

Leveraging IT technology for safe distributed workforce

Eric Fan, CEO of UDomain



Agenda

- What is distributed workforce?
- How to work safely in distributed workforce?
- Customer Case Studies
 - Suspending classes without suspending learning (停課不停學)
 - CEO email
 - Online meeting and seminars
 - Online shopping demand
 - Remote Office
- Best Practice for Safe Distributed Workforce



What is distributed workforce?

A distributed workforce is a workforce that reaches beyond the restrictions of a traditional office environment. By installing key **technologies**, distributed companies enable employees **located anywhere** to access all of **the company's resources and software** such as applications, data and e-mail without working within the confines of a physical company-operated facility.



Who led the digital transformation of your company?

A) CEO

B) CTO

C) COVID-19

How to work safely in distributed workforce?



Case 1 - 停課不停學

Background:

During the class suspension period, students moved their learning model to online (watching ETV, Zoom)

無法同步開課 網上學習困難 過半跨境學童受訪者憂引發不公平學習

2020-02-19

來源：香港商報網

【香港商報訊】記者王曉蕾報道：新型冠狀病毒疫情嚴重，香港接連實施停課、局部封關及14天強制檢疫等措施，令跨境學童家庭憂慮如香港復課而關口未能開通及14天強制檢疫令未解除，將無法與居港學童同步開課，引發連串問題。



AiTLE x UDomain 網上研討會 跨境學習無疆界 停課不停學

日期：4月15日（星期三）

時間：10:30am-12:00pm

內容：

- 面對網站突增流量，教城迅速應變的策略
- 如何解決跨境學習
- 跨境平台及安全視像直播
- 疫情下要注意的網絡陷阱



Case 1 - 停課不停學 (Con'd)

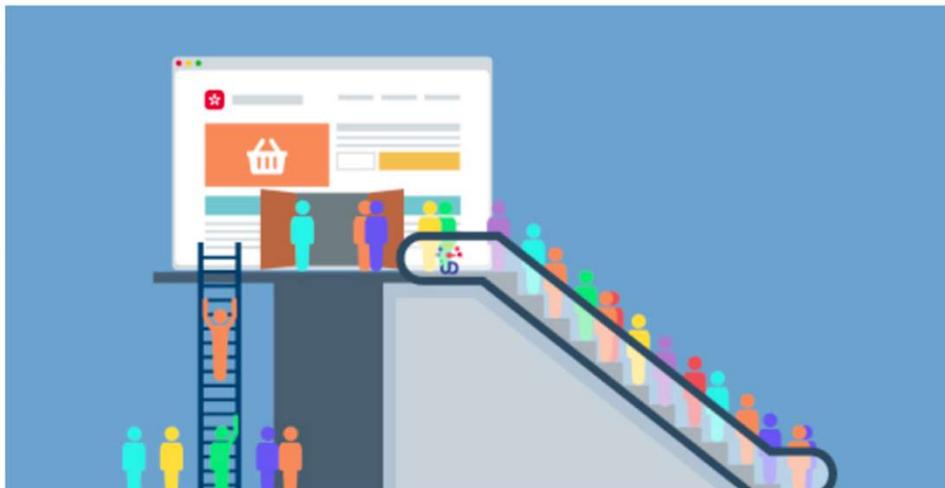
How about the 30,000 cross-boundary students 跨境學童??



Case 1 - 停課不停學 (Con'd)

- Security solution in placed
 - Using CDN Network to maintain their availability
 - Encrypted traffic

共享CDN- 免費為香港網站加速



共享CDN 免費為香港網站加速

共享資源系列

The illustration shows a website icon on a raised platform. A person is climbing a ladder to reach the website, while a long line of people is using an escalator to reach the platform. This visualizes the concept of a CDN network providing multiple paths for users to access a website, ensuring availability and speed.



Case 2 – CEO Email

Background:

- One of the general staff in a listed company receive 'CEO Email' while work from home
- Through this phishing email, hacker injected ransomware to their network and several database server are encrypted by hacker's password



Case 2 – CEO Email (Con'd)

ProPrivacy | VirusTotal | WHOIS XML API

COVID-19 Malicious Domain Research Hub

Enter any URL related to the Coronavirus below and we will tell you if it has already been flagged as potentially harmful.

Enter URL here...

CHECK NOW

AN OPEN DATA PARTNERSHIP

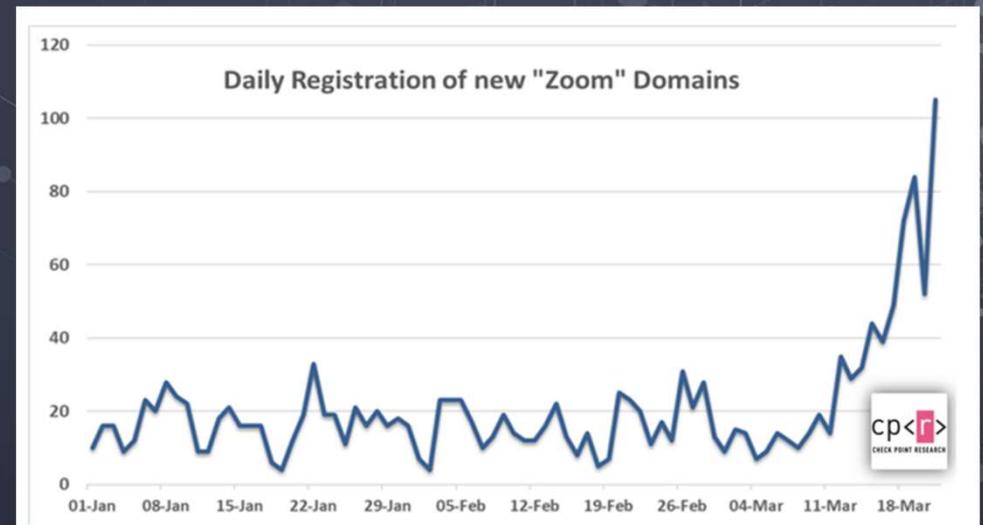


COVID-19 Malicious Domain Research Hub: Tracking malicious online activity related to the pandemic

99,448 POTENTIAL THREATS DETECTED

With over 350,000 domains analyzed and documented, the COVID-19 Malicious Domain Research Hub aims to become the single largest repository of open data related to malicious online activity.

