

出國報告（出國類別：研究）

# 109 年度「RSA 資訊安全研討會」出國研習報告

服務機關：內政部警政署刑事警察局

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派赴國家：美國舊金山

出國期間：109 年 2 月 22 日至 109 年 3 月 1 日

報告日期：109 年 5 月 29 日

## 摘要

為有效培養資訊安全人才國際觀並厚植偵防量能，特於本年度派員赴美國參加 RSA 資訊安全研討會。RSA 資訊安全研討會為世界著名資安研討會，每年吸引全球近 45,000 名資訊安全各領域專家、學者共同與會、發表資安新知及展示最新資安產品。隨著雲端、物聯網技術及智慧型產品日新月異，並結合跨境服務，伴隨而來的各種新興科技犯罪儼然成為犯罪偵防難題，期透過本次資安研討會與世界接軌、汲取各項資安新知，強化創新科技應用、精進鑑識及資(通)訊等精密儀器設備，提升查緝駭侵案件之能量、資安事件分析與處置、系統漏洞攻擊手法及尋求因新興科技犯罪問題之妥善解決方案並分析未來可能犯罪趨勢，機先應處，達成彈性調整偵查作為及防制策略。

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## 壹、目的

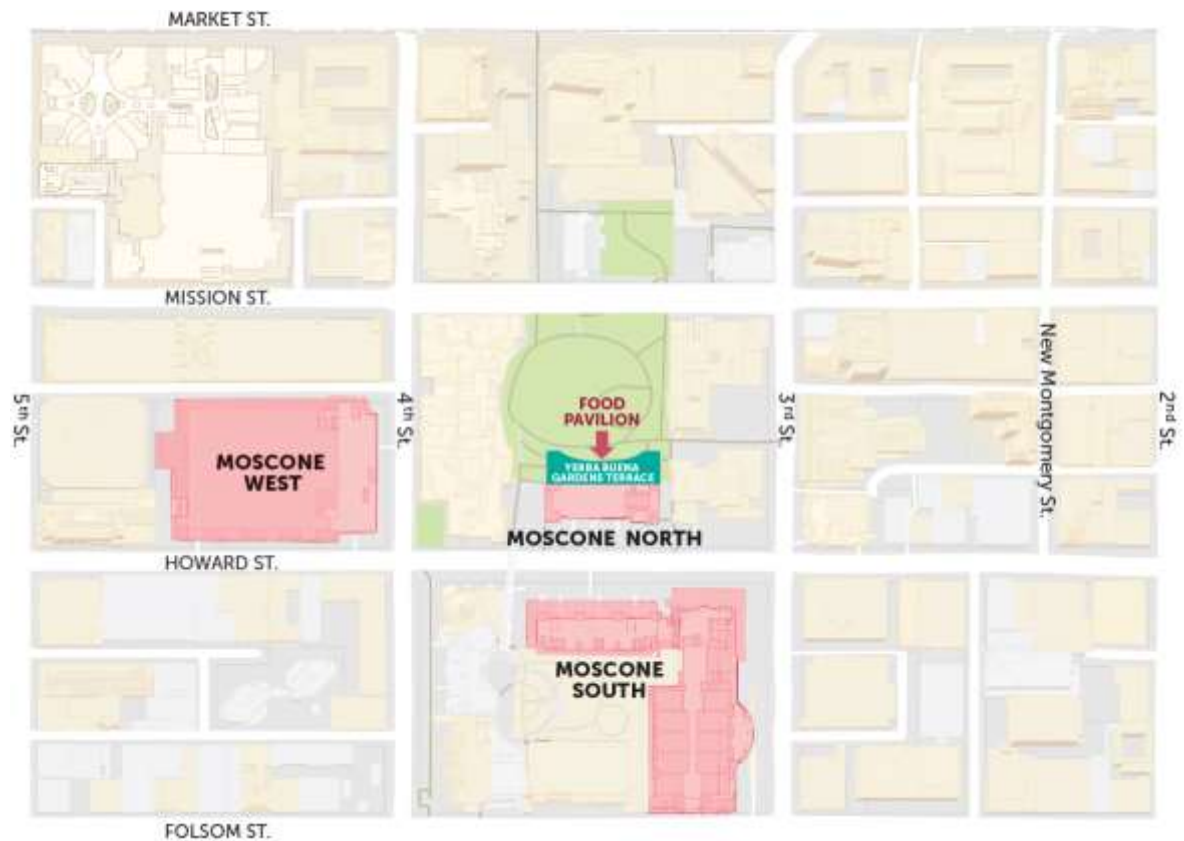
RSA 資訊安全研討會為世界著名資安研討會，本年度因受全球武漢肺炎爆發影響，參加人數略有減少，不過仍吸引近 36,000 名資安專家、學界代表、704 名講者、658 名資安廠商於 109 年 2 月 24 日至 2 月 28 日前往美國舊金山的莫斯科展覽中心 (Moscone Center) 共同參加本次資安盛會，分享的各種資安漏洞攻擊手法、資安技術、產品及各種領域的新興議題與挑戰。本次研討會主題為「人的因素」，針對人性所引發之資安衝突，包含智慧分析、反詐欺、區塊鏈與行動加密、雲端安全與視覺化、密碼學、駭侵技術、身分識別、機器學習與人工智慧應用、物聯網(IoT)、政府資安政策制定、個資保密、風險控管等議題進行討論，希冀與會人員能瞭解到國際上最新資安趨勢及攻擊技術外，亦藉由與不同國家的資安人員互動、技術交流與知識共享，增加未來國際合作機會。

此外，為學習相關資訊安全議題，參加 SANS(System Administration, Networking and Security)機構的訓練課程，主題係 Critical Security Controls : Planning 、Implementing and Auditing 及 Lethal Threat Hunting and Incident Response Techniques，希望有助提升本局資訊人員資訊安全專業領域及增進警務人員國際視聽。

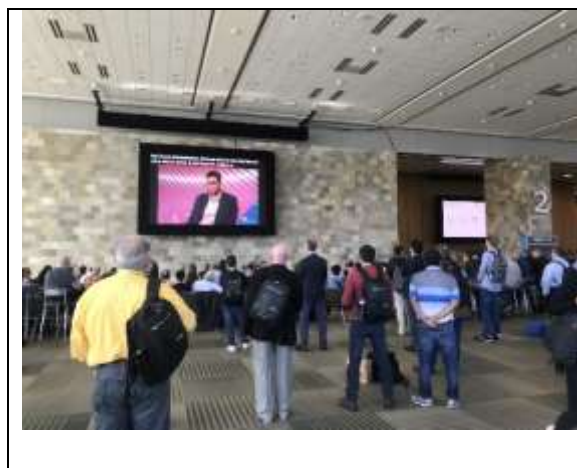
## 貳、活動過程

### 一、本次研討會特色

本研討會始於西元 1991 年，大會從最初的一個小型密碼學會議，如今已發展成為國際資訊安全領域規模最大且具影響力的安全產業盛會，活動場地可分北(Moscone North)、南(Moscone South)及西區(Moscone West)，三棟展覽館可同時開放展覽、研討。



