

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Proposed Amendments to the NERC Bylaws

Background and Overview of Changes; Approval Process and Next Steps

Sonia Mendonca, Sr. VP, General Counsel and Corporate Secretary
Member Representatives Committee Meeting
August 20, 2020

RELIABILITY | RESILIENCE | SECURITY



- Purpose of Review
- Membership
- Member Representatives Committee
- NERC Board Independence and Related Matters
- Other Revisions

- Membership Structure
 - Membership is voluntary and open
 - Sectors should reflect commonality of characteristics and reliability interests
 - Sector dilution over time
- Proposal
 - Revising Sector definitions
 - Role of associations
 - New associate Sector
 - Revisions to specific Sectors

- Nomination and election of Sector representatives
 - Ability of associate Sector members to serve
- Regional Entity role

- Statutory requirement that the ERO be independent from users, owners, and operators of the bulk power system
- Current language focuses on relationship with ERO members
- Proposal
 - Bright line exclusion from service connected to relationship with entities subject to reliability standards; catch-all provision would continue to address other conflicts
 - Corrects internal inconsistency on the eligibility of officers of the corporation
 - Clarifies eligibility for service on nominating committee
 - Streamlines provisions regarding increase/decrease of board size

- Action without a meeting
- Remote attendance
- Removal of inoperative transitional provisions
- Capitalization

- Approval by Members Representative Committee and NERC Board (August 2020)
- Approval by the Federal Energy Regulatory Commission



Questions and Answers



Recent FERC Activities

Andy Dodge

Director, Office of Electric Reliability

Federal Energy Regulatory Commission

August 20, 2020

The views expressed in this presentation are my own and do not represent those of the Commission or any individual Commissioner

Agenda

• Pandemic Related Activities

- Order Granting Deferred Implementation of Certain NERC Reliability Standards
- Extensions on Reliability and Security Related Actions
- Pandemic Liaison Contacts

• Cyber Security

- Virtualization, Cloud Services for Power Grid Operations
- NOI Regarding NIST Cybersecurity Framework and Coordinated Cyberattacks
- Cybersecurity Incentives Policy White Paper

• Operations and Planning

- Transmission Incentives NOPR
- MISO Storage as Transmission Only Asset (SATO) Technical Conference

• Technical Conferences

- Commission-led Technical Conference on Impacts of COVID-19 on the Energy Industry
- Hybrid Resources Technical Conferences
- Upcoming Conferences
 - Carbon Pricing in Organized Wholesale Electricity Markets
 - Offshore Wind Integration in RTOs/ISOs

• Regulatory

- Commission Meetings
- Court upholds FERC Order 841 Boosting Electric Grid Storage

Pandemic Related Activities

Order Granting Deferred Implementation of Certain NERC Reliability Standards

- Order RM15-4, RM16-22, RM17-13 and RD18-4 issued 4/17/20
- Grants three-month deferral of the implementation of Reliability Standards - due 10/1/20
 - CIP-005-6 (Cyber Security – Electronic Security Perimeter(s))
 - CIP-010-3 (Cyber Security – Configuration Change Management and Vulnerability Assessments)
 - CIP-013-1 (Cyber Security – Supply Chain Risk Management)
- Grants six-month deferral of the implementation of Reliability Standards – due 1/1/21:
 - PRC-002-2 (Disturbance Monitoring and Reporting Requirements)
 - PRC-025-2 (Generator Relay Loadability)
- Grants six-month deferral of the implementation of Reliability Standards – due 4/1/21:
 - PRC-027-1 (Coordination of Protection Systems for Performance During Faults)
 - PER-006-1 (Specific Training for Personnel)
- Commission recognizes that registered entities have already taken steps to ensure effective and timely implementation of these standards
- Deferred implementation is a proportionate and reasonable response to deal with COVID-19 that will allow registered entities to focus immediate efforts and resources on maintaining safety and ensuring reliability of the grid.

Extensions on Reliability and Security Related Actions

- OER has postponed all on-site audit activities in coordination with NERC and the Regional Entities and has transitioned to virtual audits as much as possible.
- The 2020 Annual Reliability Technical Conference, initially scheduled for June 25, 2020, was canceled; we expect to resume holding this conference in 2021.
- Compliance filings related to the NERC Five-Year Performance Assessment extended to 6/1/20 and 9/28/20.
- Initial and reply comments in the Virtualization and Cloud NOI were extended to 7/1/20 and 7/31/20, respectively.
- Time extended for NERC/WECC filing related to BAL-002-WECC to 6/3/20.

