

The New Paradigm in Virtualized Mobile Computing Platforms

RocIT™ Defender Elite
on a Secure Flash Drive

Don Ritzman: CEO & President

What is a VCP?

- Often referred to as a:
 - Computer on a stick (CoA)
 - System on a stick (SoA)
 - OS on a stick
- Virtual Computing Platform (VCP)
 - A USB Flash Memory Device with a Secure Host OS and virtual environment with a complete set of software...that when properly configured, provides a secure computing platform in which a user can place standard and/or custom applications and tools to use in the performance of their jobs or personal activities.

The Top 10 VCP Must's

- A VCP Must:
 - Be hardware independent
 - Be highly portable
 - Support multiple OS's within a single secure virtualized container
 - Support standard and custom user applications software
 - Utilize a secure Host or Root operating system - Linux as the Root or Host OS
 - Lock down underlying system (User does not see it)
 - Be able to run autonomously - Networked and non-networked modes
 - Maintain security and device integrity at all times
 - Have Device Driver support built-in
 - Remote Secure Device Management & Updates support built-in

Virtual Computing Platform Bare Metal Boot Solution

Optional: Insert a Virtual User Desktop
For High Availability & Disaster Recovery

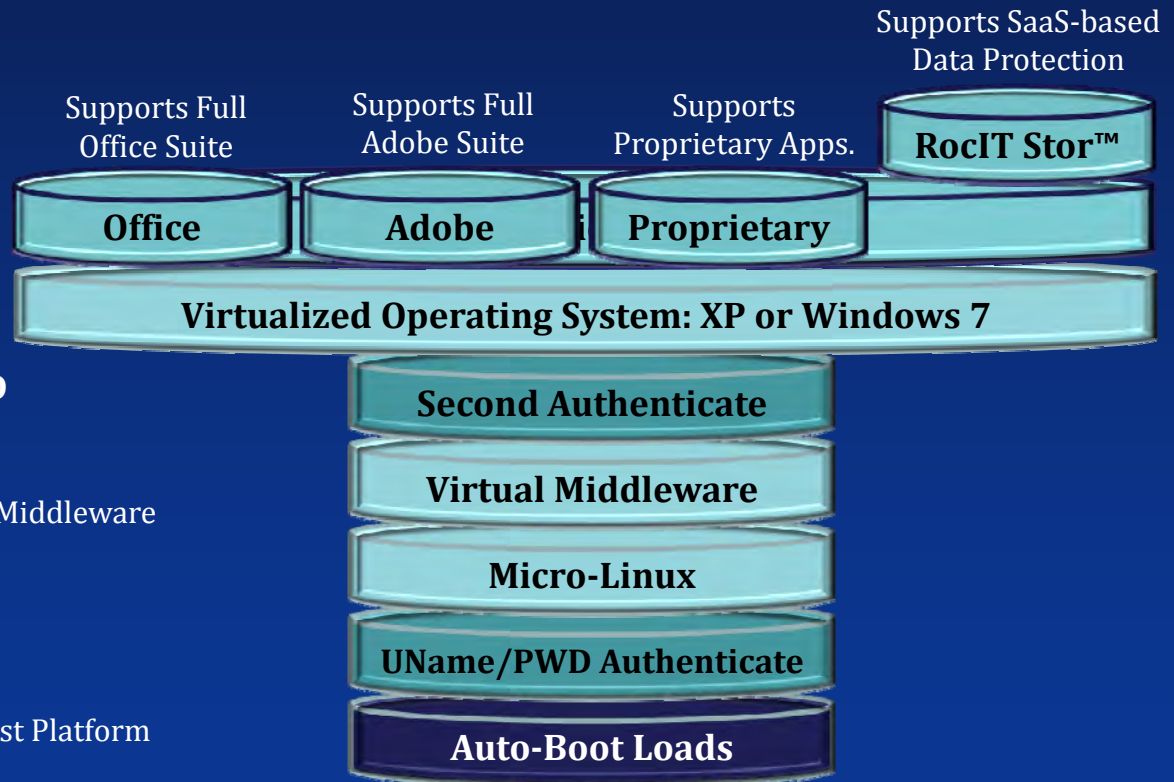
Loads User Desktop With Applications

Second Authentication: UName/PWD
(Optional: CAC/PIV/SmartCard)

