Some Thoughts on Zero-Trust, Resilience, and 5G...

Presented at ISART

13 August 2020

Wayne Phoel Institute for Systems Research (ISR) wphoel@umd.edu

With acknowledgment to the

Applied Research Laboratory for Intelligence
and Security (ARLIS)

UNIVERSITY OF

Who (Doesn't) Trust Whom?

Two Views for Zero Trust:

 Network Operators: No implicit trust of components, users, employees

Users: All of the above + Network Operators



Strengthening Access Control

Observing behavior adds another dimension to trust.

Behavioral Monitoring

These basic Zero-Trust concepts re-define the moat around the castle.

If you're in, you're in.

> Multifactor Authentication

Micro-

Role-Based Access

segmentation



Resilience and Situational Awareness

- Resilience: the capability to recover after misfortune
- Internal network situational awareness needed to detect and react to undesired behavior
- Multi-level trust metric can aid adaptive network control
- Customized virtual network functions may enable monitoring, evaluating trust, and reconstitution





Thank you