



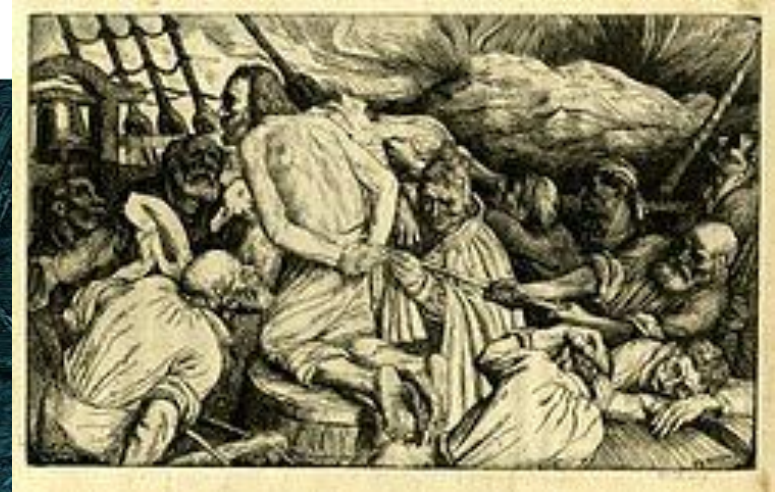
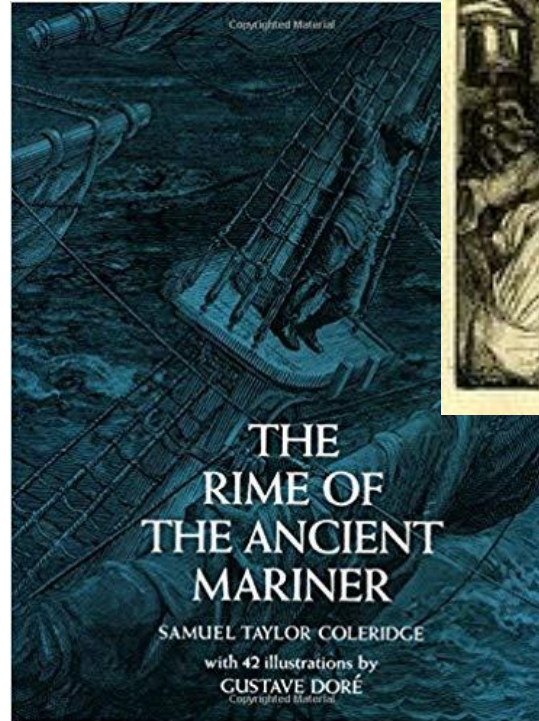
Security in Corporate Networks

FedCASIC 2019

Eugene M. Farrelly

Literature Lesson

- Modern IT
 - Data, data,
everywhere!



*Water, water, every where,
And all the boards did shrink;
Water, water, every where,
Nor any drop to drink.*

delivering the promise of science
for global good



RTI International is an independent, nonprofit research institute dedicated to improving the human condition.



What We Do

Practice Areas

Multidisciplinary expertise and research insights our clients need to inform policy, practice, and programs

Health

Education and workforce development

International development

Energy research

Environmental sciences

Social and justice policy

Food security and agriculture

Innovation ecosystems

Services and Capabilities

Rigorous methods, innovative technology R&D, and science-based solutions our clients can trust