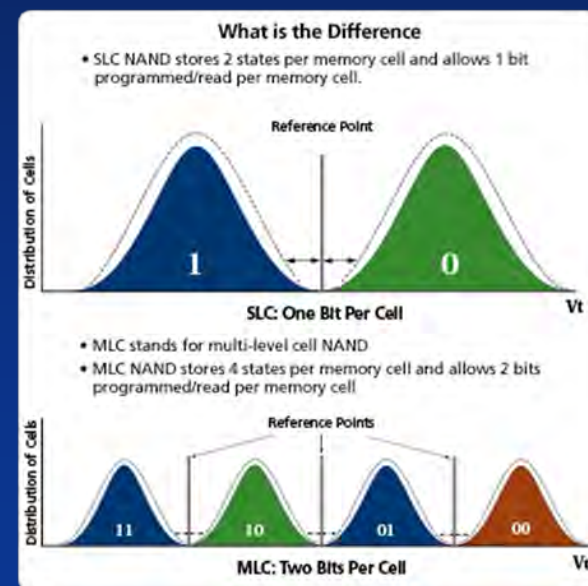
Auto-loads Custom Linux and Custom Virtual Middleware

First Authentication

Requires No Operating System Running on Host Platform



- Hardware
 - Hardware is fast becoming a commodity item (COTS)
 - That's a good thing (Pricing is aligning with usage reality)
 - Large format devices is important – above 32GB
 - FIPS 140-2: Level 3-4
 - For Government it's a must have
 - For Enterprise it's a nice-to-have
 - DAR – Data at Rest (Disk Encryption)
 - For Government it's a must have
 - For Enterprise it's a must have
- The Great Debate
 - SLC vs. MLC (Price/Performance Tradeoffs)
 - SLC NAND Flash is typically rated at about 100K cycles
 - MLC NAND Flash is typically rated at about 5K-10K cycles
 - SLC Floating Gate NOR Flash has typical Endurance rating of 100K to 1,000K cycles
 - MLC Floating Gate NOR Flash has typical Endurance rating of 100K cycles
 - SLC Costs 2-3 times more than MLC
 - SLC is about 2-3x faster than MLC
 - SLC has about a 2x larger footprint than MLC
 - Speed not as important – both function similarly in normal operations
 - Write Endurance is Key
 - Efficient and robust wear leveling built into device



- Software
 - Fully self-contained secure environment
 - Not just an operating system but an entire virtual platform
 - Security in software stack is essential
 - STIG guarantees solution is locked down
 - Portability in the solution is requirement
 - Platform Independent
 - Flexibility in the solution is requirement
 - User able to add and remove software applications according to needs

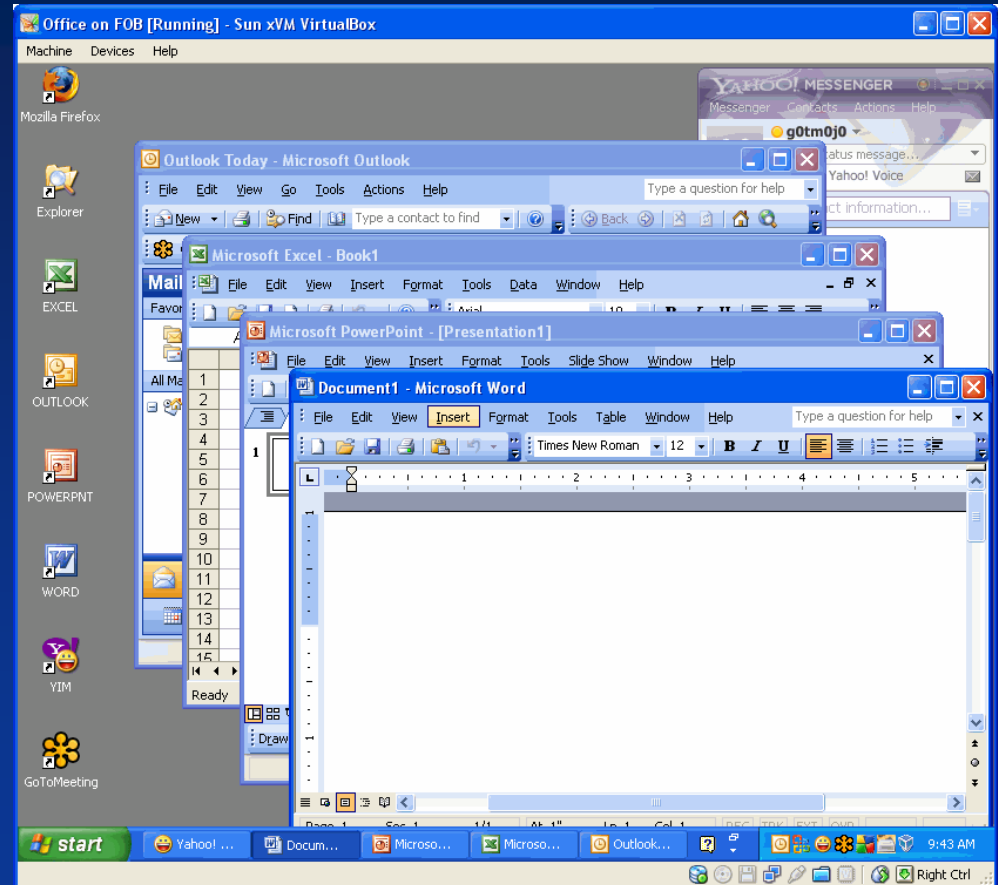
- User Name/Password is still preferred about 5 to 1 over Biometrics
 - Current generation of Biometrics sensor technology is still too clumsy to be practical
 - Novelty feature – not a practical feature
 - Too many false positives and negatives
 - For the enterprise, provisioning process is too cumbersome and prohibitive for setting up large numbers of users
- Next Generation sensor technology will make Biometrics a more useful tool for managing device access & security