<https://proprivacy.com/tools/scam-website-checker>



獨家 / 駭客趁疫而入 某銀行被騙走30萬美元

f 分享

LINE 分享

留言

列印

存新聞

2020-05-07 12:51 經濟日報 記者邱金蘭 / 台北報導

讚 571

分享



Case 2 – CEO Email (Con'd)

- Security solutions in placed:
 - Email Security Solution
 - Full network and server network scanning and patching
 - Backup and tape storage
 - By schedule (bi-weekly full backup, daily incremental backup)
 - 3-2-1 back up practice (Online, Offline, Off-site).
 - Security software and hardware to prevent future attack
 - Cisco OpenDNS
 - Regular penetration test
 - Phishing Email Test & Awareness Training for Employees



Case 3 – Online Meetings and Seminar

Background

Big4 company have to conduct seminars to 200+ partners while it is not allowed to meet face-to-face. Since the seminar content is confidential and it is important to verify attendee's attendance and identity.



Case 3 – Online Meetings and Seminar (Con'd)

Security solutions in placed:
- Security virtual meeting tools

The screenshot shows the 'Schedule an event' form in the 'DETAILS' tab. It includes fields for 'Room name' (Your Event Name), 'Room URL' (https://udomain.clickmeeting.com/ Event URL), 'Room type' (Permanent, Time scheduled, Automated, On-Demand), 'Date' (2020-05-08 10:45), 'Time zone' (Asia/Hong_Kong), and 'Access type' (Open to all, Password, Token, Paid). A PayPal integration section is visible at the bottom with an 'Authorize' button and a 'More info' link.

The screenshot shows the 'Schedule an event' form in the 'WAITING ROOM' tab. It features a 'Waiting room' section with a 'Customize content' button and a 'Restore to default' link. The main content area displays an event agenda with the following details:

- Event agenda**
- OBJECTIVE**
Where is the Parts and Accessories market at today and where does it need to go? Come find out what manufacturers, distributors, and retailers need to know to grow their business over the next 5 years.
- SCHEDULE**
 - 11:00 to 11:15: Consumer search – Joe Smith
 - 11:15 to 11:30: Delivery expectations – John Doe
 - 11:30 to 11:45: Buying trends – Sally Mill
 - 11:45 to 12:00: Data systems – Jane Green
 - 12:00 to 12:15: Inventory – Sam Jones
 - 12:15 to 12:30: Shipping – Joe Smith

A 'Fields' sidebar on the right contains 'Agenda', 'Presenter Info', 'Download', and 'Youtube' options.



Virtual Meeting Practical Guide and Tips



Host like a Pro

- Schedule a rehearsal especially there are multiple host
- Hardwire your internet connection
- Testing on internet connection, audio and video performance, mic and speaker
- Set proper expectations with your audience
 - Recording, time and interaction
- Stream your content to Facebook Live, YouTube or customer Live Stream Services



Advanced Options ^

- Enable Waiting Room
- Enable join before host
- Mute participants on entry
- Only authenticated users can join: Sign in to Zoom
- Automatically record meeting on the local computer

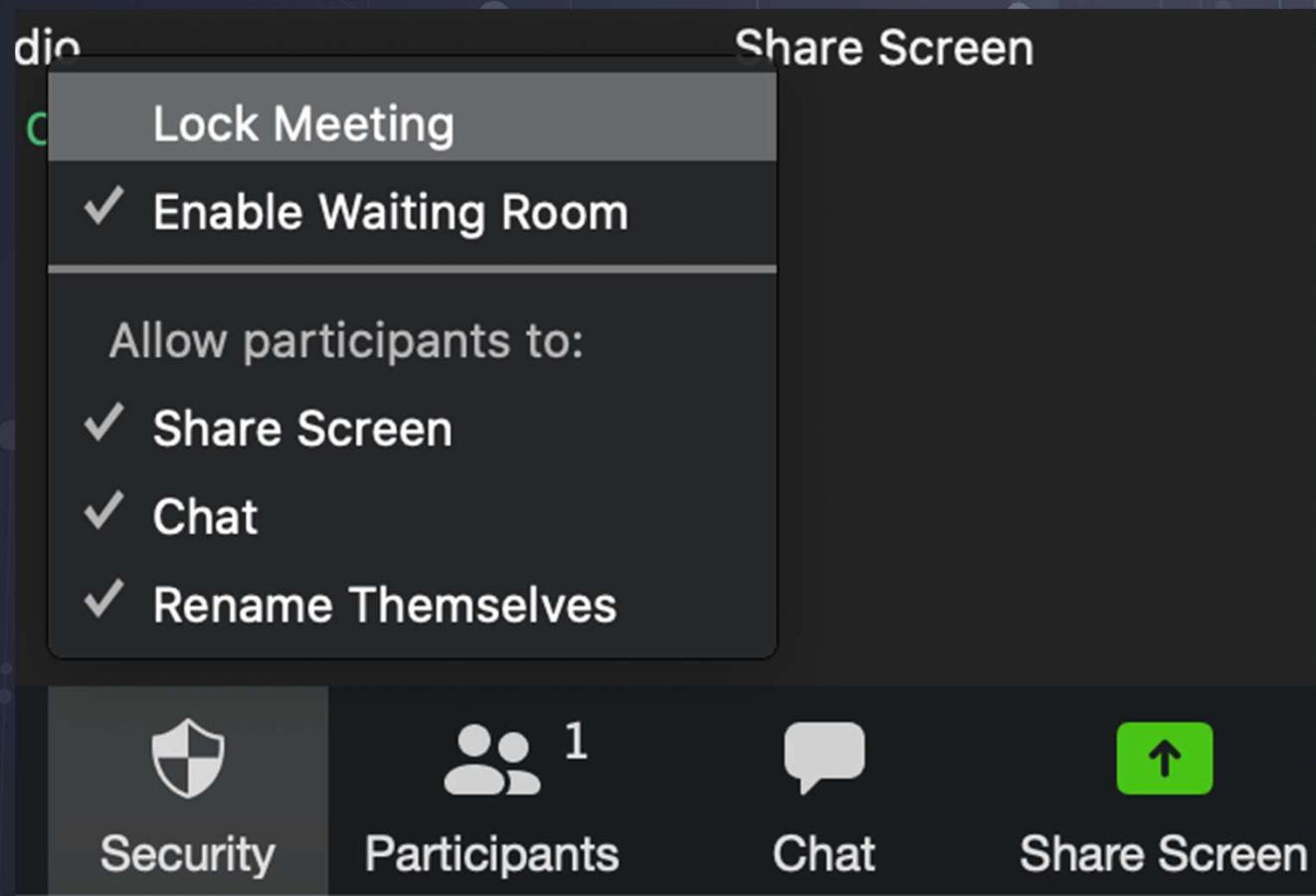
Alternative Hosts:

Example:john@company.com;peter@school.edu

1. Enable waiting room to screen every person before joining

2. Mute the participants on entry to avoid voice disturb (like home background noise, music from notebook etc)





1. Disallow participant to chat to avoid unnecessary message broadcast

2. Disallow participant to rename themselves to identify them by email



Advanced Sharing Options

How many participants can share at the same time?