Surveys and data collection

Statistics and data science

Evaluation, assessment, and analysis

Program design and implementation

Research technologies

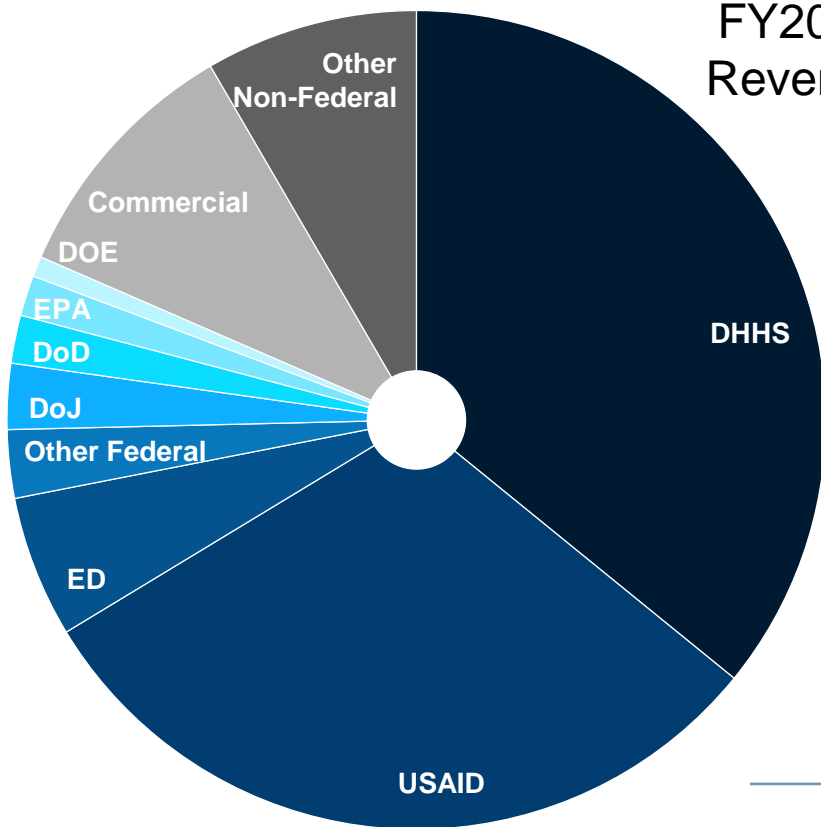
Drug discovery and development

Analytical laboratory science

Engineering and technology R&D

RTI at a Glance

FY2018 Revenue



3,830

Projects

(fiscal year 2018)



1,226

Clients

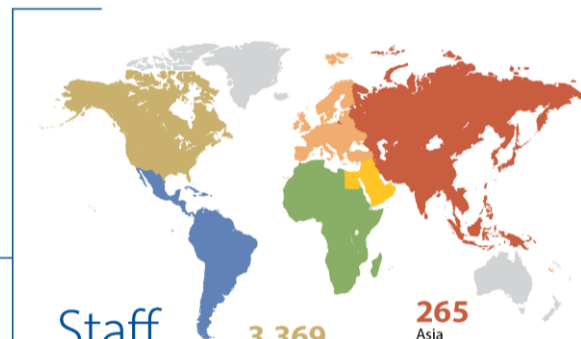
(fiscal year 2018)