本次會中邀請資安專家、學者、廠商及政府機關代表擔任會議的專題演講（Keynote Speech）多達 24 種不同主題、500 場次小組討論、30 場大型專題；全球資安大廠資安產品展示及推廣；資安專業進修課程及訓練；新創資安公司博覽會；沙箱創新競賽，招募資金；CPE 學分訓練等眾多創新作為，舉凡任何一項在我國皆是創舉，著實令人大開眼界。



## 二、研討會議程

### (一)RSA Conference 2020 會議 2月24日 (一) 議程

## MONDAY EVENTS & ACTIVITIES

MONDAY

- 8:00 AM – 9:00 AM **CONTINENTAL BREAKFAST\***  
Various locations Full Conference Pass holders, head directly to your RSAC Seminar.
- 8:30 AM – 5:00 PM **RSA CONFERENCE SEMINARS\*\***  
See following pages for details and room locations.
- 8:00 AM – 5:00 PM **PARTNER ALL-ACCESS SEMINARS**  
See following pages for details and room locations.
- 8:00 AM – 5:00 PM **BROADCAST ALLEY**  
Moscone West Street Level Watch top security publications shoot live and record exclusive interviews.
- 9:00 AM – 5:00 PM **TUTORIALS & TRAININGS**  
Moscone South Level 3 See previous pages for details and room locations.
- 1:30 PM – 4:30 PM **RSAC INNOVATION SANDBOX CONTEST**  
Moscone South Level 2, RSAC Sandbox The RSAC Innovation Sandbox Contest has crowned innovative companies who build cutting-edge technologies to minimize cybersecurity risk for the past 15 years. Witness the 2020 Top 10 Finalists battle it out for the coveted title of "Most Innovative Startup." See page 20 for a detailed agenda. *Exclusive RSAC Innovation Sandbox Media Sponsor:* **WSJ PRO CYBERSECURITY**
- 4:00 PM – 5:00 PM **FIRST-TIMERS ORIENTATION & NETWORKING RECEPTION** 🍷  
Moscone West 2005 This event is open to Full Conference Pass holders and features a 30-minute presentation followed by a 30-minute networking reception with light refreshments.
- 5:00 PM – 7:00 PM **RSAC SECURITY OPERATIONS CENTER**  
Moscone South Lower Level Take a tour of a working SOCI Head to the Moscone South Lower Level for the RSA Conference Security Operations Center. See what's really taking place on the Moscone Wireless Network in real time. *Sponsored by:* **CISCO RSA**
- 5:00 PM – 7:00 PM **WELCOME RECEPTION** 🍷  
North & South Expo Join your peers in the Expo while kicking off RSA Conference in style at the Welcome Reception. Enjoy drinks and light fare from 5 to 7 PM. Get exclusive access to the exhibitors you've been waiting to meet; network with peers as you preview cutting-edge products from more than 650 leading information security companies.

Sponsored by:



## TUESDAY EVENTS & ACTIVITIES

6:30 AM – 8:00 AM **CONTINENTAL BREAKFAST\***  
Moscone West Full Conference Pass holders, breakfast is available in Moscone West.

Locations and Times Vary **RSAC CYBREW CAFÉ**  
A full-service coffee bar in the RSAC Sandbox, RSAC Engagement Zone and West Level 3.

### KEYNOTES†

Keynote abstracts can be found on pages 34 – 35.

† On Tuesday morning, the West Stage Keynotes are open to Full Conference Pass holders only.  
South Stage Keynotes are open to Full Conference and Expo Plus Pass holders.

8:00 AM **Opening**  
West Stage

8:10 AM – 8:35 AM **Reality Check: The Story of Cybersecurity**  
West Stage [Rohit Ghal](#), President, RSA

8:35 AM – 8:55 AM **Time to Tell**  
West Stage **Steve Grobman**, Senior Vice President and Chief Technology Officer, McAfee

8:55 AM – 9:15 AM **We the People: Democratizing Security**  
West Stage **Wendy Nather**, Head of Advisory CSOs, Cisco

9:15 AM – 9:20 AM **Excellence in the Field of Mathematics Award**  
West Stage Please join us for the announcement of this year's RSAC Math Award recipients for their outstanding contributions to the field of cryptography

9:20 AM – 10:05 AM **The Cryptographers' Panel**  
West Stage **MODERATOR:** [Zulfikar Ramzan](#), Chief Technology Officer, RSA  
**PANELISTS:** [Whitfield Diffie](#), Cryptographer and Security Expert, Cryptomathic; [Arvind Narayanan](#), Associate Professor of Computer Science, Princeton University; [Tal Rabin](#), Head of Research, Algorand Foundation; [Ronald Rivest](#), Professor, Massachusetts Institute of Technology; [Adi Shamir](#), Berman Professor of Computer Science, The Weizmann Institute, Israel

10:05 AM – 10:30 AM **Cybersecurity Has a Posse**  
West Stage **Chris Krebs**, Director, Cybersecurity and Infrastructure Security Agency

11:00 AM – 11:50 AM **Fear and Loathing in Cybersecurity: An Analysis of the Psychology of Fear**  
South Stage **Dr. Jessica Barker**, Co-Chief Executive Officer, Cygenta

1:00 PM – 1:50 PM **A Forward Look at the Cyberspace Solarium Commission**  
South Stage **MODERATOR:** [Nicole Perroth](#), Investigative Journalist, New York Times  
**PANELISTS:** [Frank Cilluffo](#), Director, Auburn University McNary Institute for Cyber & Critical Infrastructure; [John C. \(Chris\) Inglis](#), Looker Distinguished Visiting Professor of Cyber Studies, United States Naval Academy; [Suzanne Spaulding](#), Senior Adviser for Homeland Security in the International Security Program, Center for Strategic and International Studies

2:20 PM – 3:10 PM **Rocked to the Core**  
South Stage **MODERATOR:** [Donna Dodson](#), Chief Cybersecurity Advisor, National Institute of Standards and Technology (NIST)  
**PANELISTS:** [Marene Allison](#), Chief Information Security Officer, Johnson & Johnson; [Paul Kocher](#), Security Entrepreneur and Researcher; [Phil Venables](#), Board Director and Senior Advisor Cyber, Goldman Sachs

3:40 PM – 4:30 PM **Effective Leadership and Motivation: What It Took to Race around the World**  
South Stage **Tracy Edwards MBE**, Round the World Sailor, Author and Social Activist

9:00 AM – 5:00 PM **BROADCAST ALLEY**  
Moscone West Street Level Watch top security publications shoot live and record exclusive interviews.

