

Welcome to the 1st

Women Business Leaders

Technology Knowledge Exchange Networking

September 26, 2018

Sponsored by:





Agenda

- Registration & Welcome 3:00 pm
- ITS Introduction 3:15
- AT&T 5G and IoT 3:20
- Datto Cyber Security 3:35
- ITS Summary 3:50
- Networking 3:55 to 5:00 pm

5G Network Evolution and The Internet of Things

Steve Britt
Mobile Solutions Consultant

AT&T Partner Exchange®



AGENDA

AT&T Partner Exchange®

AT&T 5G Network Evolution

Internet of Things (IoT)



What is the AT&T Partner Exchange?



AT&T Cellular Network Evolution



5G Network Transformation



Internet of Things Revolution



WHAT IS THE AT&T PARTNER EXCHANGE?

AT&T Partner Exchange®

AT&T Partner Exchange



AT&T's Premier Resale Channel



Fastest Growing Sales Channel



Resale of both Wireline and Mobility



600+ Partners in the U.S.



More focused Support for Customers



ITS is one of a few Platinum Partners!



5G NETWORK EVOLUTION

THE ROAD TO 5G



1980'S



1990'S



2000'S



2007

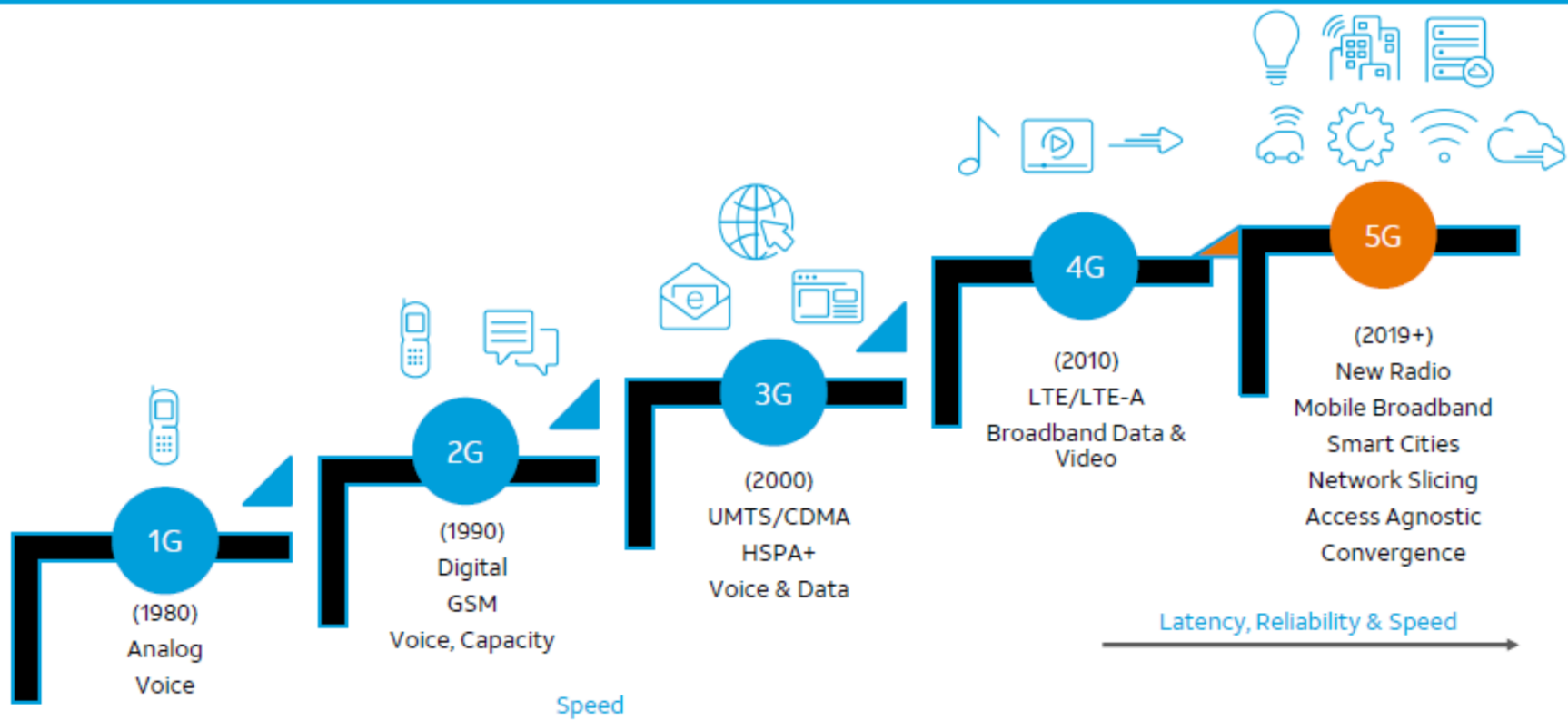


**GROWTH IN DATA TRAFFIC ON AT&T MOBILE NETWORK SINCE
2007?**

250,000%



Ramping up to 5G



AT&T NETWORK EVOLUTION

1990's- GSM Network : 128kbs

Voice Only Network

2000-2005- EDGE Network: 500kbs

MP 3 Song is 3.5MB

2006- 3G Network: 1MBs

30 minute TV Show is 500MB

2009: 4G Network: 3-4MBs

30 minute TV Show is 500MB

2010: LTE Network: 10-20+ MBs

30 minute TV Show is 500MB

2019+: 5G Network: 1GBs

Netflix Movie is 3GB

1GB is 1K MB is 1K kb is 1K sets of (8) 1's and 0's

MP 3 Download in 5s-10s

30 Minute TV Show download in 10 min

30 Minute TV Show download in 2-3 min


30 Minute TV Show download in 30s

MP3 Songs in milliseconds

30 Min Show in 0.5s

Netflix HD Movie in 3s





AT&T IoT overview

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IOT