Universal Device Management Tools

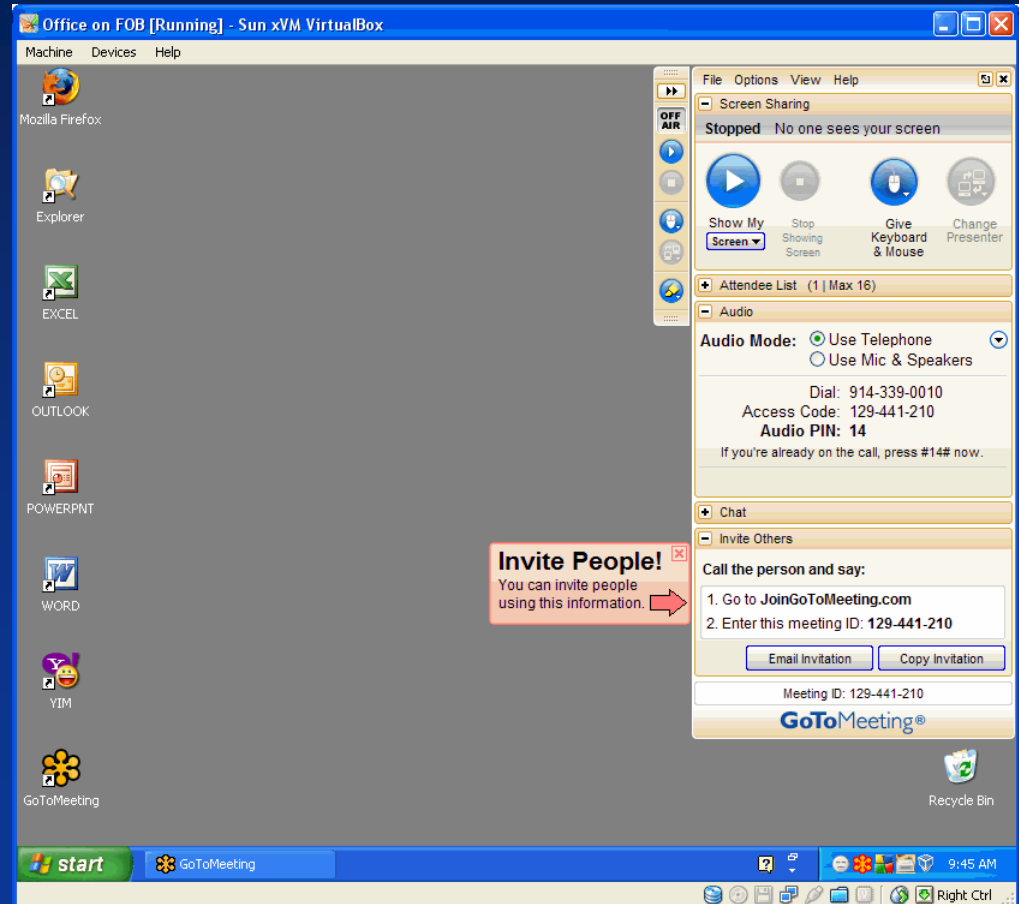
- Autosense device attached, load appropriate device tools and libraries
- Self-Contained and Standalone – does not require complicated infrastructure to implement
- Multi-functional – Complete device, security and virtual environment management from a single console.
- Integrates With and Supports Active Directory and Other LDAP DB's with minimal effort