9:00 AM – 4:30 PM **RSAC ENGAGEMENT ZONE\***  
Moscone West Level 2 Debuting at RSAC 2020, the RSAC Engagement Zone makes it easier than ever to connect with peers from around the world for meaningful interactions—ranging from informal to structured, and one-on-one to group settings. RSAC Engagement Zone events for Tuesday include Braindate, Cooperative Learning, Problem Solving, Speed Networking. Hours of each vary.

10:00 AM – 6:00 PM **RSAC SECURITY OPERATIONS CENTER**  
Moscone South Lower Level Take a tour of a working SOC! Head to the Moscone South Lower Level for the RSA Conference Security Operations Center. See what's really taking place on the Moscone Wireless Network in real time.

Sponsored by:





# TUESDAY EVENTS & ACTIVITIES

10:00 AM – 6:00 PM Moscone North & South Lower Levels	<b>EXPO</b> Come see how RSA Conference 2020 exhibitors offer you the latest technological solutions, provide hands-on learning opportunities and demonstrate how they can help you better secure your organization.	
10:30 AM – 4:10 PM Moscone North & South Lower Levels	<b>EXPO BRIEFING CENTER</b> See the following pages for abstracts and a complete schedule on pages 115–119.	
11:00 AM – 11:50 AM & 1:00 PM – 4:30 PM Locations vary	<b>TRACK SESSIONS</b> See detailed information on the following pages for descriptions and badge access.	
11:00 AM – 11:50 AM & 1:00 PM – 4:30 PM Moscone West 2004	<b>SESSION VIEWING POINT*</b> Can't make it to a session of interest? Visit Moscone West Level 2, Room 2004 and choose from up to eight different sessions to watch on a large screen. Provided headphones allow you to hear only the session you want.	
11:00 AM – 2:00 PM Yerba Buena Gardens Terrace	<b>FOOD PAVILION</b> With options for all tastes, the Food Pavilion is the easy way to fuel up between sessions. Open to all RSA Conference badge holders for cash or credit transactions.	
11:00 AM – 11:50 AM & 1:00 PM – 5:50 PM Moscone West 3006	<b>LAWTRACK SESSIONS*</b> See detailed information on the following pages for descriptions.	
2:20 PM – 4:20 PM Moscone South Level 3	<b>LEARNING LABS*</b> Learning Labs provide highly interactive, facilitated learning experiences and are very hands-on and small group oriented. Seating is limited; use Reserve a Seat to schedule your participation. You can only reserve one Learning Lab on your schedule, so choose carefully from our great offerings. <i>Note: Press is not permitted in Learning Lab sessions.</i>	
4:00 PM – 6:00 PM Moscone South Level 2	<b>RSAC SANDBOX**</b> Join hands-on learning and fun through a wide range of interactive cybersecurity challenges and networking opportunities. Explore 12 sandboxes each focusing on a unique topic including aerospace, biohacking, car hacking, ICS, IoT, medical devices, supply chain and voting; The Lab featuring SANS NetWars and other capture-the-flag challenges; and 30-minute talks with industry experts.	Exclusive RSAC Sandbox Media Sponsor: 
Moscone South Level 2, RSAC Sandbox	<b>RSAC EARLY STAGE EXPO**</b> The RSAC Early Stage Expo is the perfect megaphone for emerging cybersecurity startups. Meet 51 of the industry's most promising newcomers and learn about their innovative products and solutions, and check out the RSAC Early Stage Expo Briefing Center (details on pages 178–185).	Exclusive RSAC Early Stage Expo Media Sponsor: 
4:00 PM – 6:00 PM RSAC Sandbox & RSAC Early Stage Expo	<b>CYBEER OPS NETWORKING RECEPTION**</b> 🍻 Delight in local California craft beers and nonalcoholic drinks as you network and mingle with peers. CyBEER Ops opens the RSAC Sandbox and RSAC Early Stage Expo where you can check out 51 up and coming startups and participate in hands-on interactive experiences.	
5:00 PM – 7:00 PM Marriott Marquis Yerba Buena 9	<b>WOMEN'S NETWORKING RECEPTION</b> 🍻 Join us in celebrating the continued development of women in cybersecurity. All RSA Conference Pass holders are welcome to attend.	Sponsored by: 
6:00 PM – 8:00 PM Moscone South 302	<b>NON-PROFITS ON THE LOOSE</b> 🍻 Meet and mingle with industry and government leaders while enjoying food and drink at the Marriott Marquis, just blocks from the Moscone Center. The Anti-Phishing Working Group (APWG), the Center for Threat-Informed Defense and the Cyber Threat Alliance (CTA) invite you to join us for the tenth Annual Non-Profits on the Loose for great food, fun and networking. Thank you for supporting our passions; stop by and discuss how we can improve cybersecurity together. <i>Attendees must have an RSA Conference badge.</i>	
7:00 PM – 9:00 PM Marriott Marquis Yerba Buena 9	<b>MAIDEN MOVIE SCREENING</b> 🍻 Immediately following the Women's Networking Reception, stay put for a screening of <i>Maiden</i> , featuring our own RSAC keynote speaker, Tracy Edwards. Watch as she leads the first all-female crew in the Whitbread Round the World Race, a grueling yachting competition that covers 33,000 miles and lasts nine months.	