- One participant can share at a time
- Multiple participants can share simultaneously (dual monitors recommended)

Who can share?

- Only Host
- All Participants

Who can start sharing when someone else is sharing?

- Only Host
- All Participants

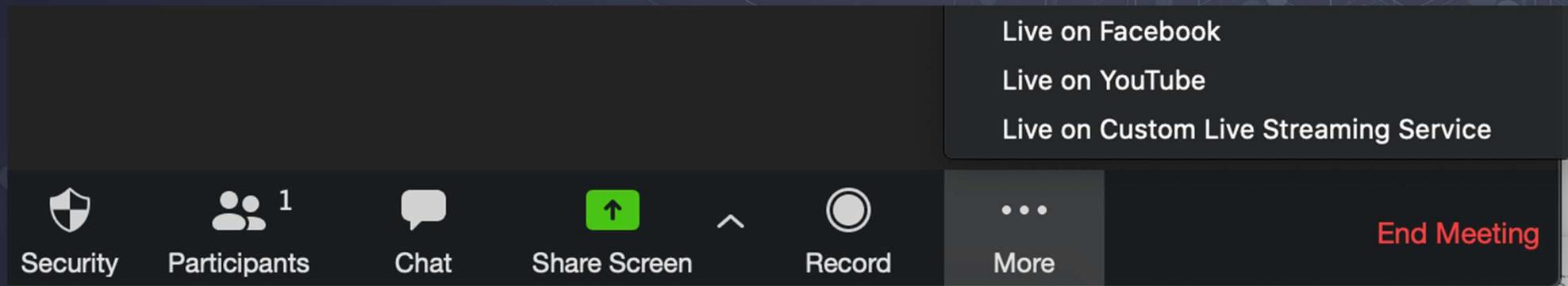
Advanced Sharing Options...

Security Participants 1 Chat Share Screen Record More

Control the host only to share the screen to avoid unpredicted message share in meeting



Using social media and live streaming service

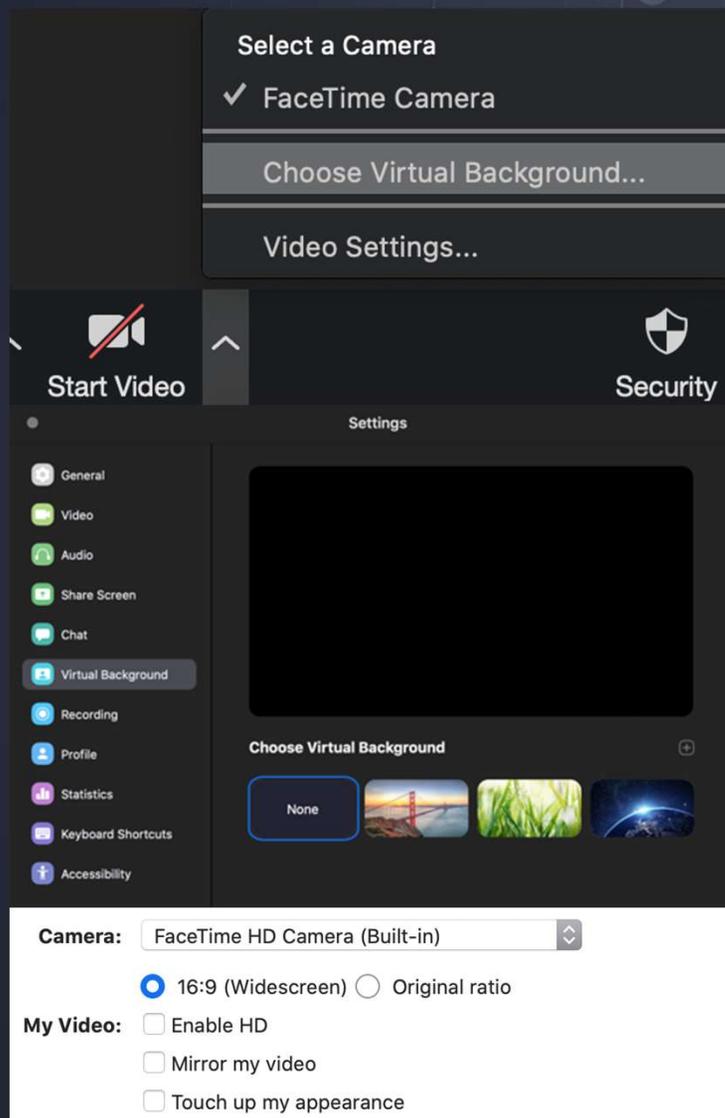


The image shows a Zoom meeting control bar with a 'More' menu open. The control bar includes icons for Security, Participants (1), Chat, Share Screen (highlighted in green), and Record. The 'More' menu is open, showing options for 'Live on Facebook', 'Live on YouTube', and 'Live on Custom Live Streaming Service'. An 'End Meeting' button is also visible on the right side of the control bar.

