Tips, Tools, Techniques for Remote Workers

Mark Kosters

Chief Technology Officer,
American Registry for Internet Numbers

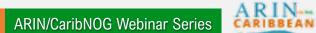APRIL 17, 2020

ARIN IN THE CARIBBEAN

Carib NOG
Caribbean Network Operators Group

WEBINAR SERIES

Organisation of Eastern Caribbean States

Caribbean Telecommunications Union

lacnic

Internet Society

ICANN

PCH
Packet Clearing House

ARIN Before Covid-19

"Our ARIN Engineering Team had an Important Advantage"

Requirements to work remotely
- *for those who travel and work remotely*
- *for times of adverse weather*
- *Existing work from home policy*

Tools for all to work remotely
- *All tools work over IP - including helpdesk and call center*
- *Internal tools available over the VPN*
- *Require Two-factor (2FA) authentication to VPN*

Remote admin of laptops
- *Able to remotely diagnose issues*
- *Remotely add/remote software packages*

Ticketing system
- *Allows users to submit trouble tickets for issues*

Lots of practice
- *Large snowstorms kept the office closed for days*
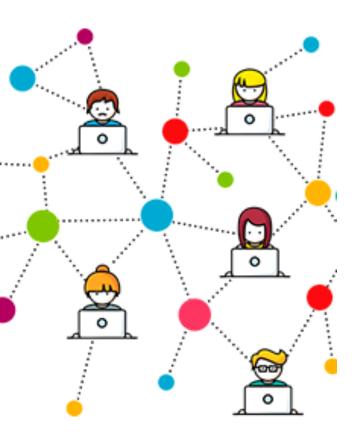- *Culture of working from home*

ARIN — CARIBBEAN   CaribNOG

Experience Helped … A Lot!

Lots of practice over the years

Large snowstorms kept the office closed for days

Working from home

All employees now have company-issued laptops

We knew our weaknesses based on experience

VPN did not work well while running with high-bandwidth applications like Zoom & YouTube

Was running older hardware that handled a good number working remotely

Management developed a multi-phase approach

Discrete events gave us some time

Allowed the IT staff to have time to build out new VPN servers to handle the entire office.

Planned a work from home day for staff – practiced remote meetings from within our office

Rolled out a segmented VPN service to route only traffic destined to the office through the VPN

ARIN—CARIBBEAN

Caribn☼G

What's In The ARIN Toolkit

COMMUNICATION

- *Email, Slack, texts, Zoom for larger meetings, Slack video conferencing and Google Hangouts for smaller informal chats*
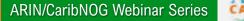
VPN with 2FA AUTHENTICATION

- *OpenVPN and duo; Viscosity for Macs and Windows*

REMOTE ADMINISTRATION

- *Jamf for Macs; Manage Engine for Windows*

OTHER TOOLS

- *VOIP via Asterix PBX*
- *Atlassian tools for overall builds, etc.*
- *Local git repositories for all developers*

Tips, Tools, Techniques for Remote Workers

Mark Kosters

Chief Technology Officer,
American Registry for Internet Numbers

APRIL 17, 2020