TUESDAY



## (三)RSA Conference 2020 會議 2月26日 (三) 議程

### WEDNESDAY EVENTS & ACTIVITIES

WEDNESDAY

7:00 AM – 8:00 AM Moscone West	<b>CONTINENTAL BREAKFAST*</b> Full Conference Pass holders, breakfast is available in Moscone West Levels 2 & 3.
7:00 AM – 8:00 AM Moscone West 2018 Overlook	<b>FIRST-TIMERS MEET-UP*</b> Start the day with a meet-up with other RSAC first-timers. Grab your complimentary breakfast, and enjoy this time to regroup, share takeaways and, of course, caffeinate.
7:00 AM – 5:00 PM Location and Times Vary	<b>RSAC CYBREW CAFÉ</b> A full-service coffee bar in the RSAC Sandbox, RSAC Engagement Zone and West Level 3.
	<b>KEYNOTES**</b> <i>Keynote abstracts can be found on pages 36 – 37.</i>
8:00 AM – 8:50 AM South Stage	<b>Hacking Exposed: Global Threat Brief</b> <a href="#">Dmitri Alperovitch</a> , Co-Founder and Chief Technology Officer, CrowdStrike; <a href="#">George Kurtz</a> , Co-Founder and Chief Executive Officer, CrowdStrike; <a href="#">Elia Zaitsev</a> , Vice President of Sales Engineering for the Americas, CrowdStrike
9:20 AM – 10:10 AM South Stage	<b>Genomics: A New Frontier for Privacy and Security</b> MODERATOR: <a href="#">Rajeev Chand</a> , Partner and Head of Research, Wing Venture Capital PANELISTS: <a href="#">Dr. Patrick Courmeya</a> , Chief Medical Officer, Kaiser Permanente; <a href="#">Kathy Hibbs JD</a> , Chief Legal and Regulatory Officer, 23andMe; <a href="#">Sharon F. Terry</a> , President and CEO, Genetic Alliance; <a href="#">Mike Wilson</a> , Former CISO, Molina Healthcare and McKesson
10:30 AM – 10:55 AM West Stage	<b>Rethink the Way You Secure Your Organization with Intrinsic Security</b> <a href="#">Carrie Mills</a> , Senior Manager, Cybersecurity, Southwest Airlines; <a href="#">Patrick Morley</a> , SVP/GM Security Business Unit, VMware; <a href="#">Sanjay Poonen</a> , Chief Operating Officer, Customer Operations, VMware
10:55 AM – 11:15 AM West Stage	<b>Drive Security into the Fabric of Your Business by Investing in Your People</b> <a href="#">Roland Cloutier</a> , Senior Vice President and Chief Security Officer, ADP; <a href="#">Mary O'Brien</a> , General Manager, IBM Security, IBM; <a href="#">Wendi Whitmore</a> , IBM Security Vice President, X-Force Threat Intelligence
11:15 AM – 11:45 AM West Stage	<b>Record-Breaking: My Life and Career with NASA</b> <a href="#">Peggy Whitson</a> , Record-Breaking Astronaut; <a href="#">Mike Massimino</a> , Former NASA Astronaut
1:30 PM – 2:20 PM South Stage	<b>Fireside Chat with the Department of Energy's Karen S. Evans</b> <a href="#">Karen Evans</a> , Assistant Secretary, Office of Cybersecurity, Energy Security and Emergency Response, US Department of Energy; <a href="#">Marty Edwards</a> , VP Operational Technology Security, Tenable
2:50 PM – 3:40 PM South Stage	<b>How to Reduce Supply Chain Risk: Lessons from Efforts to Block Huawei</b> MODERATOR: <a href="#">Craig Spiegle</a> , Founder, Agelight Advisory and Research Group PANELISTS: <a href="#">Katie Arrington</a> , Cyber Information Security Officer of Acquisitions, US Dept of Defense / OUSD for Acquisitions; <a href="#">Donald (Andy) Purdy</a> , Chief Security Officer, Huawei Technologies USA; <a href="#">Bruce Schneier</a> , Security Technologist, Researcher and Lecturer, Harvard Kennedy School; <a href="#">Kathryn Waldron</a> , Fellow, R Street Institute
4:00 PM – 4:25 PM West Stage	<b>Why Your People Are Still Your Best Cyber-Defense</b> <a href="#">Ann Johnson</a> , Corporate Vice President, Cybersecurity Solutions Group, Microsoft
4:25 PM – 5:00 PM West Stage	<b>Insights from Kara Swisher</b> <a href="#">Kara Swisher</a> , Co-Founder and Editor-at-Large, Recode
8:00 AM – 10:10 AM & 1:30 PM – 3:40 PM Locations Vary	<b>TRACK SESSIONS</b> See detailed information on the following pages for descriptions and badge access.
8:00 AM – 10:10 AM & 1:30 PM – 3:40 PM Moscone West 2004	<b>SESSION VIEWING POINT*</b> Can't make it to a session of interest? Visit Moscone West Level 2, Room 2004 and choose from up to eight different sessions to watch on a large screen. Provided headphones allow you to hear only the session you want.
8:00 AM – 10:10 AM & 1:30 PM – 3:40 PM RSAC Engagement Zone Moscone West 2020	<b>BIRDS OF A FEATHER</b> It's our popular Birds of a Feather format—with an Engagement Zone twist. Participate in published, planned topics facilitated by some of our speakers, or take advantage of open, non-scheduled space all day to have free-form discussions. You never know where the conversation may lead! <i>Note: Press is not permitted in Birds of a Feather sessions.</i>
8:00 AM – 5:00 PM Moscone West Level 2	<b>RSAC ENGAGEMENT ZONE*</b> Debuting at RSAC 2020, the RSAC Engagement Zone makes it easier than ever to connect with peers from around the world for meaningful interactions—ranging from informal to structured, and one-on-one to group settings. RSAC Engagement Zone events for Wednesday include Birds of a Feather, Braindate, Cooperative Learning. Hours of each vary.

# WEDNESDAY EVENTS & ACTIVITIES

8:00 AM – 5:00 PM Moscone West 3006	<b>LAW TRACK SESSIONS*</b> See detailed information on the following pages for descriptions.	
8:00 AM – 4:00 PM Moscone South Level 2, RSAC Sandbox	<b>RSAC EARLY STAGE EXPO**</b> The RSAC Early Stage Expo is the perfect megaphone for emerging cybersecurity startups. Meet 51 of the industry's most promising newcomers and learn about their innovative products and solutions, and check out the RSAC Early Stage Expo Briefing Center (details on pages 178 – 185).	Exclusive RSAC Early Stage Expo Media Sponsor: 
8:00 AM – 5:00 PM Moscone South Level 2	<b>RSAC SANDBOX**</b> Join hands-on learning and fun through a wide range of interactive cybersecurity challenges and networking opportunities. Explore 12 sandboxes each focusing on a unique topic including aerospace, biohacking, car hacking, ICS, IoT, medical devices, supply chain and voting; The Lab featuring SANS NetWars and other capture-the-flag challenges; and 30-minute talks with industry experts.	Exclusive RSAC Sandbox Media Sponsor: 
8:00 AM – 5:00 PM Moscone West Street Level	<b>BROADCAST ALLEY</b> Watch top security publications shoot live and record exclusive interviews.	
Beginning at 9:00 AM Moscone North Street Level	<b>RSAC YOGA &amp; MEDITATION</b> Take a break from your busy RSAC schedule for a brief 15-minute guided meditation session (at 9 and 9:45 AM) or chair yoga session (at noon and 12:45 PM) led by the professionals from Office Meets Yoga.	
9:20 AM – 11:20 AM & 2:00 PM – 4:00 PM Moscone South Level 3	<b>LEARNING LABS*</b> Learning Labs provide highly interactive, facilitated learning experiences and are very hands-on and small group oriented. Seating is limited; use Reserve a Seat to schedule your participation. You can only reserve one Learning Lab on your schedule, so choose carefully from our great offerings. <i>Note: Press is not permitted in Learning Lab sessions.</i>	
9:30 AM – 2:20 PM RSAC Early Stage Expo	<b>RSAC EARLY STAGE EXPO BRIEFING CENTER**</b> See page 185 for a schedule of presentations.	
10:00 AM – 6:00 PM Moscone South Lower Level	<b>RSAC SECURITY OPERATIONS CENTER</b> Take a tour of a working SOC! Head to the Moscone South Lower Level for the RSA Conference Security Operations Center. See what's really taking place on the Moscone Wireless Network in real time.	Sponsored by: 
10:00 AM – 6:00 PM Moscone North & South Lower Levels	<b>EXPO</b> Come see how RSA Conference 2020 exhibitors offer you the latest technological solutions, provide hands-on learning opportunities and demonstrate how they can help you better secure your organization.	
10:30 AM – 4:10 PM Moscone North & South Lower Levels	<b>EXPO BRIEFING CENTER</b> See the following pages for abstracts and a complete schedule on pages 115–119.	
11:00 AM – 2:00 PM Yerba Buena Gardens Terrace	<b>FOOD PAVILION</b> With options for all tastes, the Food Pavilion is the easy way to fuel up between sessions. Open to all RSA Conference badge holders for cash or credit transactions.	
11:30 AM – 1:00 PM Moscone South 303	<b>EXECUTIVE WOMEN'S FORUM MEET &amp; GREET AT RSA CONFERENCE 2020</b> The Executive Women's Forum and Accenture Security are hosting a Meet & Greet for all the amazing women attending RSA Conference 2020. Enjoy the company of your peers—some of the brightest minds at the event—for a fun, relaxed, professional get together. Engage and connect with the most dynamic personalities; the women in information security who make it happen. Join in interactive discussions and get to know each other over light lunch. We look forward to meeting you!	
12:00 PM – 1:00 PM Moscone North Street Level	<b>RSAC SECURITY SCHOLAR POSTER BOARD EXHIBITION</b> RSA Conference Security Scholar connects the brightest up-and-coming cybersecurity students to leading experts, peers and Conference attendees. We are offering the RSAC Security Scholars the opportunity to demonstrate their work at a poster board exhibition. Drop by, provide feedback and meet the RSAC Security Scholar Class of 2020!	