What is IoT?

IoT is the Internet of Things...Internet connected devices sharing information with each other.

Example of IoT Solutions?

Ring Doorbells, Wi-Fi Thermostats, Connected Cars, Irrigation Controllers, Smart Appliances, Smart Cities, HealthCare Monitoring, Soda Machines, Digital Signage/Menu Boards, Manufacturing, Wearables, Smart Watches, Asset Tracking...almost an endless list.

Expected Growth in IoT Devices by 2025?

AT&T anticipates 20 Billion devices by 2025!



AT&T IoT momentum

Connected Device Stats as of Q1 2018



2M

Connected asset
management devices*



2.9M

Connected
fleet vehicles*



19.5M

Connected cars in
the U.S. and abroad*



41M+

Total connected
devices*

*as of Q118



Value Across All Industries

Business vertical strategy



Finance

- Equipment Monitoring
- WAN Back-up



Public Sector

- Smart Cities Portfolio
- FirstNet



Healthcare

- Medical Wearables
- Assisted Living
- Clinical Remote Monitoring



Retail

- Digital Signage
- Point of Sale
- Vending



Manufacturing

- Logistics
- In-Building Solutions



Transportation

- OEM Telematics
- Aftermarket



Home & Consumer

- Wearables
- Security

Fleet

Asset Tracking



SUMMARY

“5G wireless technology will change the world as we now know it. It will deliver faster communications, unlimited interoperability, and transform everything from commerce, entertainment, family life, travel, health care and more. It promises smart devices, smart cities, and even smarter businesses. While 4G ushered in the app economy, 5G promises the Internet of Everything, Everywhere for Everyone.”

Adonis Hoffmann-FCC Chief of Staff







Cyber Security

Jeff Luxenberger

Manager, IT & Sales Engineering

datto

What

is

RansomWare?



Why is Ransomware a Problem?