4,941

Worldwide

Staff Members



90

Languages



250

Degree Fields



94

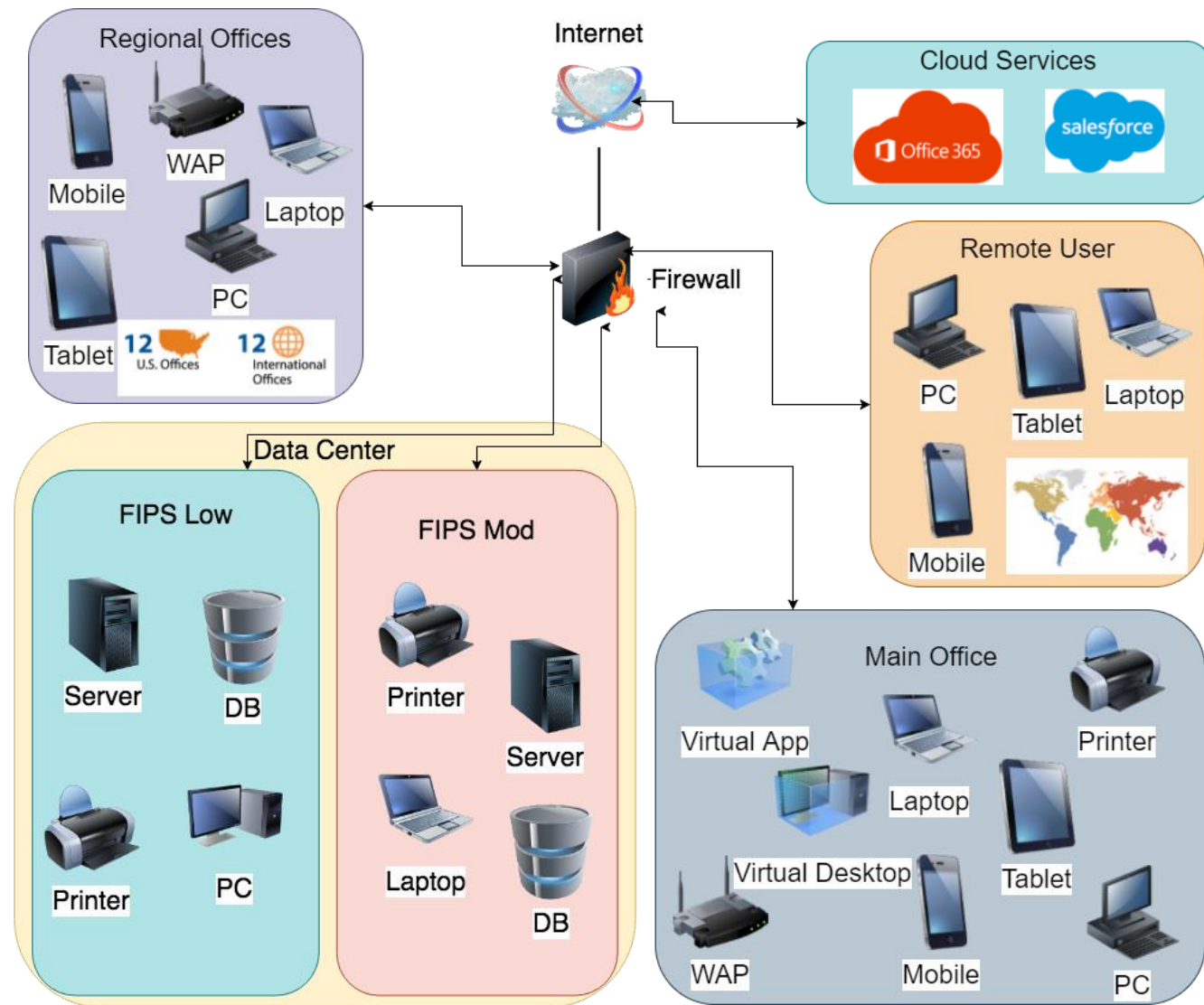
Nationalities



- Diverse data sources
- And a lot of data
 - 21TB associated with 1 project alone (CMS)

Network Topology & Challenge

- Data collection systems per SSPs
- Challenge
 - Evolving work force
 - Desks
 - Collaboration space
 - Travel (hotel, conf, etc.)
 - Mobile Device Proliferation
 - Tablets
 - Phones
 - Chromebooks
- Risks
 - Lost/stolen devices
 - Malware
 - Data loss



Solutions

- Network Access Control (NAC)
 - Wired
 - Wireless
- Remote Access Solutions
 - Mobile Device Management
 - Virtualization
 - Containerization
- Data Controls
 - Data Loss Prevention
 - Data Exfiltration Controls

- **Who is allowed on the network**
- **How they are allowed to access the network**
- **What are they allowed to do on it**

