

Standing up GIS Servers in the DOD Environment

GIS Servers

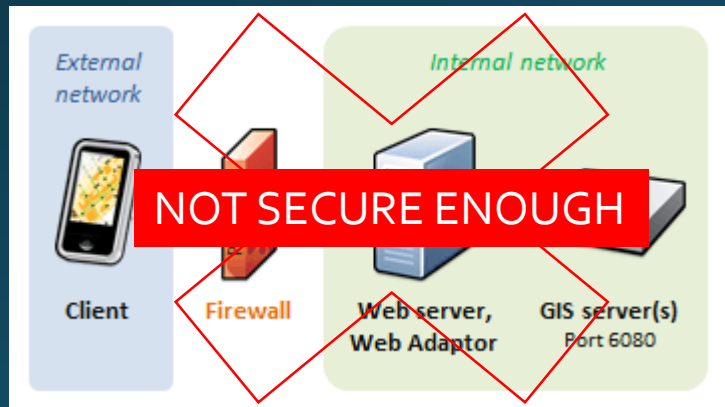
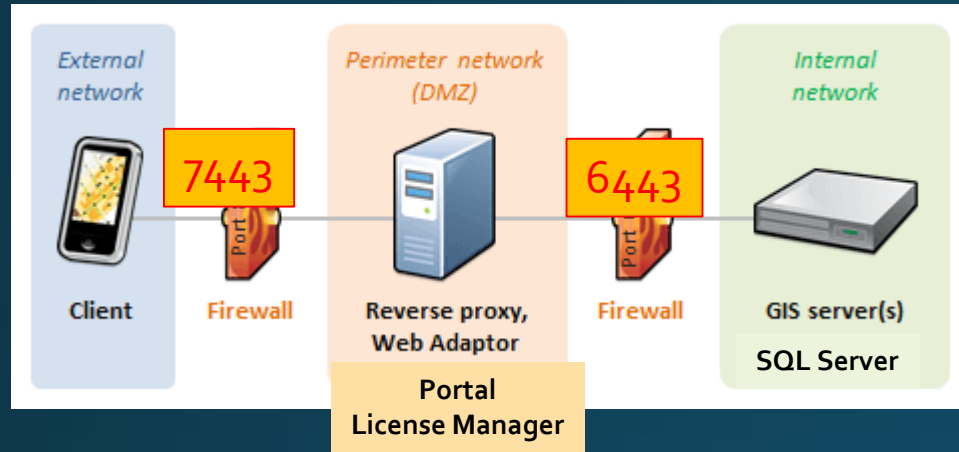
Jonathan Witcoski

