

Virtualization in Broadcast

Paul Stewart, Technical Support /
R&D Engineer, ENCO Systems,
Inc.



The Analog Studio

- Traditionally, studios have been equipped with analog wiring
- Studio functionality was fixed
- Automation/workstation housed within each studio
- Automation workstations decentralized and subject to the elements



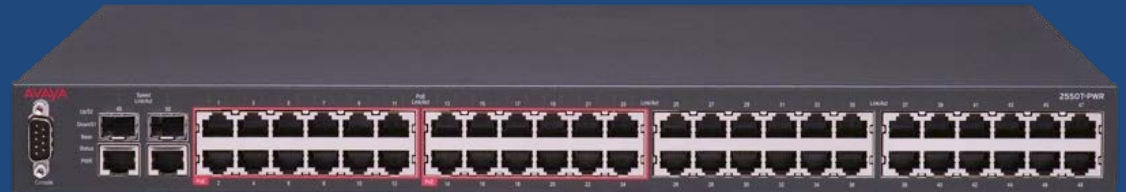
Virtual Computing

- Virtual computing has gained in popularity due to its scalability and cost savings
 - Reduce energy costs
 - Reduce maintenance costs
 - Use what you need
 - Scalable to fit your needs



Virtualized Studio

- Virtual server runs independent operating systems and instances of all software
- Server integrates with the AoIP network
- Workstations are replaced by thin clients
- Server can afford additional benefits



The ENCO1 System

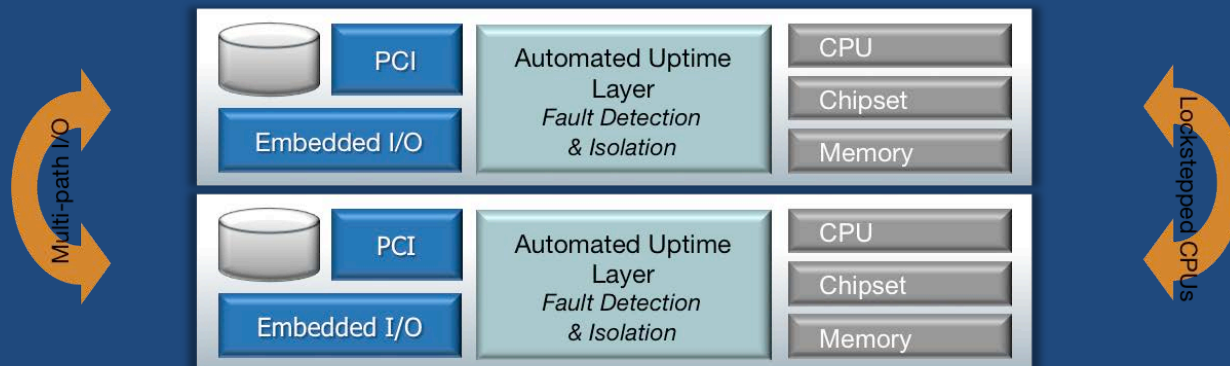
- The ENCO1 System is one such virtualized server for broadcast automation
- Upgrading can be done more efficiently
- Server kept in ideal environment
- Thin clients relay control signals like a KVM extender
- Fault tolerant server
- Less demand on LAN



Fault Tolerant

- ENCO1 contains two blades
- Uses Rapid Disc Resync (RDR) to mirror drives
- Lockstep processing and memory
- Server can be configured to email user and Stratus upon drive failure
- Main advantage is the level of ease for the user when fault is detected - little intervention

Duplex Hardware Components



Reduces LAN Traffic

- With a virtual solution, the network is used for control signals only (AoIP, thin clients, GPIO)
- Accessing files from “file server” or another “workstation” is quicker
- Network traffic is reduced



