
- No store-and-forward

z/VM



VSE

Linux

Linux



Windows

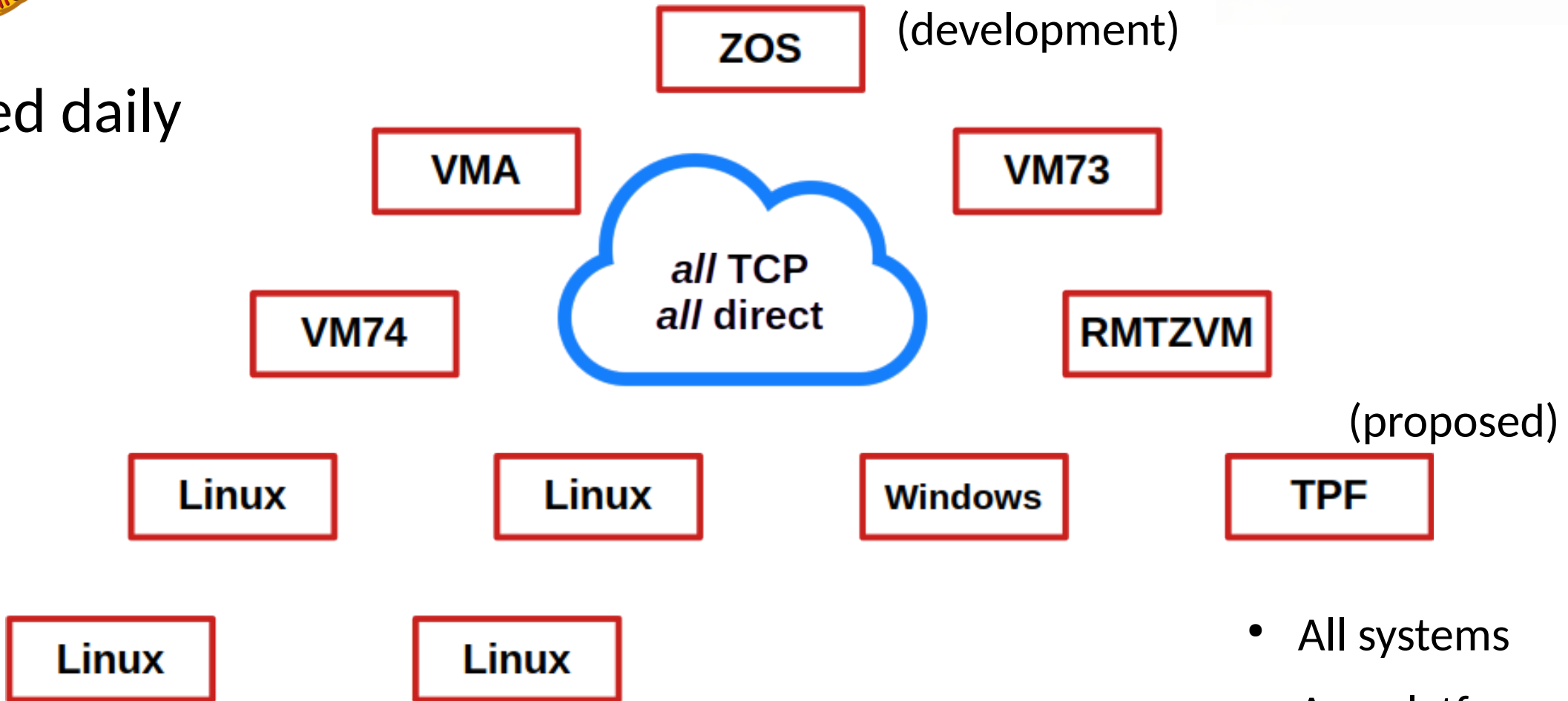


(proposed)
TPF



used daily

VFILE at VSSI



- All systems
- Any platform

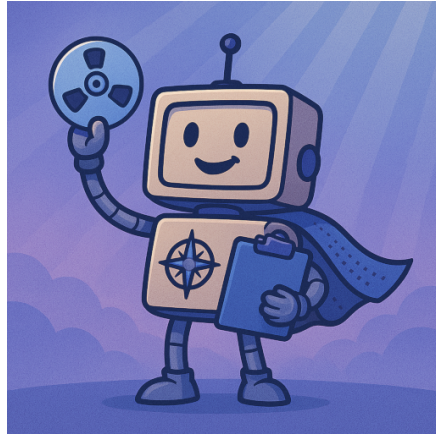


VFILE: The Solution

- Mainframe and data-center framework and concepts
- Secure, simple, and reliable content and file transfer
- Open protocol so any platform can join the mix
- Fully facilitate automation with less complexity
- Extend multi-platform reach while cutting costs



thank you!!



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Security Aspects

- Systems must be indicated in VFILE configuration
- TLS/SSL
- “agent” token
- VFILE recognizes the systems/peers, not the users
- Files go to the delivery dock, not to user space
- Protocol inherently offers winnowing and chaffing



Auto-Deploy

- Softens the configuration and licensing deployment load
- Uses a primary VFILE server/node
- Does not address PKI certificate deployment

A single VFILE server with proper config and license reachable as host “vfile” makes the rest of the collection ready-to-run