Contractor ARNG-ILE

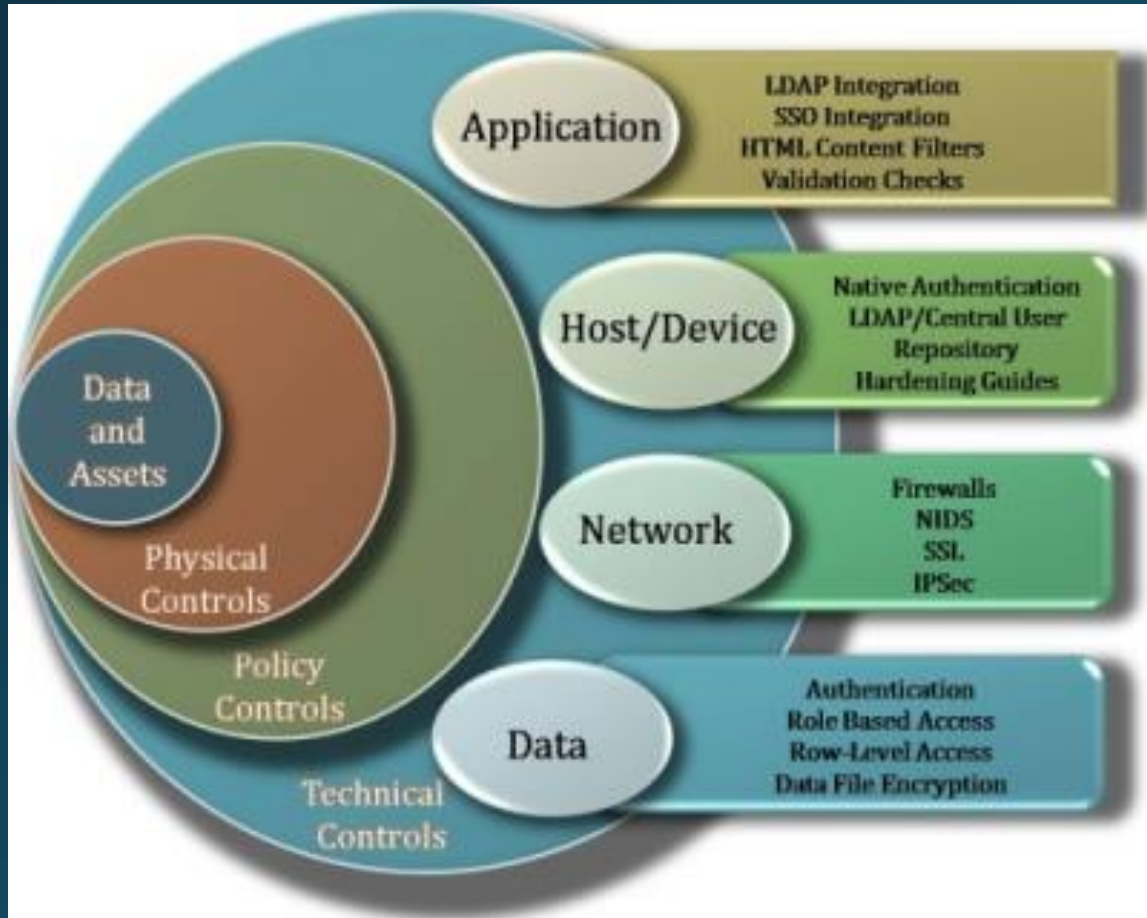
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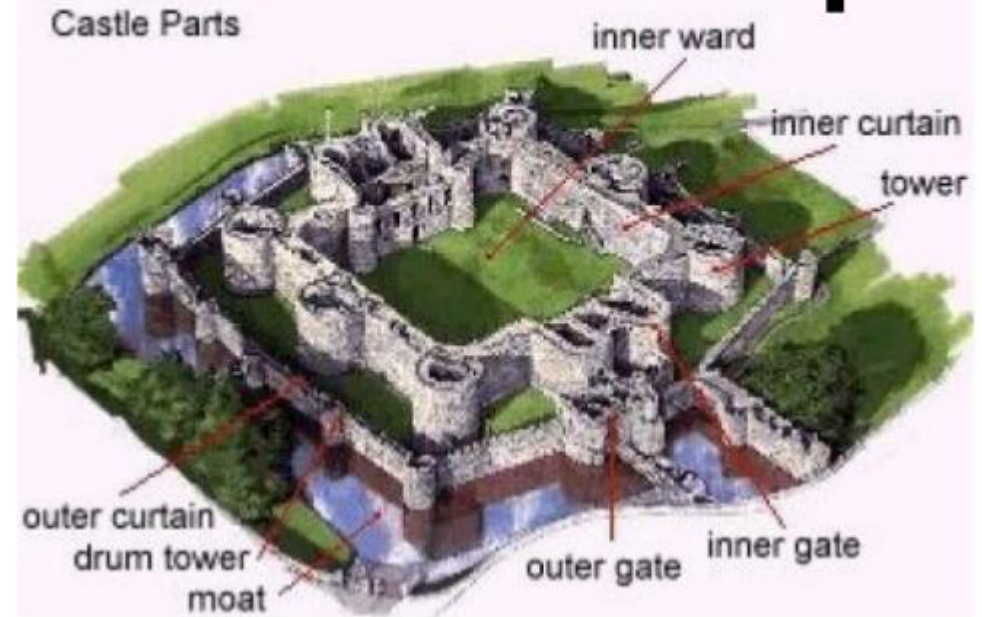
The Architecture