WEDNESDAY

## WEDNESDAY EVENTS & ACTIVITIES

4:15 PM – 5:00 PM Moscone South Level 2, RSAC Sandbox	<b>RSAC LAUNCH PAD**</b> RSAC Launch Pad is designed to give new talent a platform to share their brilliant industry solutions. Watch three selected participants give a 10-minute pitch on their groundbreaking products to a panel of leading security venture capitalists. And see who walks away with investments that could take their company to the next level.	Exclusive RSAC Launch Pad Media Sponsor: 
4:30 PM – 6:00 PM Moscone North & South Lower Levels	<b>EXPO PUB CRAWL</b>  Enjoy your choice of complimentary beer, wine and non-alcoholic beverages as you visit sponsoring companies' booths to learn about their latest products, services and innovations. Located at select sponsor booths within both halls.	
5:30 PM – 6:30 PM Moscone South Stage	<b>HOW ONE PERSON CAN MAKE A DIFFERENCE IN CYBERSECURITY—THE INSPIRING LIFE OF MICHAEL ASSANTE</b> Have you ever wondered if you're making a difference? Come listen to some amazing stories about an amazing man, Mike Assante. His passing in 2019 has been mourned by cybersecurity leaders, government and military officials and his friends all over the world. You'll be inspired to do your best to make a difference in protecting the world's systems from cyberattacks.	

## (四)RSA Conference 2020 會議 2月27日 (四) 議程

## THURSDAY EVENTS & ACTIVITIES

7:00 AM – 8:00 AM Moscone West	<b>CONTINENTAL BREAKFAST*</b> Full Conference Pass holders, breakfast is available in Moscone West Levels 2 & 3.	
7:00 AM – 8:00 AM Moscone West 2018 Overlook	<b>FIRST-TIMERS MEET-UP*</b> Start the day with a meet-up with other RSAC first-timers. Grab your complimentary breakfast, and enjoy this time to regroup, share takeaways and, of course, caffeinate.	
7:00 AM – 5:00 PM Locations and Times Vary	<b>RSAC CYBREW CAFÉ</b> A full-service coffee bar in the RSAC Sandbox, RSAC Engagement Zone and West Level 3.	
	<b>KEYNOTES**</b> <i>Keynote abstracts can be found on pages 38 – 39.</i>	
8:00 AM – 8:50 AM South Stage	<b>The Industrial Cyberthreat Landscape: 2019 Year in Review</b> <b>Robert Lee</b> , CEO, Dragos, Inc.	
9:20 AM – 10:10 AM South Stage	<b>Hacking Society</b> <b>Bruce Schneier</b> , Security Technologist, Researcher and Lecturer, Harvard Kennedy School	
10:30 AM – 10:55 AM West Stage	<b>20 Years In: Security's Grand Challenges, Then and Now</b> <b>Andy Ellis</b> , Chief Security Officer, Akamai Technologies, Inc.	
10:55 AM – 11:25 AM West Stage	<b>The Future of Transportation Relies on Strong Cybersecurity</b> <b>Mary T. Barra</b> , Chairman and Chief Executive Officer, General Motors Company	
1:30 PM – 2:20 PM South Stage	<b>Geopolitical Risks, Elections and Cybersecurity</b> <b>Admiral James Stavridis</b> , Retired Four-Star Officer, US Navy; <b>Juliette Kayyem</b> , Professor, Harvard's Kennedy School of Government	
2:50 PM – 3:40 PM South Stage	<b>Hacking Stress in Cybersecurity Operations</b> <b>Dr. Celeste Paul</b> , Researcher, National Security Agency	
4:00 PM – 4:25 PM West Stage	<b>On the Edge of Something Big: Security's Next Frontier</b> <b>Ken Xie</b> , Founder, Chairman of the Board and Chief Executive Officer, Fortinet	
4:25 PM – 5:10 PM West Stage	<b>The 5 Most Dangerous New Attack Techniques and How to Counter Them</b> <b>MODERATOR: Alan Paller</b> , Research Director and Founder, SANS Institute <b>PANELISTS: Heather Mahalik</b> , Senior Instructor, SANS Institute and Director of Digital Intelligence, Cellebrite; <b>Aed Skoudis</b> , Instructor, SANS Institute; <b>Johannes Ullrich</b> , Dean of Research, SANS Technology Institute	
8:00 AM – 10:10 AM & 1:30 PM – 3:40 PM Various Locations	<b>TRACK SESSIONS</b> See detailed information on the following pages for descriptions and badge access.	
8:00 AM – 10:10 AM & 1:30 PM – 3:40 PM Moscone West 2004	<b>SESSION VIEWING POINT*</b> Can't make it to a session of interest? Visit Moscone West Level 2, Room 2004 and choose from up to eight different sessions to watch on a large screen. Provided headphones allow you to hear only the session you want.	
8:00 AM – 10:10 AM & 1:30 PM – 3:40 PM RSAC Engagement Zone Moscone West 2020	<b>BIRDS OF A FEATHER</b> It's our popular Birds of a Feather format—with an Engagement Zone twist. Participate in published, planned topics facilitated by some of our speakers, or take advantage of open, non-scheduled space all day to have free-form discussions. You never know where the conversation may lead! <b>Note: Press is not permitted in Birds of a Feather sessions.</b>	
8:00 AM – 3:30 PM Moscone South Level 2	<b>RSAC SANDBOX**</b> Join hands-on learning and fun through a wide range of interactive cybersecurity challenges and networking opportunities. Explore 12 sandboxes each focusing on a unique topic including aerospace, biohacking, car hacking, ICS, IoT, medical devices, supply chain and voting; The Lab featuring SANS NetWars and other capture-the-flag challenges; and 30-minute talks with industry experts.	Exclusive RSAC Sandbox Media Sponsor:  