Pandemic Liaison Team

Pandemic Liaison Team created to coordinate answers to industry questions.

- Caroline Wozniak named as the Pandemic Liaison
 - Contact: PandemicLiaison@ferc.gov
 - OER **contacts**: Mark Hegerle and Kal Ayoub

Cybersecurity

Virtualization, Cloud Services for Power Grid Operations

- NOI in RM20-8, RD20-2 - issued 2/20/20.
- Seeks comments on potential benefits and risks of virtualization and cloud computing services in the bulk electric system operations and barriers to FERC-approved Critical Infrastructure Protection (CIP) Reliability Standards.
- Poses questions on four general topics:
 - Scope of potential use of virtualization or cloud computing
 - Associated benefits and risks
 - Possible impediments to their implementation
 - Potential new and emerging technologies beyond virtualization
 - Cloud computing that responsible entities may be interested in adopting
- The Commission will use the NOI to decide whether it would be appropriate to direct NERC to develop modifications to the CIP reliability standards to facilitate the use of virtualization and cloud computing by grid users and operators.
- **Initial and reply comments in the Virtualization and Cloud were due 7/1/20 and reply comments due 7/31/20.**

NOI Regarding NIST Cybersecurity Framework and Coordinated Cyberattacks

- NOI in RM20-12, RD20-2 issued 6/18/20.
- The NOI seeks comment on whether the CIP Reliability Standards adequately address cybersecurity risks pertaining to (i) data security, (ii) detection of anomalies and (iii) events and mitigation of cybersecurity events.
- In addition, the NOI seeks comment on the potential risk of a coordinated cyberattack on geographically distributed targets and whether Commission action, including potential modifications to the CIP Reliability Standards, would be appropriate to address such risk.
- **Initial and reply comments in the NOI are due 8/24/20 and 9/22/20, respectively.**

Cybersecurity Incentives Policy White Paper

- Issued June 18, 2020 in Docket AD20-19-000
- Explores a potential new framework for providing transmission incentives to utilities for cybersecurity investments that produce significant cybersecurity benefits for actions taken that exceed the requirements of the CIP Reliability Standards. States that transmission incentives to counter the evolving and increasing threats to the cybersecurity of the electric grid may be warranted.
- Seeks comments on 11 questions. Some topics include:
 - Adoption of one or both of the CIP Reliability Standards and NIST Framework approaches;
 - Identify type of incentive that would encourage cybersecurity improvement based on the approaches;
 - Incentives based on medium/high and Hub-Spoke methodology, and /or on NIST Framework;
 - Sufficiency of 200-basis point project-specific ROE adder;
 - Should there be a rebuttable presumption of reasonableness; and
 - Appropriateness of adopting a sunset date for certain incentives.
- **Comments are due 8/17/20 and reply comments due 9/1/20.**

Operations and Planning

Transmission Incentives NOPR

- NOPR in RM20-10 issued 3/20/20.
- Proposes to revise existing regulations implementing section 219 of the FPA to align Commission policy with statutory mandate of ensuring reliability and reducing transmission congestion.
- Proposes to depart from the risks and challenges approach and instead focus on granting incentives based on economic and reliability benefits.
- NOPR proposes to provide incentives for:
 - Joining/remaining in an RTO/ISO (increased from 50 to 100 basis pts)
 - Projects that meet a pre-construction benefit-to-cost ratio (50 pts) and projects that meet a post-construction benefit-to-cost ratio (50 pts)
 - Projects that demonstrate reliability benefits (up to 50 pts)
 - Technologies that enhance existing transmission facilities (100 pts)
- **Comments were due 7/1/20; Commission received over 80 comments.**

MISO Storage as Transmission Only Asset (SATOAs) Technical Conference

Staff-led conference in ER20-588 held 5/4/20 via WebEx.

Technical conference addressed:

- Evaluation and selection criteria for SATOAs in MISO footprint
- SATOA market activities and market impacts
- Cost recovery for SATOA
- Impact on the generator interconnection queue
- Operating guides for SATOAs
- **Post technical conference comments were due on 6/1/20.**

Technical Conferences

Commission-led Technical Conference on Impacts of COVID-19 on the Energy Industry

- Held on 7/8/20-7/9/20 in Docket No. AD20-17.
- Included four panels:
 - System Operating and Planning Challenges
 - Electricity Demand and Transmission Planning
 - Natural Gas and Oil Demand
 - Access to Capital, Credit, and Return on Equity
- **Comments are due 8/31/20 in Docket No. AD20-17.**

Hybrid Resources

Technical Conferences

- Staff-led conference in AD20-9-000 held 7/23/20 via WebEx
- Discussed technical and market issues prompted by growing interest in projects comprised of more than one resource type at same plant location (hybrid resources)
- Focused on a generation resource and an electric storage resource paired together as a hybrid resource.
- The Commission will issue a notice to indicate when post technical conference comments are due.