- Ransomware is extortion
- The government has no way to stop it
- Paying the ransom doesn't guarantee you will get your data back or you won't be attacked again
- Payments are virtually untraceable via bitcoin.
- For businesses it causes down time and lost credibility with customers



LA Valley College paid \$28K cyber-ransom to hackers

Monday, January 09, 2017

Los Angeles Valley College paid a cyber-ransom in order to get back online after the school's computer network came under attack, officials confirmed.

Paid \$28,000 to get their data back

Hospital pays bitcoin ransom for hijacked patient records



Hollywood Presbyterian Hospital
Lost all access to patient records.



California Senate Website Hit with Ransomware

'All of our shared drive files have been encrypted with software typically used in ransomware attacks,' said spokesman Andrew LaMar.

A day after the state Senate approved legislation outlawing ransomware, the bill author's website was hit.



► Five Maine Police and Sheriff Departments
Hit With Ransomware 2:24

Maine Police Departments
lost 8 years of evidence!

Ransomware attack hit San Francisco train system

Elizabeth Weise, USA TODAY Published 12:42 p.m. ET Nov. 28, 2016 | Updated 11:29 a.m. ET Nov



The San Francisco Municipal Transportation Agency has contained a cyber attack that disrupted its ticketing systems over the Thanksgiving weekend. USA TODAY

Riders rode for FREE on one of the
biggest shopping days of the season

Ok but why would they attack my business?



58% of malware attack victims are categorized as small businesses.

Verizon

In 2017, cyber attacks cost small and medium-sized businesses an average of \$2,235,000.

Poneman

Only 29 percent of small businesses had experience with ransomware, making these businesses more likely to be unprepared for the threat.

A quarter of business executives would be willing to pay between \$20,000 and \$50,000 to regain access to encrypted data.

IBM

What we know today.



75% of organizations infected with ransomware were running up-to-date endpoint protection.

The average cost of downtime per ransomware attack to Business was \$133,000 in 2017.

Sophos

Ransomware attacks fell nearly 30% over the past 12 months. While attacks have decreased, sophistication of attacks has increased substantially.

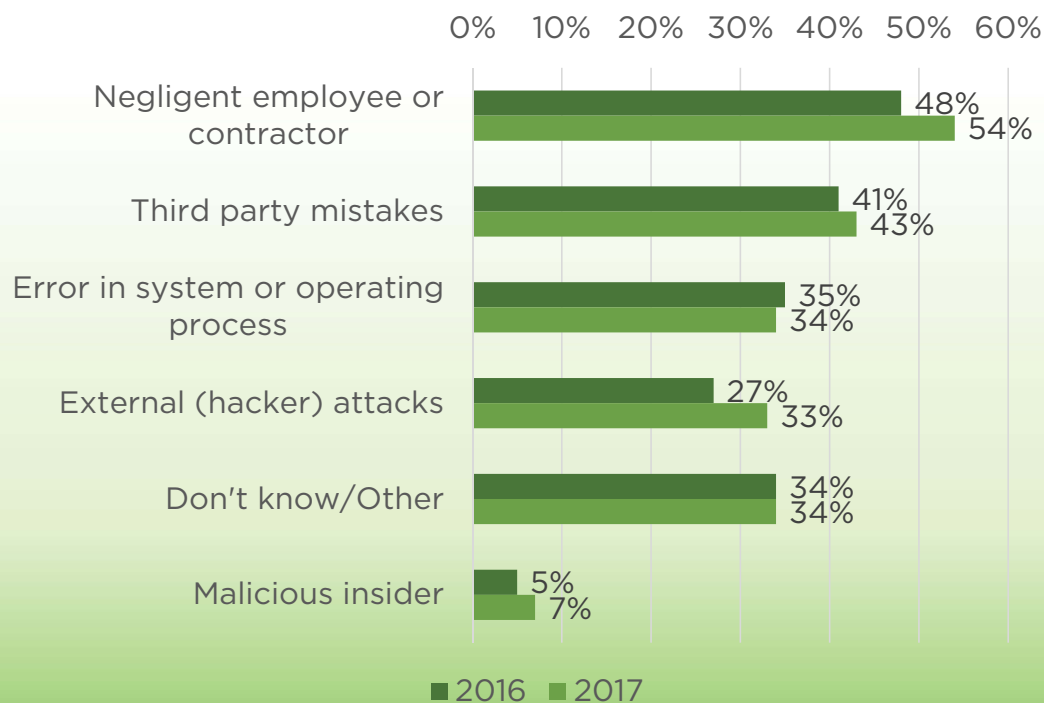
Mobile Ransomware attacks were 13x Higher YoY.