Live on Facebook
Live on YouTube
Live on Custom Live Streaming Service

Security Participants 1 Chat Share Screen Record More End Meeting



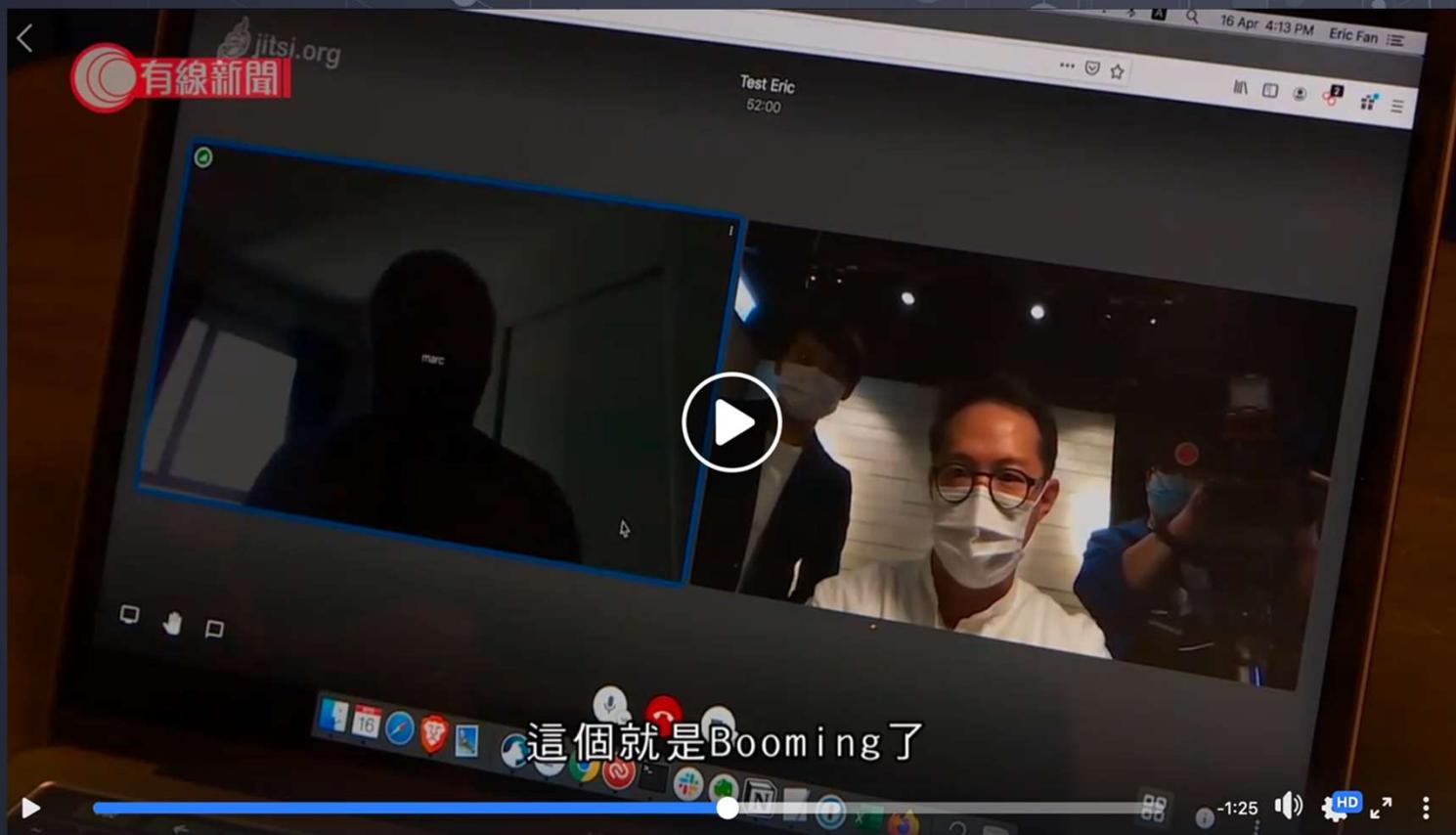


Protect your PRIVACY

Set up virtual background before meeting



Bombing: Jitsi Meet



	Webex	Microsoft Teams	Google Meet	Jitsi	BigBlueButton	Skype Meet Now	LINE	Zoom
版本	免費版	免費版	G Suite	免費版	免費版	免費版	免費版	免費版
人數	100/原50人	250人	250/原100人	75人	50人為佳	無限制	200人	100/原10人
時間	無/原40分鐘	無限制	無限制	無限制	無限制	無限制	無限制	40分鐘
發起者	需帳號	需帳號	需帳號	免帳號軟體	需帳號	免帳號軟體	需帳號軟體	需帳號軟體
加入者	免帳號軟體	免帳號軟體	免帳號軟體	免帳號軟體	免帳號軟體	免帳號軟體	需帳號軟體	免帳號、裝軟體
加入權限	密碼、主持人接受	網址直接加入	主持人接受	密碼	密碼、主持人接受	網址直接加入	先加入群組	密碼
固定視訊網址	有，也可彈性	無	無	無	有	有（相對不安全）	先加入群組	有，也可彈性
行事曆預約	外掛	付費版功能	Google日曆	外掛	外掛	無	無	外掛
主持人	主持、主講人	由發起者設定	發起者	任何人	發起者	發起者	無	可設定
控制大家焦點	主持人釘選	無	無	跟隨主持人	無	無	無	主持人
靜音他人	主持人	主持人	主持人	任何人	主持人	無	無	主持人
關掉他人視訊	主持人	無	無	無	主持人	無	無	主持人
踢出他人	主持人	主持人	主持人	任何人	主持人	無	無	主持人
共享畫面	一次一人	一次一人	一次一人	多人可同時共享 (看網路速度)	一次一人	一次一人	一次一人	一次一人

- <https://www.playpcesor.com/2020/04/webex-teams-meet-jitsi-8.html>



Virtual meeting tips

會員登入

爸媽

范健文 April 2, 2020

【范健文】在Zoom為子女開生日會遇不速之客？教你應對五式



【Zoom危機】專家教網絡會議6大tips 要避免經WhatsApp傳送會議連結

更新時間 (HKT): 2020.04.09 00:06



范健文 Eric
網絡安全專家
網頁寄存供應商UDomain CEO

例如「googleclassroom.hk」

▶ 1:35 4:53

Case 4 – Online Shopping Demand

Background

Online shopping and website demand had increased rapidly during COVID-19 and ‘Social Distancing Regulations’



Case 4 – Online Shopping Demand (Con'd)

- Secure solution in placed
 - Managed Secure Cloud Hosting
 - Queneing system and email broadcast
 - Penetration test and vulnerability scanning
 - Stress test



Case 5 – Remote Office

Background

- HKSME not ready for Work from Home? No secure solution, using Remote Desktop/Teamviewer?
- HKSME File Sharing between HK and China Office become headache
- Our client's employees were unable to go to office as usual for the disease outbreak, yet work-from-home was not feasible as all the files were stored in the company's server.