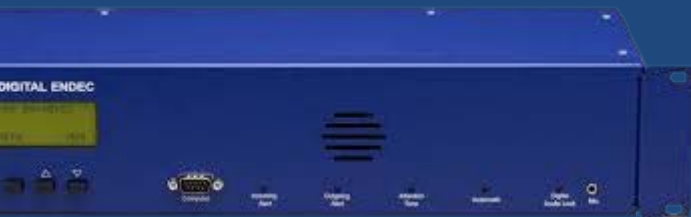
Flexibility

- Control any session from any studio
- Add clients easily and quickly if needed
- Interface with AoIP networks
- Interface with GPIO equipment
- Other IP based systems
- Controlled remotely (VPN)

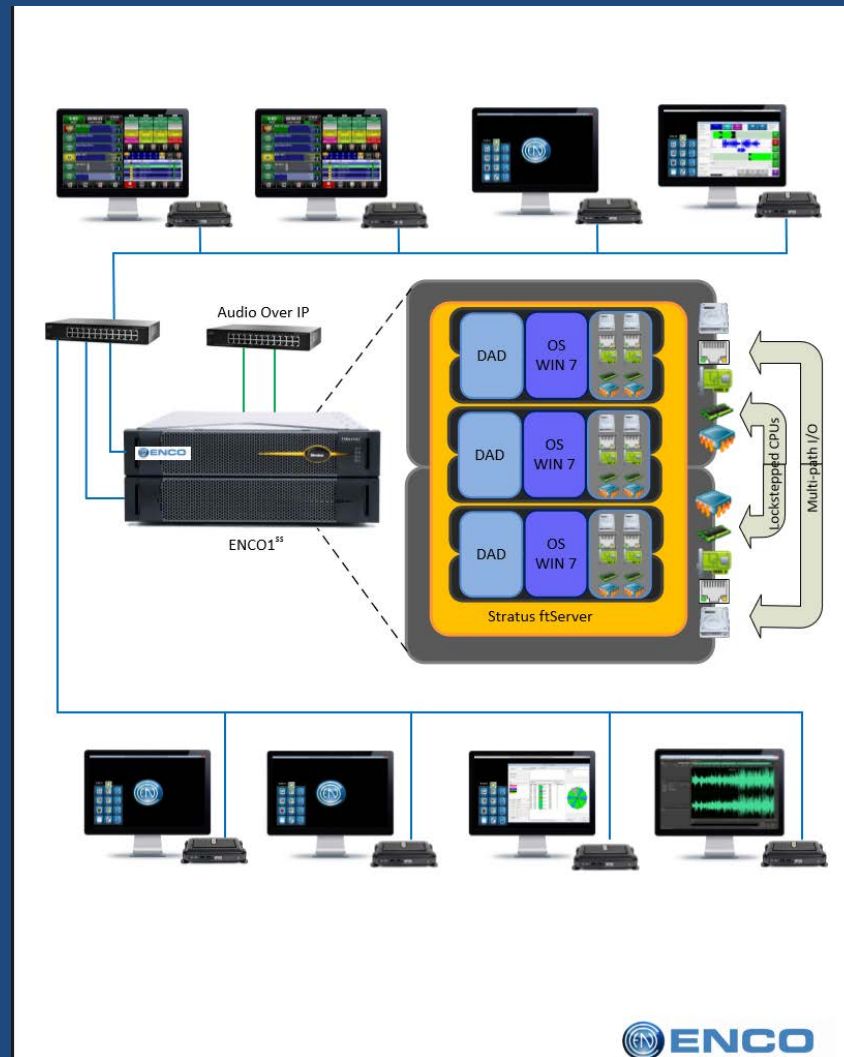


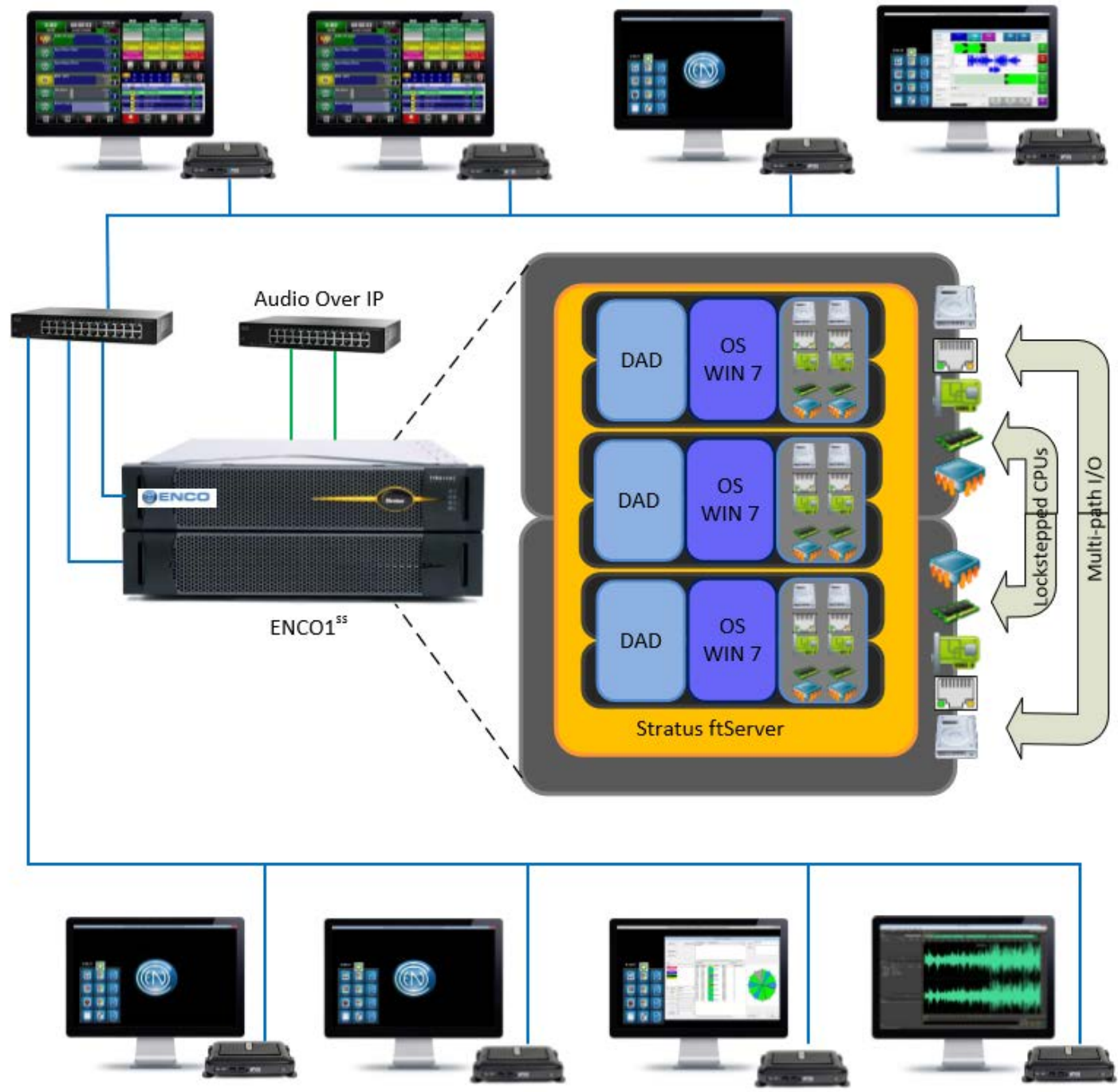
Flexibility

- No need to change existing equipment
- Virtual computing still allows for serial, GPIO, and UDP commands across the network or within the virtual environment
- Automation system will still work with EAS, RDS, processor, switchers, etc.



Architecture of Virtual Automation Server





Summary

- Virtual computing can afford users the same level of flexibility they are accustomed to
- A virtual server is scalable in nature and can be upgraded easily
- No need to replace existing equipment as a virtual environment can interface with IP, serial, and GPIO
- Questions?

Contact Me

Please feel free to contact me with any thoughts, questions, or comments regarding the topic presented today

Paul Stewart

(248) 827-4440 ext. 155

paul@enco.com