Safety and Mission Assurance (SMA) Office
Information Assurance/Cybersecurity Support

Managing Cyber Risk w/ RedSeal

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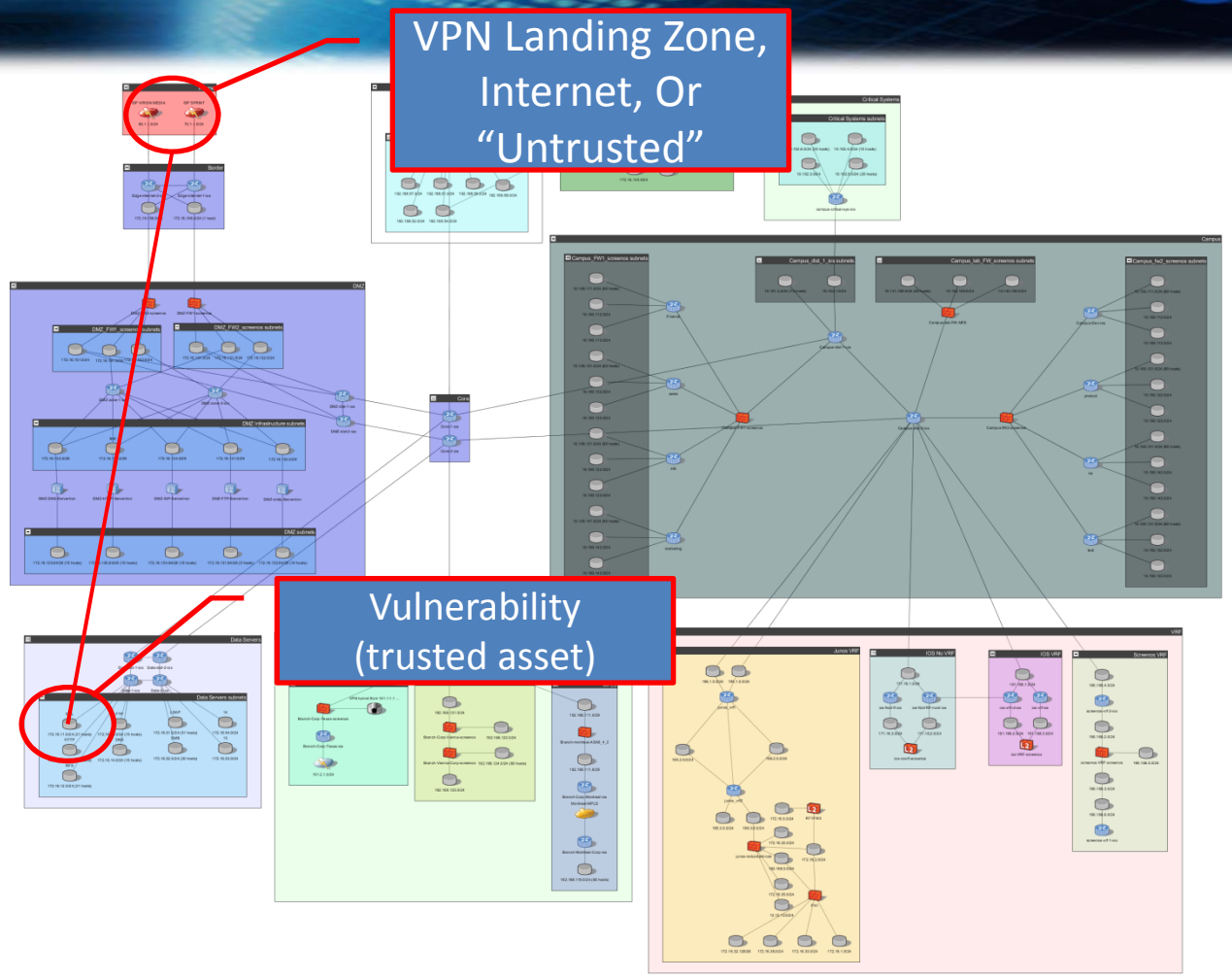
NASA's IV&V Program
http://www.nasa.gov/centers/ivv

B.L.U.F.