THURSDAY

# THURSDAY EVENTS & ACTIVITIES

8:00 AM – 3:00 PM	<b>RSAC EARLY STAGE EXPO**</b>	<i>RSAC Early Stage Expo Exclusive Media Sponsor:</i> <b>crunchbase</b>
Moscone South Level 2	The RSAC Early Stage Expo is the perfect megaphone for emerging cybersecurity startups. Meet 51 of the industry's most promising newcomers and learn about their innovative products and solutions, and check out the RSAC Early Stage Expo Briefing Center (details on pages 178 – 185).	
8:00 AM – 5:00 PM	<b>BROADCAST ALLEY</b>	
Moscone West Street Level	Watch top security publications shoot live and record exclusive interviews.	
8:00 AM – 5:10 PM	<b>RSAC ENGAGEMENT ZONE*</b>	
Moscone West Level 2	Debuting at RSAC 2020, the RSAC Engagement Zone makes it easier than ever to connect with peers from around the world for meaningful interactions—ranging from informal to structured, and one-on-one to group settings. RSAC Engagement Zone events for Thursday include Birds of a Feather, Braindate, Cooperative Learning. Hours of each vary.	
Beginning at 9:00 AM	<b>RSAC YOGA &amp; MEDITATION</b>	
Moscone North Street Level	Take a break from your busy RSAC schedule for a brief 15-minute chair yoga session (at 9 AM and 12:45 PM) or guided meditation session (at 9:45 AM and noon) led by the professionals from Office Meets Yoga.	
9:20 AM – 10:20 AM	<b>RSAC SECURITY SCHOLAR POSTER PITCH-OFF</b>	
Moscone West 3006	Learn about the cutting-edge research coming out of top universities as three selected RSA Conference Security Scholars give 5 minute pitches to government, research and cybersecurity veterans.	
9:20 AM – 11:20 AM & 2:00 PM – 4:00 PM	<b>LEARNING LABS*</b>	
Moscone South Level 3	Learning Labs provide highly interactive, facilitated learning experiences and are very hands-on and small group oriented. Seating is limited; use Reserve a Seat to schedule your participation. You can only reserve one Learning Lab on your schedule, so choose carefully from our great offerings. <i>Note: Press is not permitted in Learning Lab sessions.</i>	
10:00 AM – 3:00 PM	<b>RSAC SECURITY OPERATIONS CENTER</b>	<i>Sponsored by:</i> 
Moscone South Lower Level	Take a tour of a working SOCI. Head to the Moscone South Lower Level for the RSA Conference Security Operations Center. See what's really taking place on the Moscone Wireless Network in real time.	
10:00 AM – 3:00 PM	<b>EXPO</b>	
Moscone North & South Lower Levels	Come see how RSA Conference 2020 exhibitors offer you the latest technological solutions, provide hands-on learning opportunities and demonstrate how they can help you better secure your organization.	
10:30 AM – 12:00 PM	<b>EXPO BRIEFING CENTER</b>	
Moscone North & South Lower Levels	See the following pages for abstracts and a complete schedule on pages 115–119.	
9:30 AM – 2:20 PM	<b>RSAC EARLY STAGE EXPO BRIEFING CENTER**</b>	
RSAC Early Stage Expo	See page 185 for a schedule of presentations.	
11:00 AM – 2:00 PM	<b>FOOD PAVILION</b>	
Yerba Buena Gardens Terrace	With options for all tastes, the Food Pavilion is the easy way to fuel up between sessions. Open to all RSA Conference badge holders for cash or credit transactions.	
6:00 PM – 9:00 PM	<b>RSAC AFTER HOURS*</b> 	
Marriott Marquis, Yerba Buena Level	Bring back the 80's with RSA Conference and enjoy a night back in time on Throwback Thursday #TBT. Join your peers and enjoy food, drinks, dancing with a live 80's cover band, throwback games and more.	
	<i>Return shuttles to official RSAC hotels will run from 8:30 to 9:00 PM.</i>	

THURSDAY



## (五)RSA Conference 2020 會議 2 月 28 日 (五) 議程

### FRIDAY EVENTS & ACTIVITIES

#### 7:30 AM – 8:30 AM CONTINENTAL BREAKFAST\*

Moscone West Full Conference Pass holders, breakfast is available in Moscone West Levels 2 & 3.

#### 7:30 AM – 12:30 PM RSAC CYBREW CAFÉ\*

Moscone West Level 3 A full-service coffee bar.

#### 8:00 AM – 1:00 PM BROADCAST ALLEY

Moscone West Street Level Watch top security publications shoot live and record exclusive interviews.

#### KEYNOTES\*\*

Keynote abstracts can be found on page 40.

#### 8:30 AM – 9:20 AM Coordinated Vulnerability Disclosure: You've Come a Long Way, Baby

South Stage **Katie Mousouris**, Chief Executive Officer, Luta Security; **Chris Wysopal**, Co-Founder and Chief Technology Officer, Veracode

#### 9:50 AM – 10:40 AM Collaborating to Improve Open Source Security: How the Ecosystem is Stepping Up

South Stage **Mark Russinovich**, Chief Technology Officer, Microsoft Azure

#### 11:10 AM – 12:00 PM You Can Stop Stupid

South Stage **Dr. Tracy Celaya Brown**, President, Go Consulting International; **Aira Winkler**, Lead Security Principal, Trustwave

#### 8:30 AM – 12:00 PM TRACK SESSIONS\*

Locations Vary See detailed information on the following pages for descriptions.

#### 8:30 AM – 12:00 PM SESSION VIEWING POINT\*

Moscone West 2004 Can't make it to a session of interest? Visit Moscone West Level 2, Room 2004 and choose from up to eight different sessions to watch on a large screen. Provided headphones allow you to hear only the session you want.