Case 5 – Remote Office (Con'd)

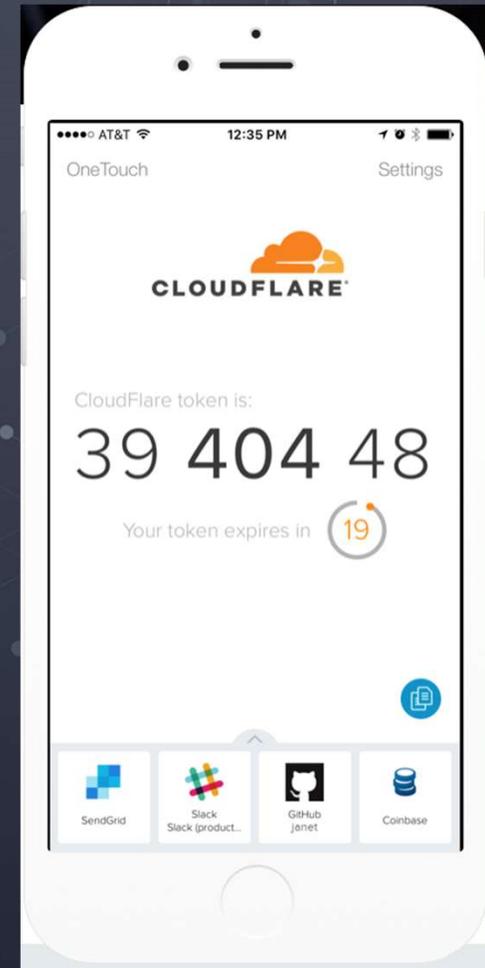
- Secure solutions in placed:
 - Upgrade and Set up VPN connection
 - set up 20 VPN accounts through the client's firewall remotely with 2 factors authentication
 - File, database and email servers were set up to enable employees accessing data and information in a secure environment.
 - Video Conference Training
 - Meeting client and its employees through video conference for a tutorial on the installation and use of VPN accounts

Above set up and training completed within one day without any physical interaction



Secure Authentication

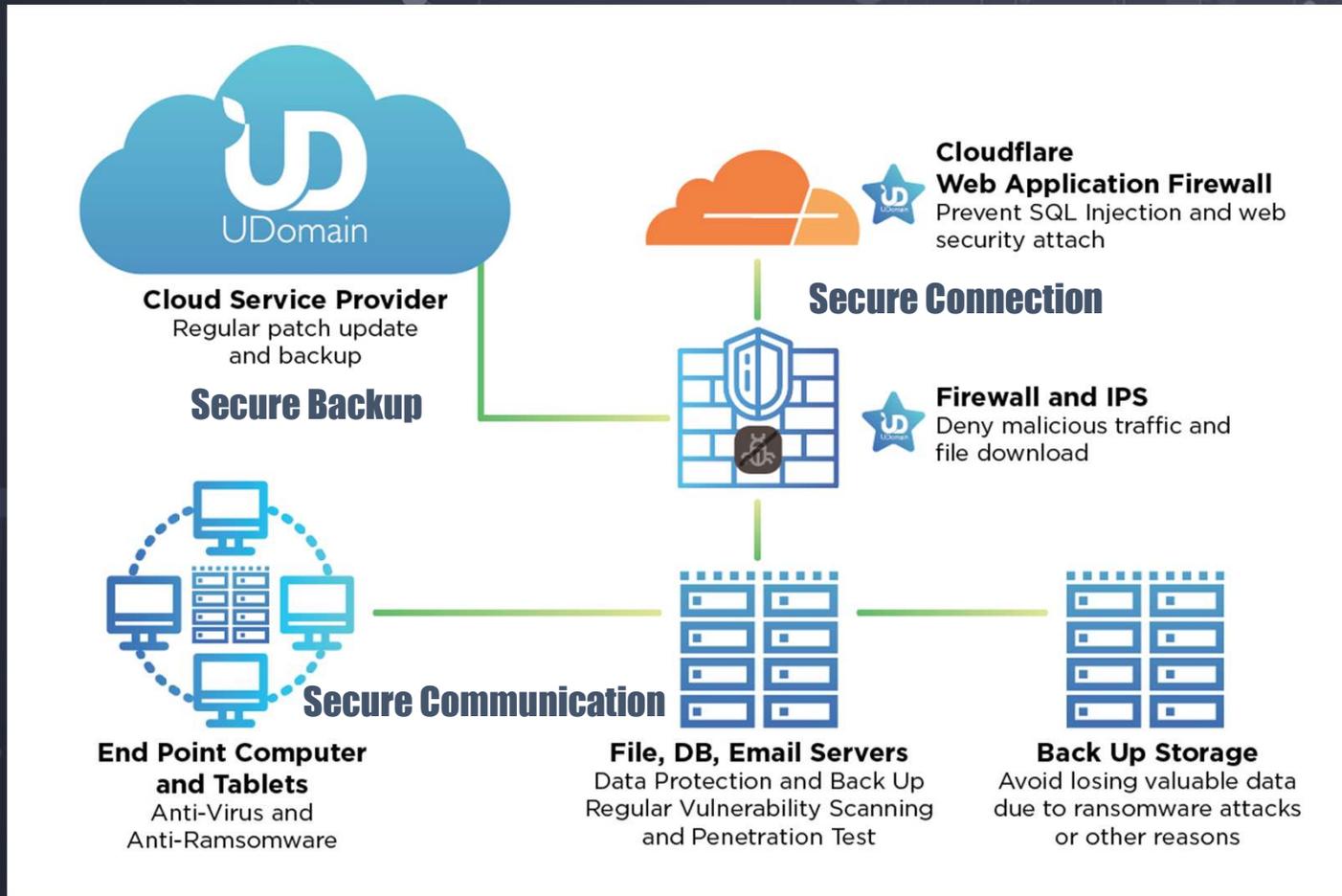
- Cloud Storage Solution
 - Single Sign On, 2 Factors Authentication
 - Google Drive, Dropbox, OwnCloud



<https://authy.com>



Best Practice of Safe Distributed Workforce



D-Biz Programme

網絡遙距管理方案



網上會議安全方案



雲端託管安全方案



Google雲端整合方案



List of free trial software and tools

- <https://www.bleepingcomputer.com/news/software/list-of-free-software-and-services-during-coronavirus-outbreak/>



Thank You!