- Rarely people FULLY understands their network ground truth architecture
  - Ability to understand risk/exposure of interfaces
    - Ex: NASA works with international partners, universities, center-to-center where each network is controlled by different stakeholders and have different security postures
- Rarely people understand true exposure of known vulnerabilities
  - Prioritize patching based on exposure (i.e. risk)
- Without insight into vulnerabilities and networks, how do really understand attack depth to mission critical functions.

Sample Exposure

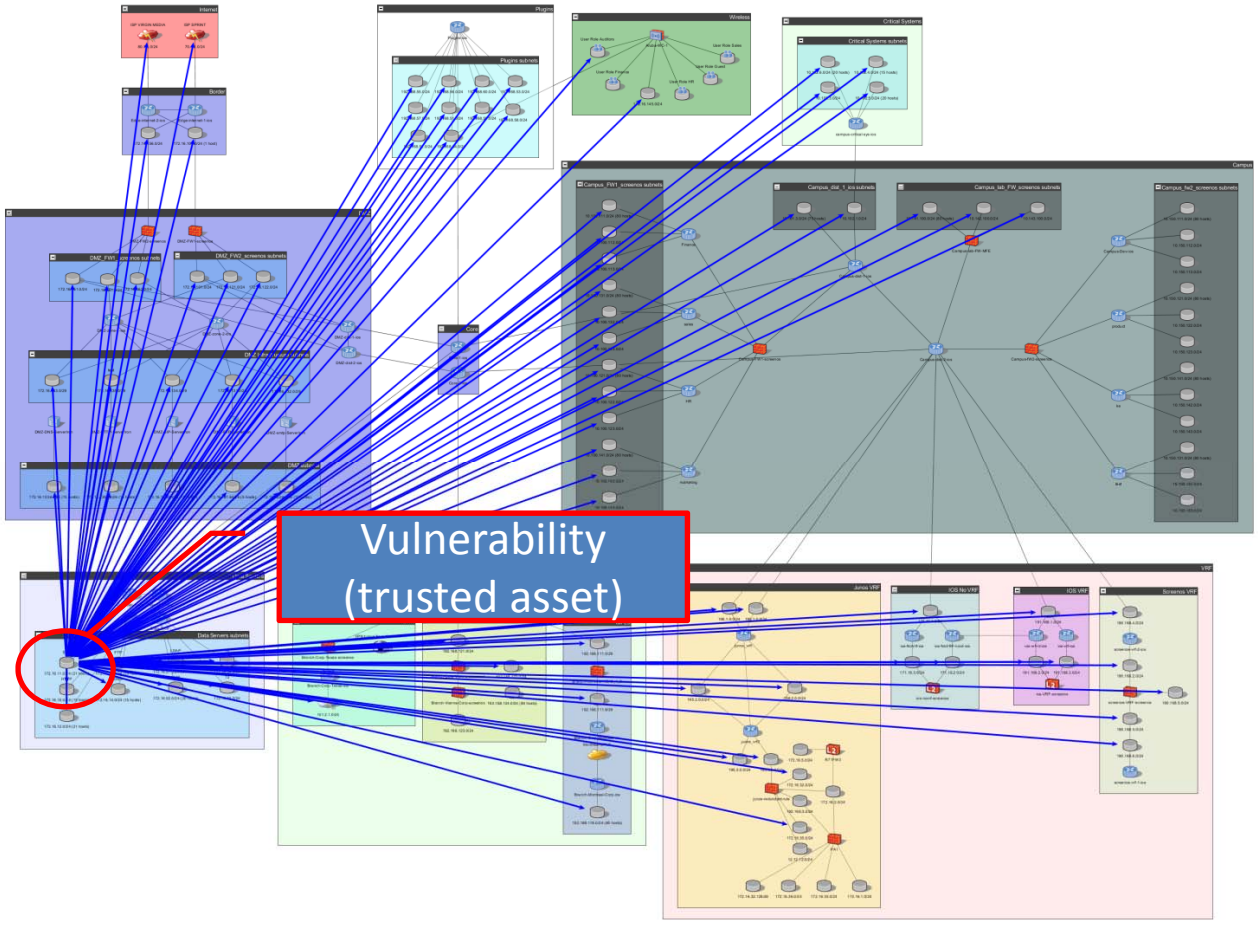
SMA Support



Demonstrates that a pathway exists from the VPN Landing Zone, Internet, Or Untrusted to a vulnerable asset in non-zero trust network