Kaspersky



How does it happen?

Root Cause - Attacks on Small-Medium Business



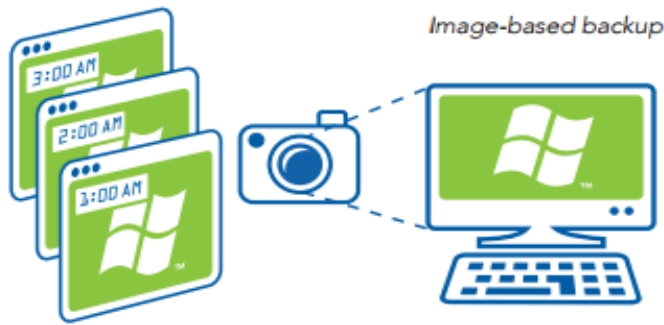
- The #1 Leading Cause of downtime is HUMAN ERROR
- Email is the typical vehicle
- Email link or attachment contains code
- Sometimes it's weeks before it is detected
- Code proliferates the network

How do I prevent it?



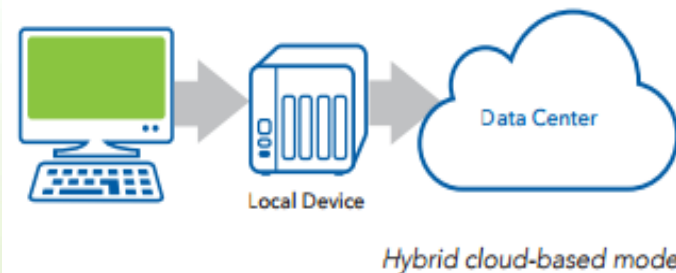
- There is NO way to 100% prevent attack – Your Best Defense is Offense
- Educate your staff
- Keep your equipment/software current – install patches
- Secure files and all devices accessing network
- Protect your data with a Total Data Protection Solution

Total Data Protection from **datto**

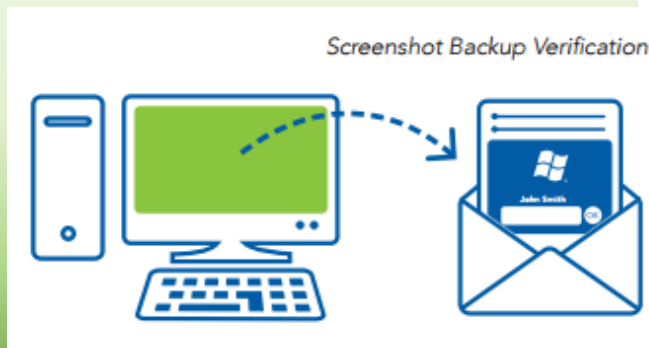


- Image-based backup - entire systems are backed up and stored as a VMDK (Virtual Machine Disk), there is no missing that one critical file, and the image can then be virtualized in seconds

Datto is different than your traditional back-up solution



- Instant off-site virtualization can take place in a secure hybrid cloud-based model



- Screenshot Back-up Verification ensuring the backup was successful

Summary



- Ransomware infects PCs, networks and locks up the data
- No way to prevent
- SMBs are extremely vulnerable and exposed
- Education and Awareness is Key
- Datto provides the protection needed
- Three essentials to ensure data protection are:
 - Image-Based Backup
 - Hybrid Cloud-Based Model
 - Testing and Proof of Backup

Thank You

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