Upcoming Conferences

- **Technical Conference - Carbon Pricing in Organized Wholesale Electricity Markets**
 - To be held 9/30/20 in AD20-14-000 (WebEx)
 - Will discuss issues related to state adoption of mechanisms to price carbon dioxide emissions, in regions with Commission-jurisdictional wholesale electricity markets
- **Technical Conference - Offshore Wind Integration in RTOs/ISOs**
 - To be held 10/27/20 in AD20-18-000 (WebEx)
 - Will discuss whether existing Commission transmission, interconnection, and merchant transmission frameworks in RTOs/ISOs can accommodate anticipated growth in offshore wind generation in a way that safeguards open access transmission principles

Regulatory

Commission Meetings

- For the last several months, the meetings were held in virtual format with virtual press conference.
- Next Commission meeting: 9/17/20.
- Commission meetings will be held using virtual format for the foreseeable future.

Court upholds FERC Order 841

Boosting Electric Grid Storage

- On July 10th, the U.S. Court of Appeals for the District of Columbia Circuit upheld FERC Order 841 that the federal storage order does not encroach on states' authority over the distribution system.
- FERC Order 841 treats electric storage resources as a generation asset and requires that grid operators treat storage similar to the way power plants are treated.
- The Court determined that Order 841 directly regulates a matter that deals with wholesale rates, and does not exert undue authority over state-regulated facilities.

Stay Home, Stay Safe!

When Out, Please Wear a Mask.

- Thank you!
- Questions?

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Cloud Computing Update

Lonnie J Ratliff, Senior Manager Cyber and Physical Security Assurance
Steven Noess, Director of Regulatory Programs
Member Representatives Committee Meeting
August 20, 2020

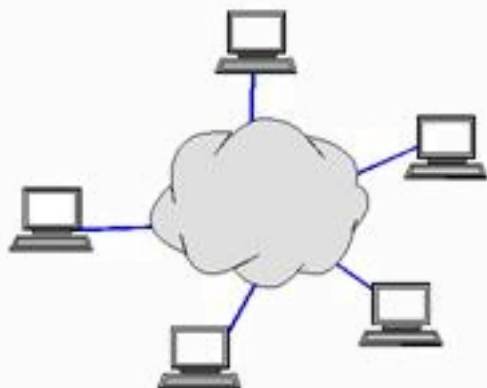
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- Virtual and cloud computing resources are becoming increasingly prevalent
 - NERC supports technology enhancements consistent with a reliable and secure bulk power system
 - Emerging paradigm is transitioning fast and beyond current Reliability Standards framework
 - Future must balance innovation, managing cyber risks, and relevant regulation
- NERC encourages innovative approaches to Reliability Standards framework to manage and mitigate continuing cyber risks

- Four future-state use cases
 - Cloud or Virtualization
 - Storage of Information in the Cloud
 - Cloud-based Electronic and Physical Monitoring Cyber Assets
 - Cloud-based BES Operations
- Existing NERC support
 - BCSI Practice Guide
 - Supply Chain Study
 - Standards Development Support (Projects 2016-02 and 2019-02)
- Other Considerations and Looking Forward