Defense in Depth Strategy



Defence in Depth




**Shepherding Solution Architecture
Security Decisions**

Differences

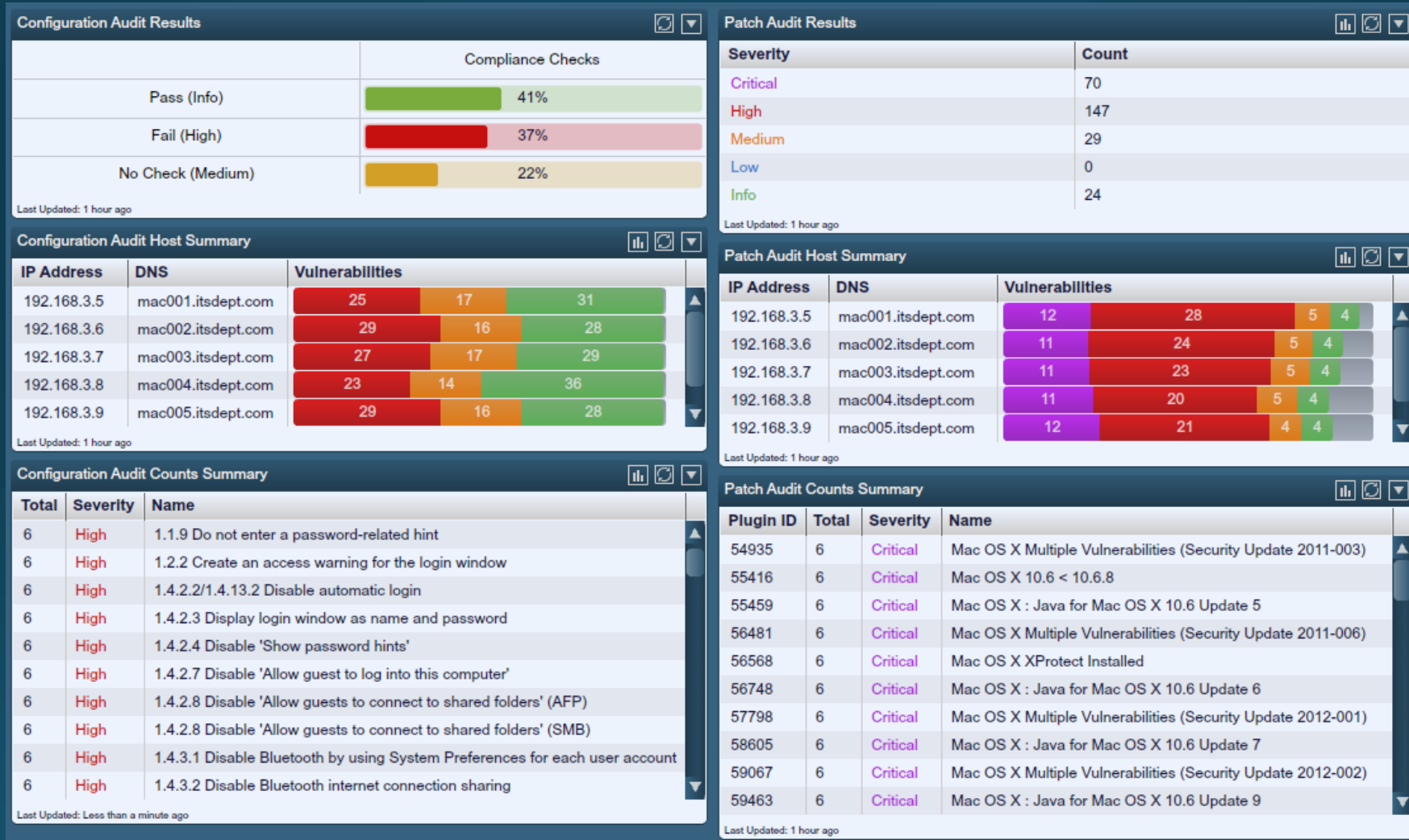
	Standard Install	DOD Install
Directory	C:	OS (C:) separate from data and app (D:)
Access	HTTP or HTTPS	HTTPS required with CAC authentication
Server Location	Anywhere	DOD secure facility
Internet Connectivity	No Firewall, any site	Firewall, Trusted Sites Only
Software	Anything	Only certified software
Installation	Directly on Production Machines	Development → Test → Production

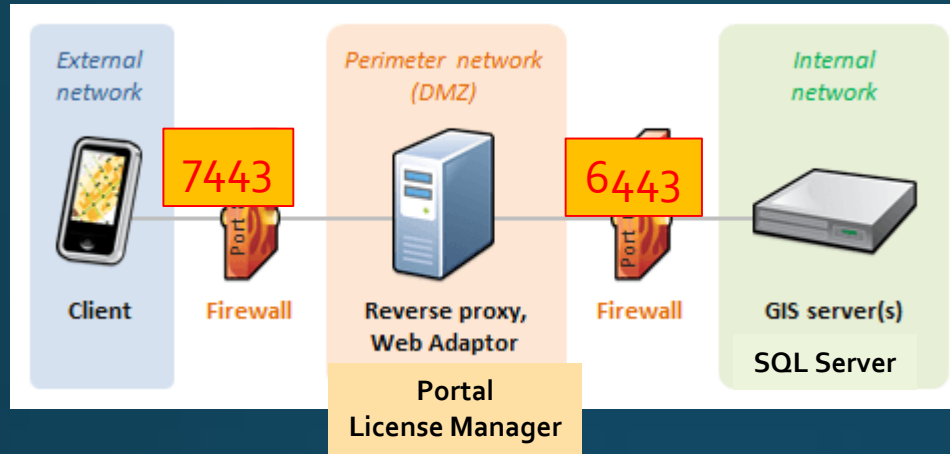
Firewall Ports

License Manager	ESRI Server	ESRI Portal	SQL
27000-27009 inbound tcp	6443 inbound tcp	7080 inbound tcp	1433 inbound tcp
27000-27009 inbound tcp		7443 inbound tcp	1433 inbound udp
		7005 inbound tcp	1434 inbound tcp
		7099 inbound tcp	1434 inbound udp
		7199 inbound tcp	1433 outbound tcp
		7654 inbound tcp	1433 outbound udp
			1434 outbound tcp
			1434 outbound udp

TCP: Transmission Control Protocol (with Internet Protocol [IP], the main protocol of the Internet
 UDP: User Datagram Protocol

Security (STIG) Compliance





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