Complete Office & Adobe Tool Suites

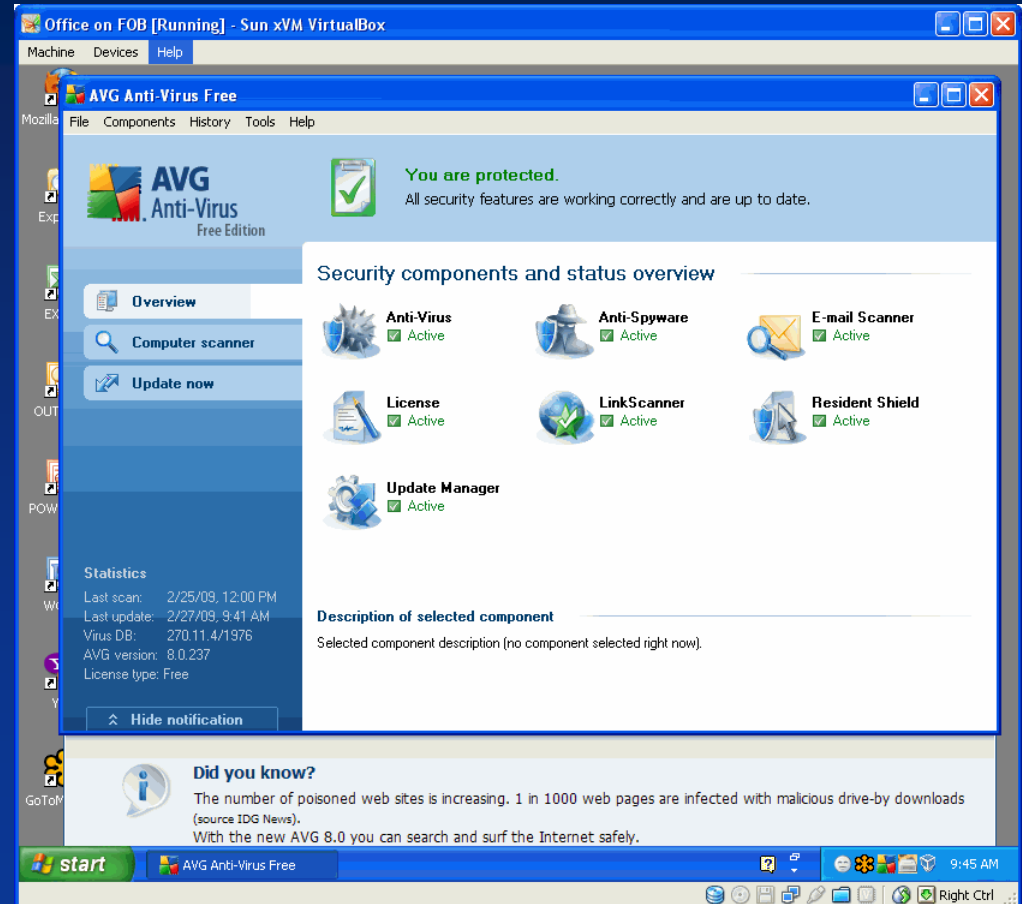
- Solution must support the entire complement of MS Office & Adobe Tool Suite applications that run on the Windows XP & Windows 7 operating systems.
- Users should have the choice to load the applications or have them pre-loaded prior to delivery.