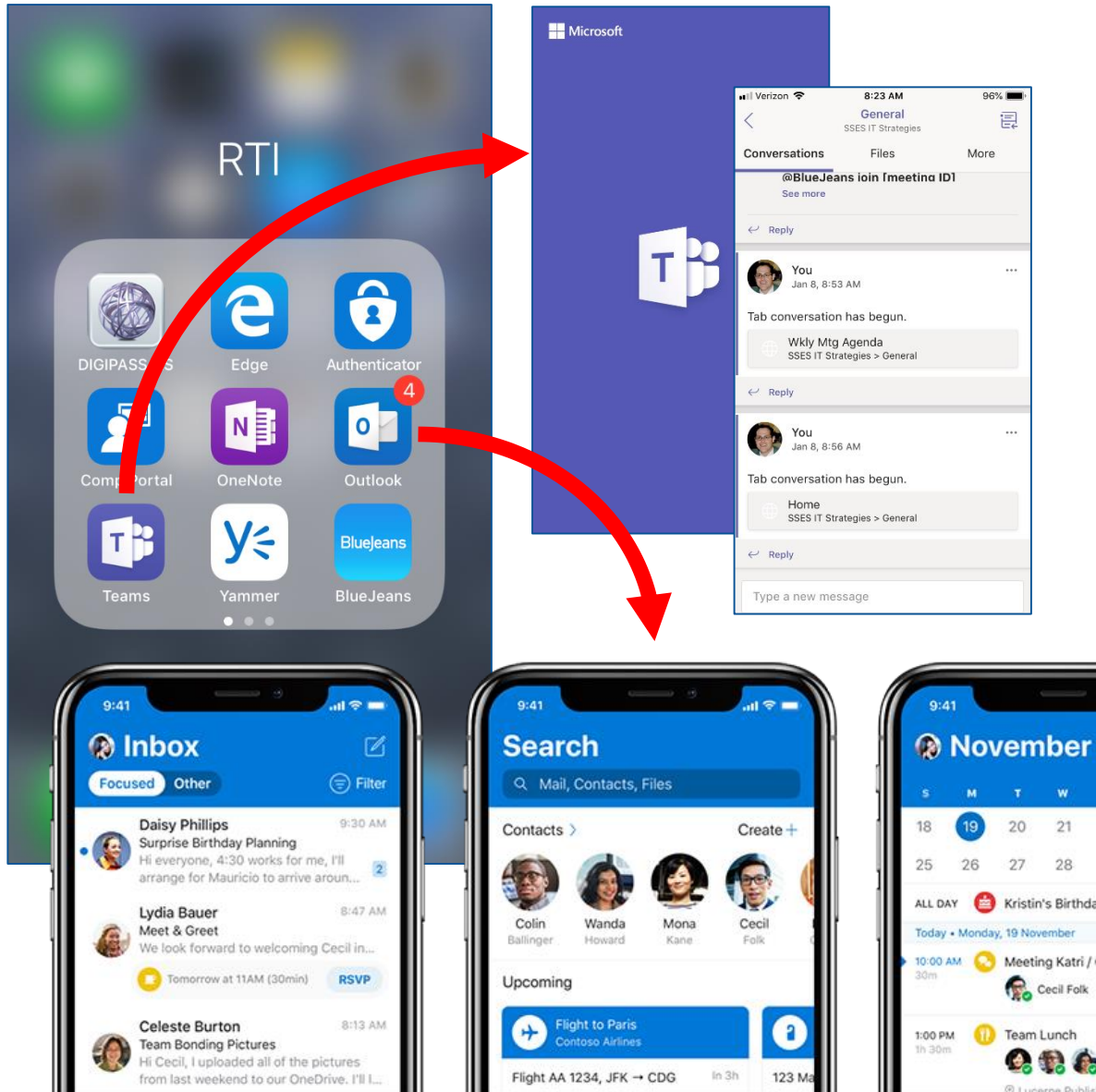


Network Access Control (NAC)