Eric Fan 范健文

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主頁

關於

已讚好 追蹤中 分享

Eric Fan 范健文
昨天 12:32 發佈 · 🌐

憑一封電郵就可以騎劫你部 iPhone，即使你 link？聽落好恐怖，但這是本周一家網絡保安有財富 500 大公司的員工、歐洲記者等人中 UDomain 當然要查究一下，發現漏洞是真的問題，仍未足以攻陷你的手機，不過若你已有心.....

延伸閱讀: 深入了解 iOS 遠端電郵程式漏洞
<https://www.udomain.hk/tc/media/95>

Stand News 立場新聞
昨天 10:55 發佈 · 🌐



立場新聞 STANDNEWS

范健文
UDomain CEO、香港電子學雜誌創刊會長



壹周刊

范健文
UDomain CEO、香港電子學雜誌創刊會長



zh.wikipedia.org/zh-hk/范健文

維基百科 自由的百科全書

范健文 [編輯]

維基百科 · 自由的百科全書

范健文 (英語: Eric Fan Kin Man) · 香港科技資訊科技界人士



Appendix



Modern Worker Classification

Fixed / Static

Traditional office tasks
ranging from office
support, onsite service
Admin, Receptionist



Telecommuter

Staff that work at home or
satellite office
*Branch sales rep, data center
operator, call center operator*



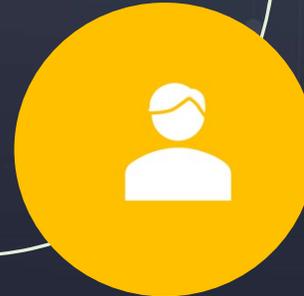
Extremely Mobile

Perform both individual and group
work and work from anywhere
Sales and BD, Top Management



Internally Mobile

Alternate between
individual and group work
*Finance, Engineer,
Programmer, Marketing*



Digital transformation pros & cons

PROS

**MAKES YOUR BUSINESS
MORE COMPETITIVE**

**MAKES YOUR
EMPLOYEES MORE
PRODUCTIVE**

**ALLOWS YOU TO
PROVIDE A BETTER
CUSTOMER EXPERIENCE**



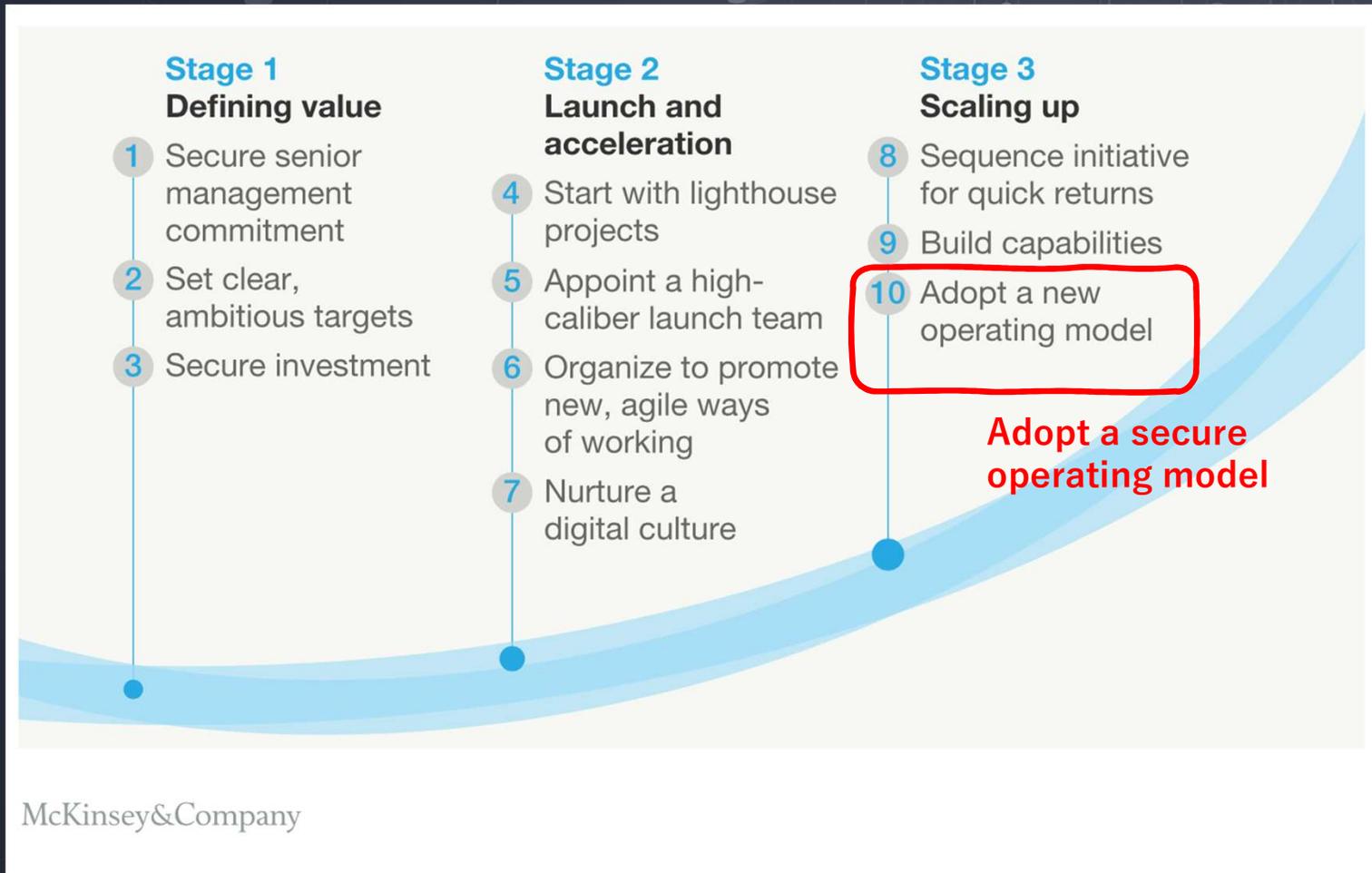
CONS

**EFFECTIVE
IMPLEMENTATION OF NEW
TECHNOLOGIES TAKES TIME**

**OPERATIONAL SECURITY
IMPLEMENTATION**



Top 10 guiding principle of a digital transformation



Cyber Security Assessment

Vulnerability Scanning



- Scanning the system using professional tool
- Generate scanning report

Black Box Testing



- Know nothing about the system, like a normal user
- Close to the real hacker
- Might only find minor issue