Sample Exposure

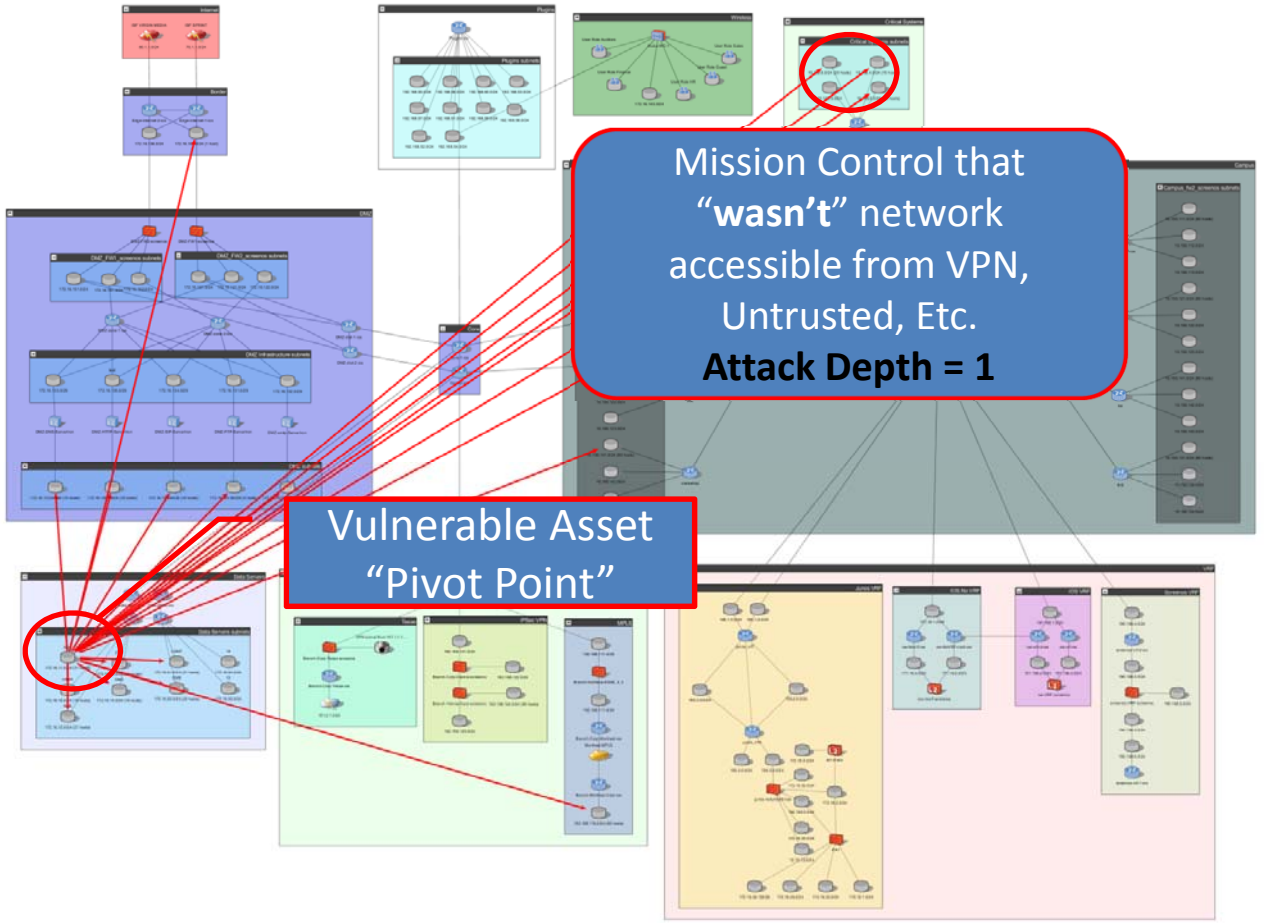
SMA Support



Demonstrates all outbound access paths (**Pivoting**) from the vulnerable asset

Sample Exposure

SMA Support



Demonstrates potential vulnerabilities that could be exploited from this server