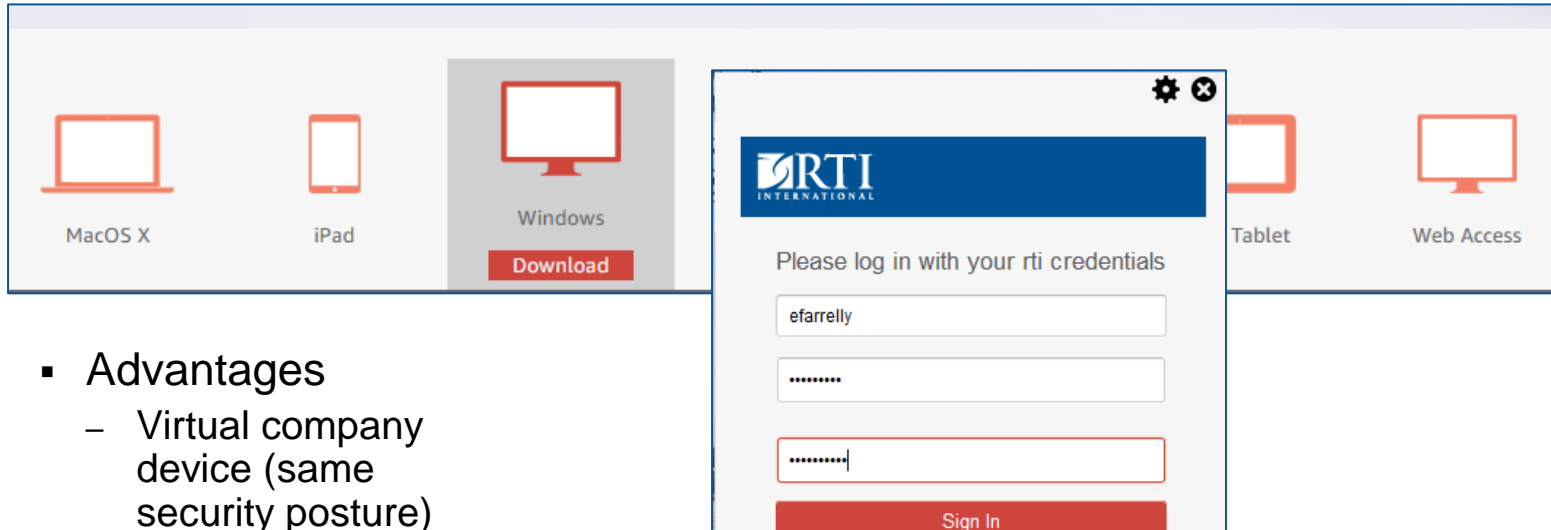
- Wired
 - Company Owned Devices with Security Posture
- Wireless
 - Corporate Network
 - Company Owned Devices with Security Posture
 - Guest Network
 - Person Devices
 - Visitor Devices
 - Research Network
 - R&D equipment
- End User Impact
 - Not much
 - Security Posture maintained by IT
 - Certificates, credentials, patching, antivirus