#### 8:30 AM – 9:40 AM JOB SEARCH 2020: INTERVIEW SKILLS & RESUME REVIEW WORKSHOP\*

Moscone West 2018 This workshop has two components—the first explores how to best present your skills and self to potential companies and the second is a resume review workshop. **No Press allowed.**

#### CONFERENCE CLOSING\*\*

#### 12:30 PM – 1:30 PM The Hugh Thompson Show, featuring Penn & Teller and Dr. Lorrie Cranor

West Stage **Penn & Teller**, Magicians; **Hugh Thompson**, Program Committee Chair, RSA Conference; **Dr. Lorrie Cranor**, Director and Bosch Distinguished Professor, CyLab Security and Privacy Institute, Carnegie Mellon University

FRIDAY



### 三、資訊安全研習課程

#### (一)關鍵安全控制：計畫、執行及稽核(Critical Security Controls：

#### Planning、Implementing and Auditing)

本課程主要內容為介紹關鍵安全控制（計畫、執行及稽核），可分為基本（Basic）、基礎（Foundational）、組織（Organizational）三大執行面向及如何

掌握實施和稽核 Internet 安全中心（CIS）記錄的關鍵安全控制所需的設定、可靠的技術和工具。分項說明如下：

1.基本（Basic）：

- (1)硬體資產的管控及工具（Inventory and Control of Hardware Asset）
- (2)軟體資產的管控及工具（Inventory and Control of Software Asset）
- (3)連續弱點管理（Continuous Vulnerability Management）
- (4)管理者權限的控管使用（Controlled Use of Administrative Privileges）
- (5)移動設備、筆記本電腦及 Sever 的軟硬體安全配置(Secure Configuration for Hardware and Software on Mobile Devices、Laptops,Workstation,and Servers)
- (6)維護、監控及稽核日誌（Maintenance ,monitoring, and Analysis of Audit Logs）

2.基礎（Foundational）：

- (1)電子郵件及瀏覽器的保護（Email and Web Browser Protection）
- (2)惡意程式的防護（Malware Defense）
- (3)網路通訊埠、協定及服務的控制及限制（Limitation and Control of Network Ports、Protocol and Services）
- (4)資料回復的能力（Data Recovery Capabilities）
- (5)網路裝置的安全組態例如防火牆、路由器及交換器(Secure Configuration for Network Devices , such as Firewalls、Routers and Switches)
- (6)邊界防護（Data Defense）
- (7)資料防護（Data Protection）
- (8)基本需要的控制存取（Controlled Access Based on the Need to Know）
- (9)無線存取控制（Wireless Access Control）
- (10)帳號的監視及控管(Account Monitoring and Control)

### 3.組織 (Organizational)：

- (1)執行資安意識及訓練程式(Implement a Security Awareness and training Program)
- (2)應用軟體安全 (Application Software Security)
- (3)意外事件回復及管理(Incident Response and Management)
- (4)展示測試及紅隊攻擊演練(Penetration Tests and Red Team Exercises)

這些關鍵安全控制因素是由美國軍方以及其他政府和私人組織（包括 NSA、DHS、GAO 和許多其他組織）最專業的專家共同選擇和定義有關攻擊如何實際起作用以及如何阻止攻擊。他們將這些控制措施定義為共識，以阻止已知攻擊的最佳方法，以及幫助發現並減輕遭受攻擊的破壞的最佳方法。對於資訊安全專業人員，可以學習到如何有效地廣泛使用具有成本效益的自動化技術，從而在現有網路中有效管控。對於稽核人員、資訊長和風險管理人員而言，則可衡量資安控制措施是否有效實施及符合 NIST Cybersecurity Framework (美國國家標準暨技術研究院之網路安全框架)及 BSI 英國標準協會 ISO27002:2013。





## (二)威脅狩獵與資安事件處理技術 ( Lethal Threat Hunting and Incident Response Techniques )：

現今社會資安事件頻傳，卻甚少造成極大損失，只因資安事件處理小組能在攻擊者造成破壞前有效防堵，其發現的過程即稱為「威脅狩獵」。資安事件處理小組成員必須對電腦運行機制熟稔且具備 APT(advanced persistent threats) 觀念始能勝任。本課程採實例方式逐步教導學員認識資安事件發生時，如何辨別主機與網路異常紀錄及使用各種輔助工具協助偵測（如使用 SIFT Workstation、Kansa 工具）及復原內部資料。SIFT Workstation 為 SANS 建立之 Linux based 鑑識調查虛擬環境工作站，可針對不同跡證進行廣泛或深度調查；Kansa 為 Powershell 工具，可用於遠端登入蒐集資訊並建立標準。偵查技術可分為三部分：

### 1、進階資安事件處理與威脅狩獵 ( Advanced Incident Response & Threat Hunting )

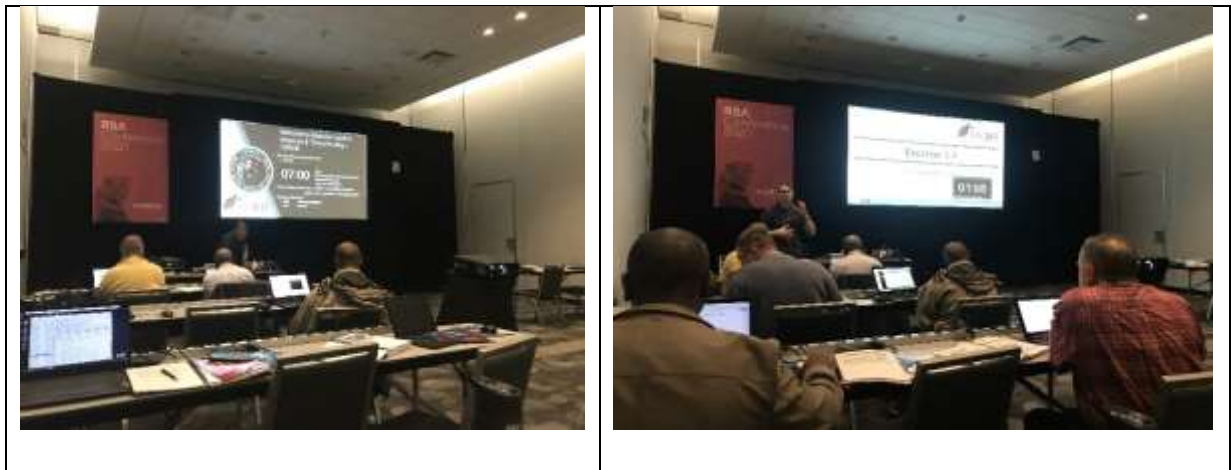
利用時間軸分析，分析蒐集事件之所有跡證時間戳記：M(修改)、A(存取)、C(建立)、E(metadata 修改時間)，可協助調查人員釐清整起資安事件發生經過及事件、跡證間之關聯性。檔案系統包含重要的 4 個檔案時間戳記，可以協助釐清事件經過。

### 2、駭侵事件分析 ( Intrusion Analysis )

駭侵事件發生前，常會有異常紀錄發生，但往往被人忽略。其原因不外是系統紀錄過大，一般管理者無法在短時間內辨別正常與異常事件區別。駭客通常會利用各種管道取得系統權限、植入木馬或後門程式，最後消除所有連線紀錄。所以只要發現事件日誌紀錄檔案不連續或異常滅失，可能遭受攻擊。定期檢視系統事件紀錄，除可剖析帳戶使用行為有無異常、甚至可逆向追蹤駭客動向、調查可疑的服務、排程及惡意程式的執行等行為。

### 3、資安事件記憶體鑑識 (Memory Forensics in Incident Response and Threat Hunting)

無論是什麼程式，執行時總會在電腦記憶體留有相關紀錄，調查人員即可利用記憶體分析工具，找出可疑程序、擷取其開啟檔案、載入 DLL、惡意程式類型、對外網路資訊、是否遭受程式碼注入攻擊跡象、盜取使用者密碼、系統設定檔等等。



## 四、RSA 預測未來十大趨勢

本年度的主題為人的因素(Human Element)，著重於人員、流程、管理並如何制定有效風險管理。

RSAC 2020

Each year, industry leaders from around the world submit an application to be a speaker at RSA Conference. This year, we received 2,400 responses to our 2020 Call for Speakers.