Grey Box Testing



- Some level of knowledge on the system
- Most common approach to do penetration test
- A more accurate result

White Box Testing

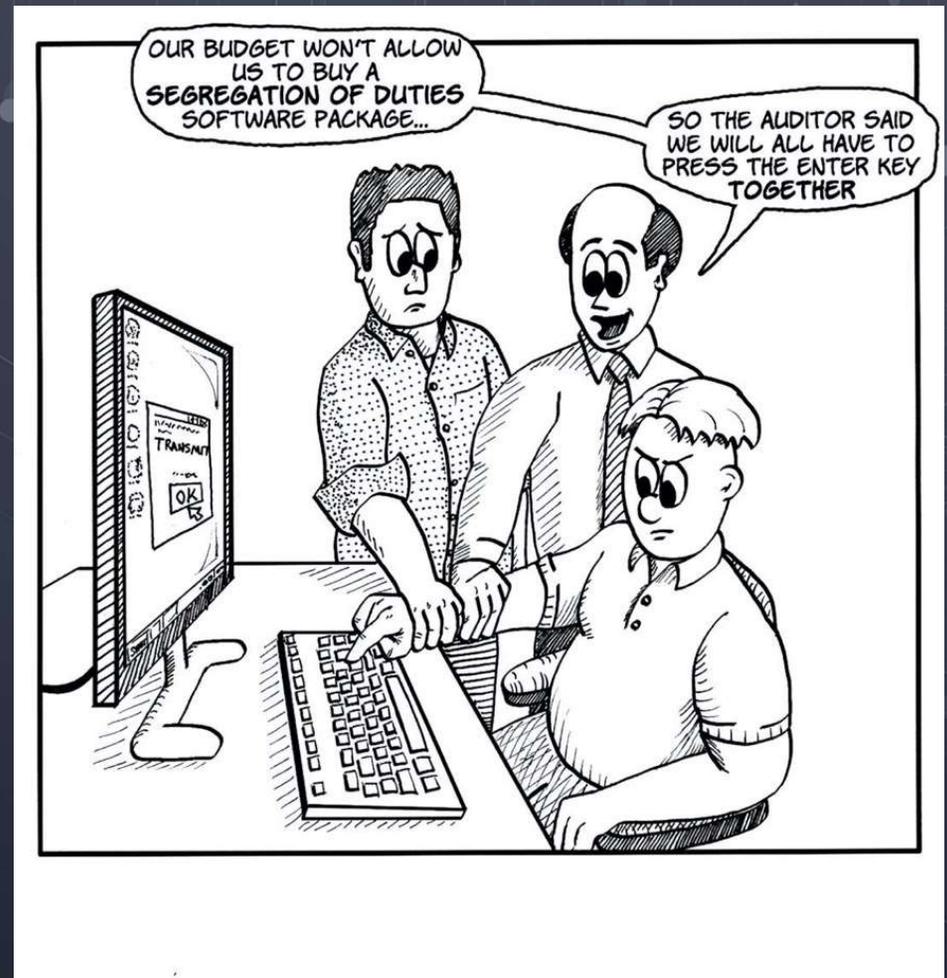


- Know everything on the system, including the source code
- We will provide this in the next phase



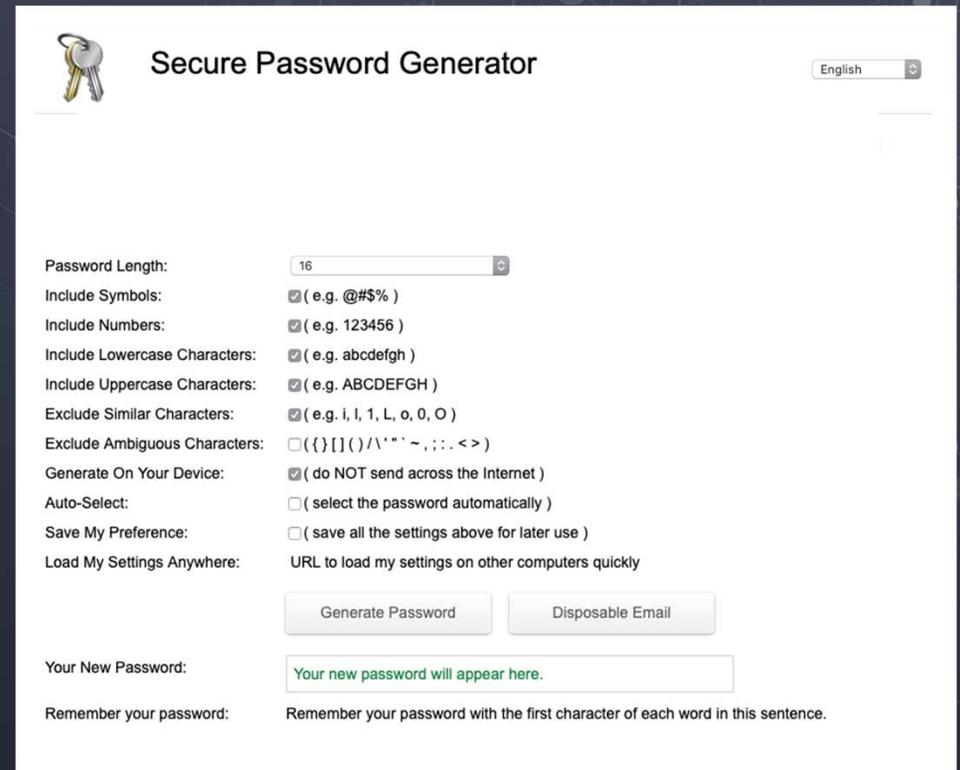
Availability

- Backup and tape storage
 - By schedule (bi-weekly full backup, daily incremental backup)
 - 3-2-1 back up practice (Online, Offline, Off-site)
- Access Control
 - Need-to-Know, Least Privilege and Segregation-of-Duties principles.