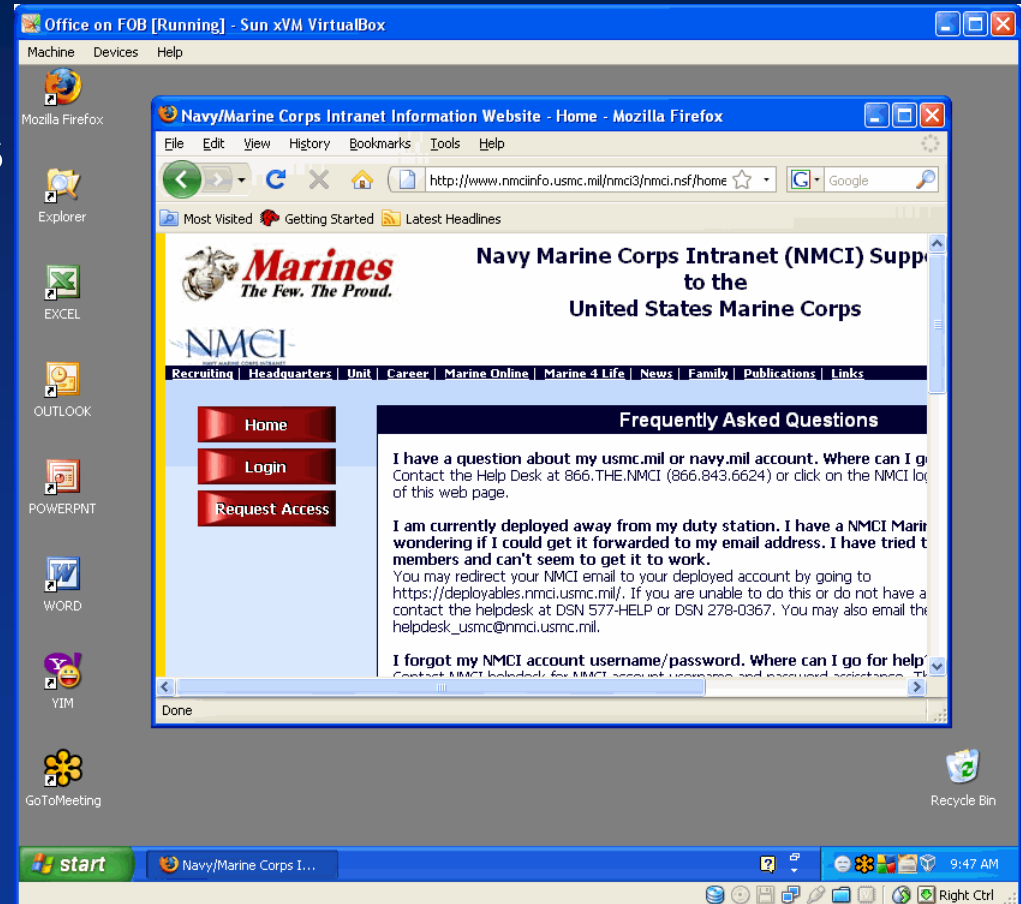
- Solution must support third-party applications, including proprietary applications that run on the Windows XP & Windows 7 operating systems.
- Users should have the choice to load the applications or have them pre-loaded prior to delivery.



- Anti-Virus programs must be able to operate inside secure container



- Administrators must be able to point users to portal URL's
- Administrators must be able to lock down the communications protocols



RocIT™ Defender Elite

- Consists of a complete VCP on a 16GB – 128GB FIPS USB thumbdrive.
- System is highly secure –
 - FIPS140-2 Level 3 Hardware
 - STIG CERTIFIED Software
 - Restricts access to local host resources (i.e. Hard Drive, Printers, etc.)
 - Multi-factor authentication - Supports CAC, PIV and Smart Cards
- Minimal host hardware to support
 - No hard drive required on host platform
- Configurable and flexible operating environment
 - Can be set-up to specifically support users requirements
 - Supports multiple operating systems Windows XP and Windows 7
 - Supports multiple web browsers
 - Supports full Internet web access
 - Leverages broadband connectivity
 - Supports standard applications software
 - Supports full e-mail client (i.e. Outlook)
 - Allows use of at least one free USB port



Uses for RocIT™ Defender Elite

- Mobile Worker Support
 - Complete SECURE system on a mobile device
- Teleworker Support
 - Complete SECURE replication of office desktop on a portable device
- IT Support (Portable Support Environment)
 - Set-up and Fix broken computers
 - Remove viruses
- Education
 - Administrative Worker Mobile Platform
 - Pandemic Support



- Healthcare
 - Patient Records
 - Healthcare Practitioner Mobile Device
- Government
 - Emergency Conditions Support
 - First Responder Support
 - Pandemic Support
- Financial Services
 - Portable and secure document storage and management
- Legal
 - Portable and secure document storage and management