Remote Access - Mobile

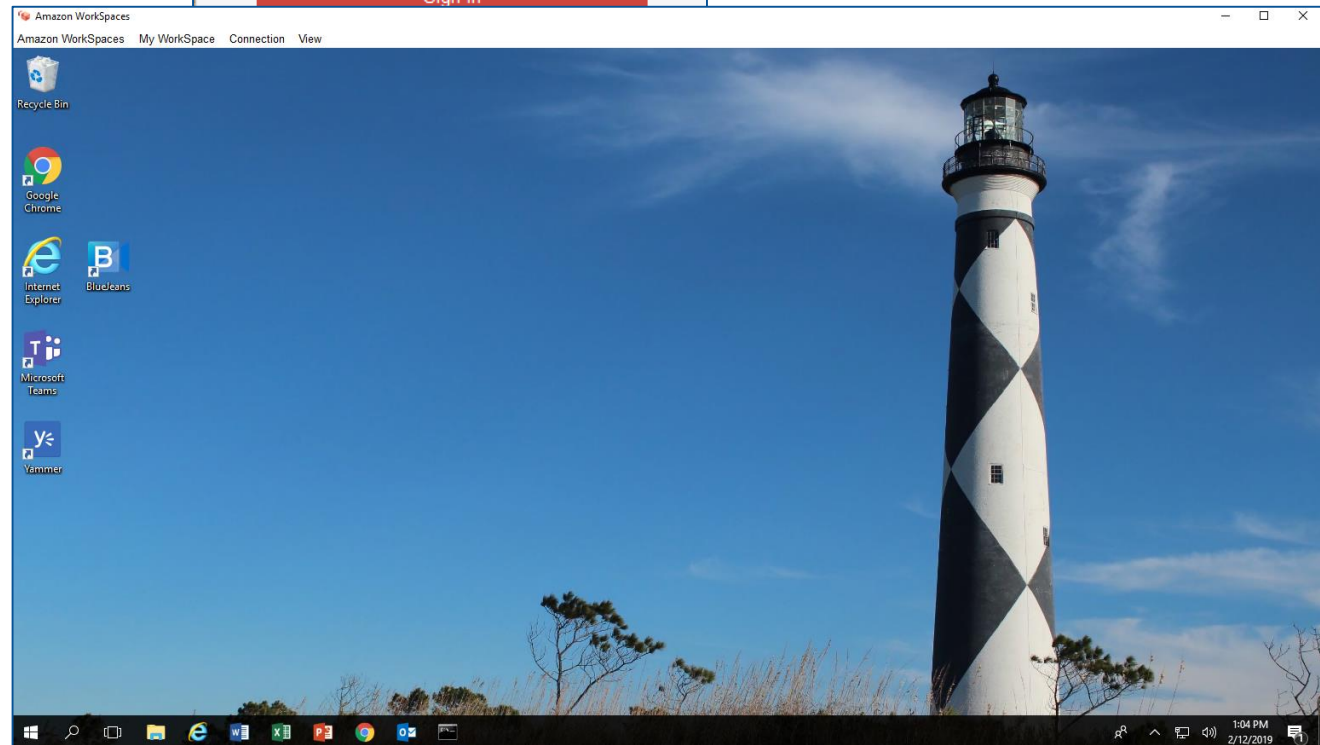


- Enterprise Mobility Management
 - Device, app, content, information
- Implementation
 - Managed applications
 - Data Loss Prevention
 - Copy/Paste
 - Local Storage
 - Erase Capability
- End User Impact
 - Download apps from app store
 - Authenticate against our backbone

Remote Access – Virtual Desktops



- Advantages
 - Virtual company device (same security posture)
 - Runs on various personal devices
 - Easy to spin up
 - Retained session across devices
 - No access if hardware stolen
- End User Impact
 - Download appropriate client
 - Use company's 2FA authentication



Remote Access - Containerization



RTI Authorized use only!
Webportal.rti.org

RTI Username
Token Passcode
RTI Password

RTI's information technology use of these systems to er



RTI Authorized use only! Webportal Test Site,
Inactivity time: 2 hours - Max time: 12 hours (Coll

Web Bookmarks

- Time Collection**
*Pulse Secure not required.
- Webmail (OWA)**
*Requires Pulse Secure to be connected.
- RTIUX**
*Requires Pulse Secure to be connected.
- Amazon Workspaces**
*Paid service requiring an account.

Client Application Sessions

Pulse Secure

Terminal Sessions

Remote Desktop Session to Hostna

You don't have any terminal sessions.

- Establish portals for accessing company resources
 - Data collection applications
 - Email
 - Time keeping
 - Training courses
 - Virtual desktop environments
 - RDP to desktops
- End User Impact
 - Browser based
 - Company 2FA

What's Next?



- Done? Never!
- Additional security
 - Administrative access on endpoints
 - Cloud tools
- New paradigms
 - Data devaluation
 - Make data valuable only at the point of use
 - Effective implementation of existing tools
 - True Education

Summary

- Remember the Mariner....don't be careless
 - *Pass, like night, from land to land;
with strange power of speech;
That moment that his face I see,
the man that must hear me:
To him my tale I teach.*
- Embrace the challenge of data protection
- Find ways to support modern workflows without compromising security

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