Confidentiality

- Encryption
 - Network
 - Data
- Password Policy



The image shows a web-based "Secure Password Generator" interface. At the top left is a key icon, and at the top right is a language dropdown menu set to "English". The main settings area includes: "Password Length" set to 16; "Include Symbols" checked (example: @#\$%); "Include Numbers" checked (example: 123456); "Include Lowercase Characters" checked (example: abcdefgh); "Include Uppercase Characters" checked (example: ABCDEFGH); "Exclude Similar Characters" checked (example: i, l, 1, L, o, 0, O); "Exclude Ambiguous Characters" unchecked (example: {}, [], (), ^, *, ~, ., :, ;, <, >); "Generate On Your Device" checked (do NOT send across the Internet); "Auto-Select" unchecked (select the password automatically); "Save My Preference" unchecked (save all the settings above for later use); and "Load My Settings Anywhere" with a text input field for a URL. Below these are two buttons: "Generate Password" and "Disposable Email". The "Your New Password" field contains the text "Your new password will appear here." At the bottom, there is a "Remember your password:" section with a checkbox and the instruction "Remember your password with the first character of each word in this sentence."



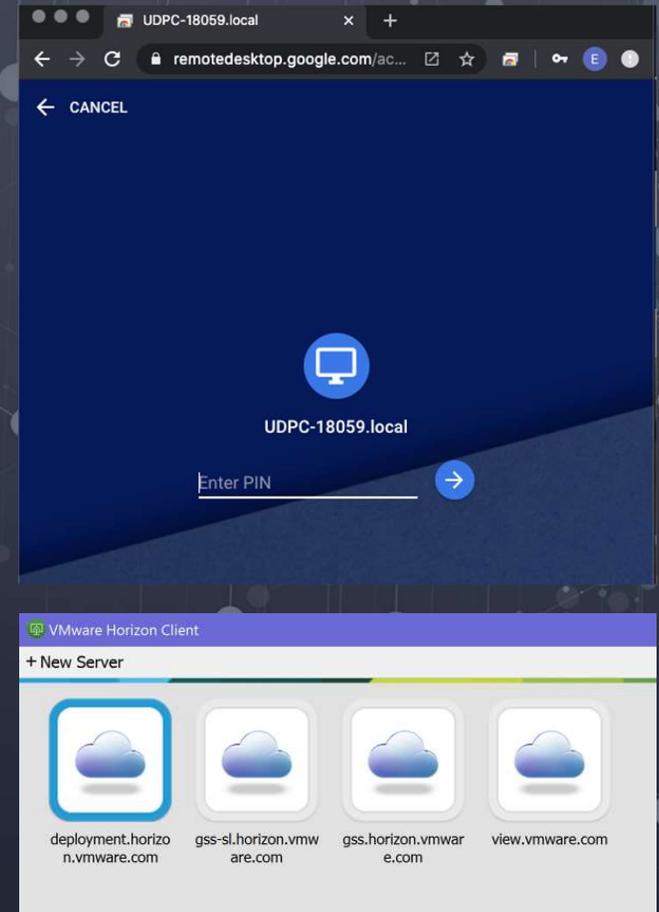
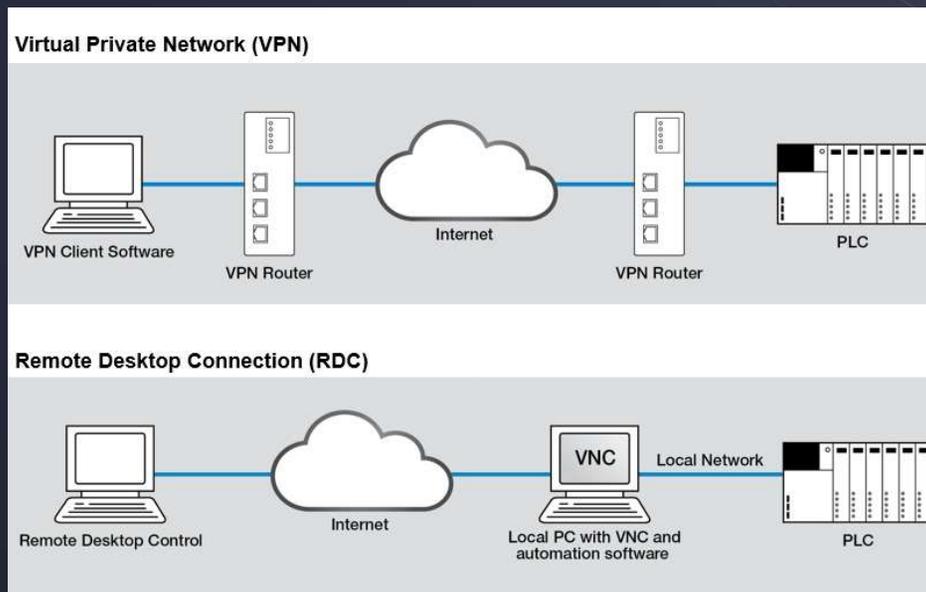
Integrity

- Remote patching and reboot
- Authentication and Access control
- Data leakage
- Audit and Review
 - Vulnerability Scanning, Patching



Secure Connection

- Remote Desktop / VDI Demo
 - How to establish secure network connection



Secure Communications

- Email
 - 2 Factor Authenticator, Google Authenticator
 - China email
- Phone
 - Softphone
 - Unified Communication: IM, Chatbot
- Virtual Meeting
 - Training, Live Streaming
 - Document Sharing



Secure Cloud Storage / Remote File Server

Other Cloud Storage Service

- Risky unencrypted transaction
- Blocked in Mainland China
- Unbranded and generic sharing URL
- Limited number of users and limited features

UD Cloud Storage Service

- Safe 256 bit encrypted transaction on all plans
- Comprehensive connectivity to China and the world
- Sharing URL customized for your domain to present a more professional image
- Unlimited number of users and storage can be freely allocated



Supplementary / Key Take Away

- Staff handbook – Use of Computer Device Policy
 - Secure Communications
 - Email, Phone, Instant Message
 - Secure Connection
 - VPN, Remote Desktop, VDI
 - Secure Back Up
 - Encrypted