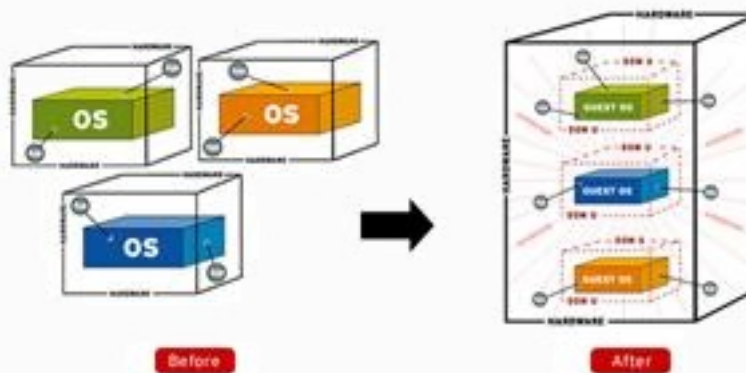
Use Case 1 - Cloud or Virtualization



Cloud Computing

Vs

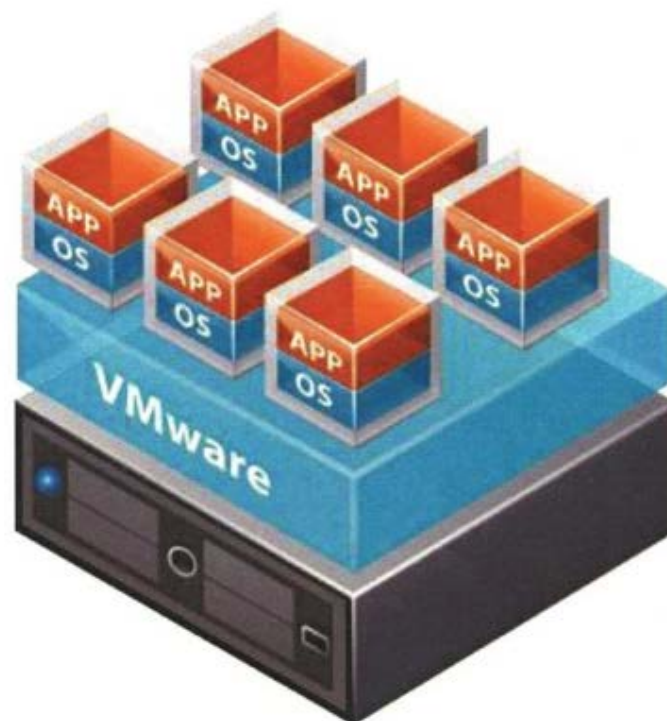
Virtualization



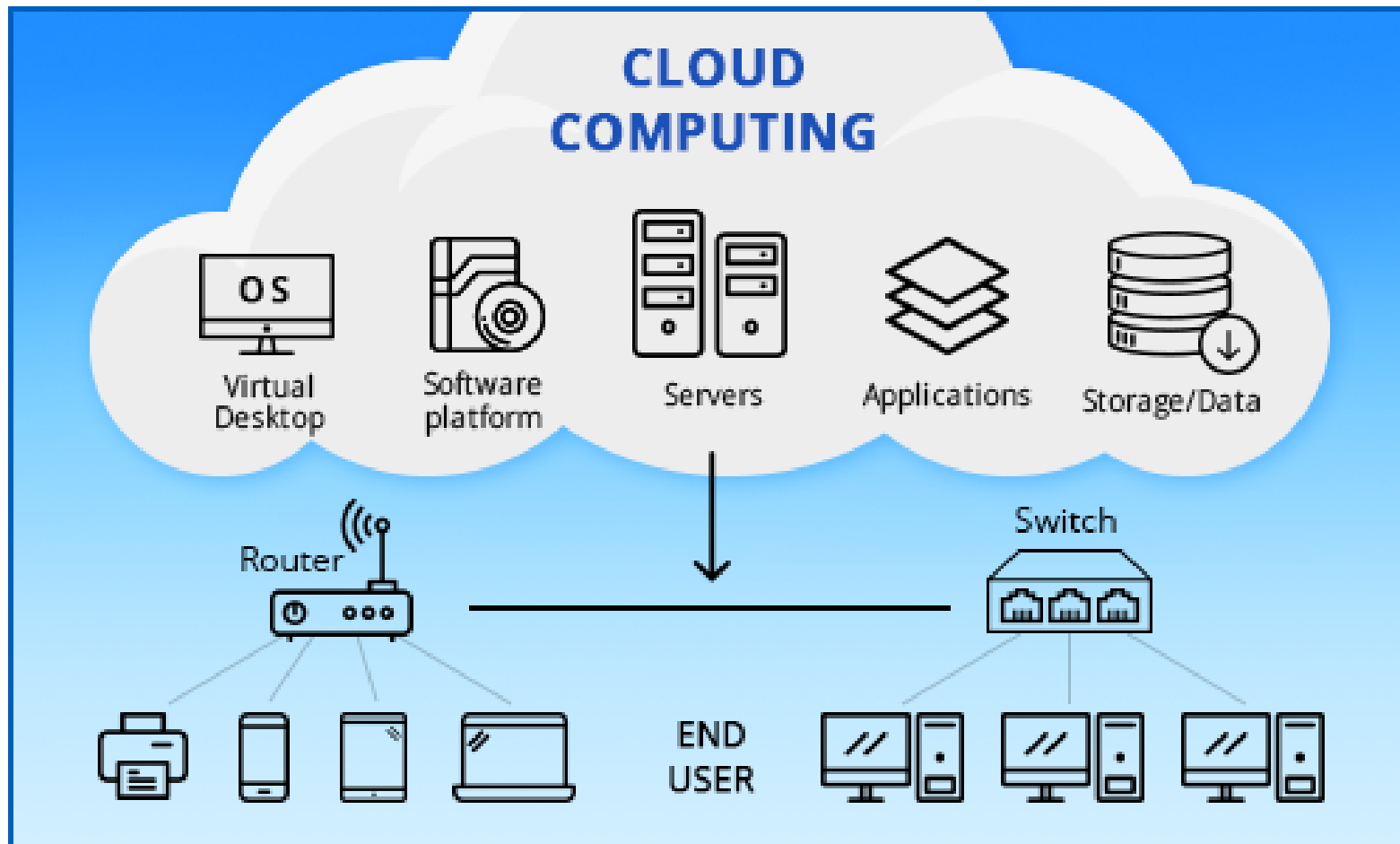
Reference: www.lettoknow.com



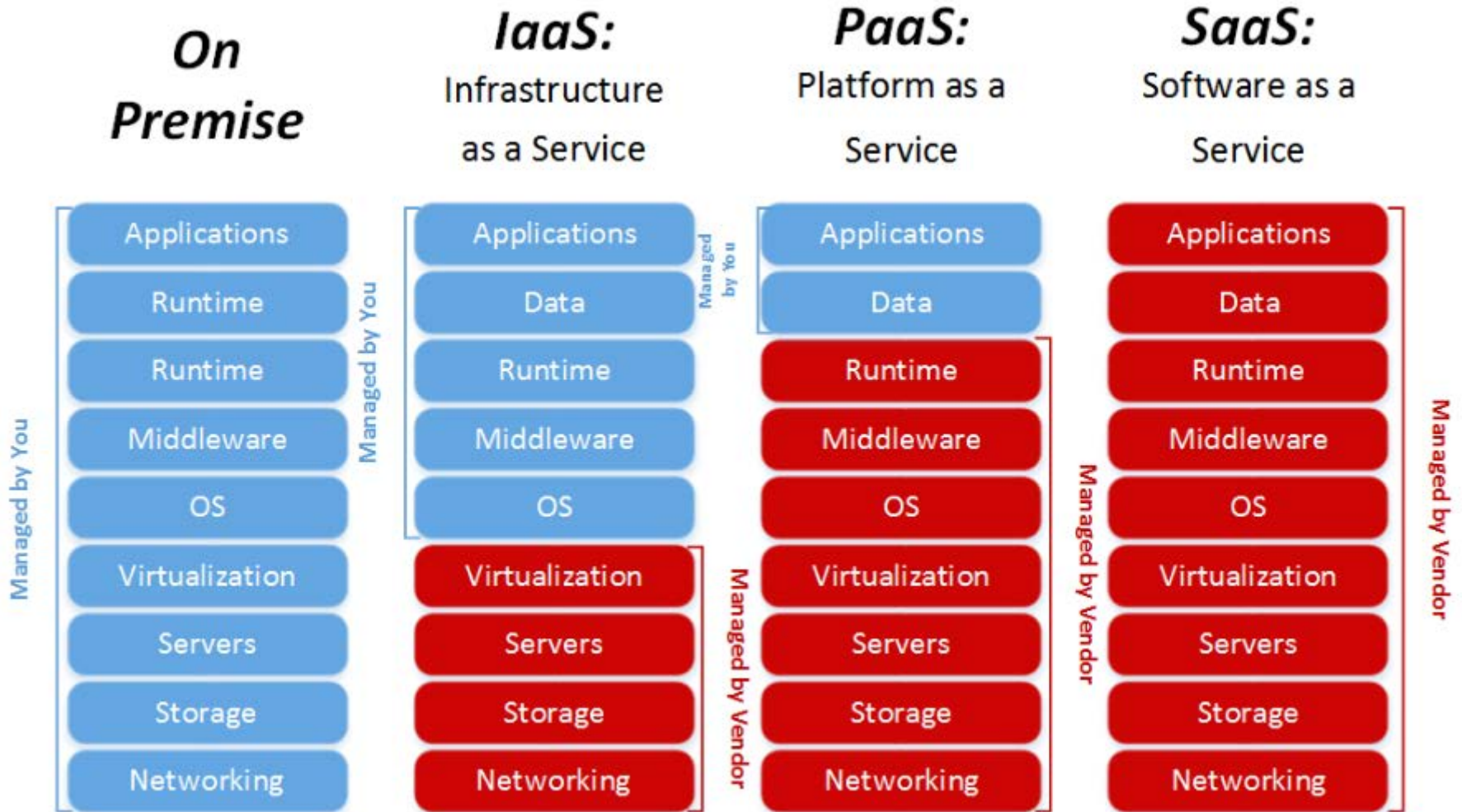
Traditional Architecture



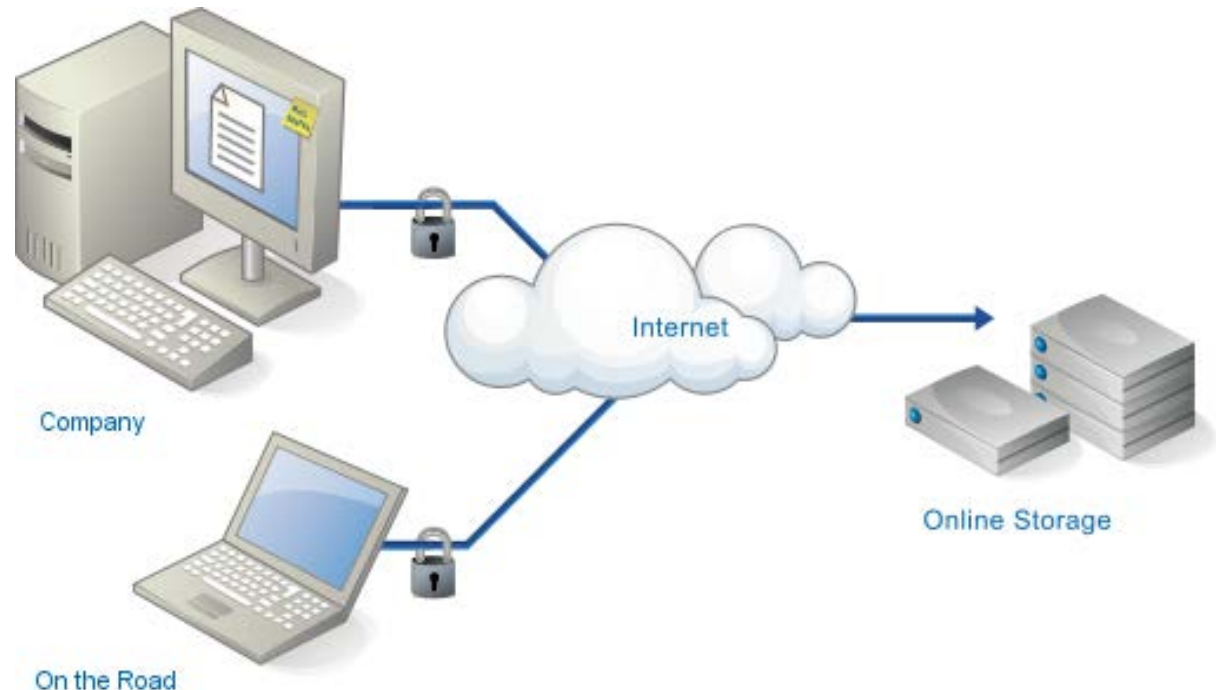
Virtual Architecture



"Cloud" is a Spectrum not "Either/Or"



- ERO Support
 - Ability to use now
 - ERO Enterprise Practice Guide
 - Focus on data and ability *“to obtain and use”*
- Moving Forward
 - SDT Project 2019-02



- Use Case 3 – Electronic and Physical Monitoring
 - Devices that are logging access (provides history/forensics)
 - Reliability Standards
 - Cyber asset-centric approach
 - Access vs logging
 - Cloud logging and monitoring can provide enhanced detection awareness
 - Standards Development activity still shaping consensus

- Use Case 4 – BES Operations
 - Operations (Access control, SCADA systems, etc.)
 - Increased use of third-party providers (movement from on-premises devices to virtual cloud computing)
 - Heavy reliance on network communications
 - Possibility of enhanced resilience
- Reliability Standards
 - Existing device-centric framework well-suited for on-premises solutions
 - NERC supports objective-based framework to address transitioning paradigm

- Third-party certification
 - Controls testing and reporting
 - Contrast with specific NERC Reliability Standards requirements
- Support industry to enable new paradigms in Reliability Standards



Questions and Answers