By sifting through all the entries, we were able to identify 10 trends that wended their way through many of the submissions. Examining these trends provides a glimpse of what will be on the minds of cybersecurity professionals in 2020, and possibly beyond.

Click below to see what the future holds for our industry.

LEARN THE TRENDS

- HUMAN ELEMENT
- SECURE PRODUCTS
- IT AND BY SECURITY
- SECURE ENGINEERING
- WORKING
- THREAT INTELLIGENCE
- EXAMINATIONS
- SECURITY ARRANGES
- COMMUNICATIONS
- PROFESSIONAL DEVELOPMENT

### (一)人(Human Element)：

眾所皆知，資安最脆弱的一環，就是人性。如何能在人性與資訊安全取得最佳平衡點，將是未來最大的挑戰。

### (二)安全產品(Secure Products)：

如何確保身份、人工智慧、隱私和資安監控(SOC)方面探討產品的開發與設計、開源工具的發展，確保產品在供應鏈中是安全無虞。

### (三)科技與運營技術(IT and OT Security)：

結合工控系統(ICS)與網路系統兩種完全不同型態設備及供應鏈文化，並降低風險，創造最大收益。

### (四)安全的設計流程(Secure Engineering)：

軟體開發生命週期(DevSecOps)內容及風險管理，在保證流程順暢外同時具備相對應安全機制。

### (五)隱私(Privacy)：

依循嚴謹的法律的規範(如歐盟一般資料保護規範 GDPR)與合理使用顧客資料並確保安全。

### (六)威脅情資共享(Threat Intelligence)：

透過 AI 蒐集各項威脅情資後及如何跨組織有效分享。

### (七)框架(Frameworks)：

MITER ATT &CK、NIST、CSCF、FAIR 四大資安熱門框架，說明駭客攻擊前準備與行動，有助於理解攻擊帶來的安全風險，藉此改進檢測和應對措施。

### (八)安全意識(Security Awareness)：

建立各種資安意識及強化培訓員工各項資安技能。

### (九)溝通(Communication)：

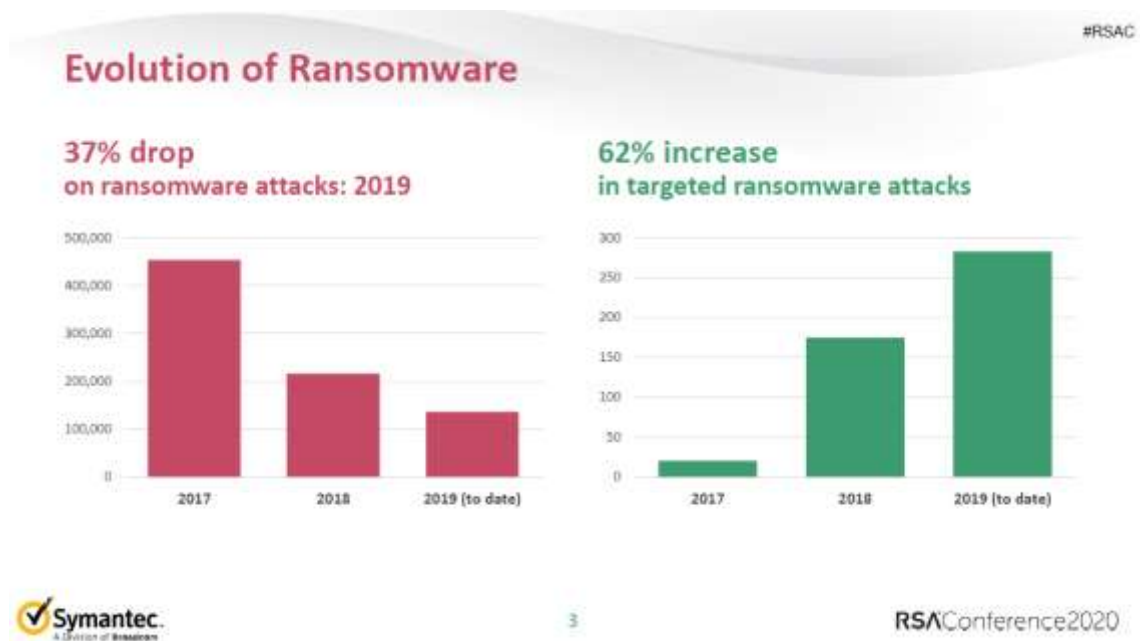
面臨內部衝突，組織上下、內外如何有效溝通，化解僵局。

### (十)專業技能(Professional Development)：

建立良好學習場域，讓員工做好份內工作並有進修機會、獲取新知管道，提升自我知能。

## 五、針對性勒索軟體：潛在威脅開始增生

主題：Targeted Ransomware: A Potent Threat Begins to Proliferate，主講者：Dick O'Brien/ Jon DiMaggio，分別為賽門鐵克內政策制定者及資安威脅研究員。觀察 2017 年迄今，勒索軟體總攻擊件數雖下降 37%，但針對性攻擊件數卻上升 62%，顯示感染目標已從大量傳播一般個人電腦轉變為針對企業伺服器或有價值資產的設備為主。其原因不外為手機科技進步，個人電腦使用頻率下降，很多人習慣將資料備份於雲端，就算感染個人電腦，亦可重新回復資料。而伺服器擁有眾多功能（AD server、Mail server……）且 24 小時運轉，不允許網路斷線，資料備份困難，就算是資料正常備份行為，也是利用較少使用者的深夜時段，減少負載量。正因如此，攻擊企業伺服器成為近期攻擊目標且伺服器為高價值資產，贖金價格高昂。一般企業為了回復正常營運，往往選擇支付贖金，變相使勒索軟體更為猖獗。



### （一）GogaLocker 運行手法：

#### 1. 入侵目標階段（Incursion）

透過社交郵件、系統漏洞、服務，入侵電腦後利用系統內建 Powershell 或一般已知工具載入惡意程式碼（payload）建立監控木馬或後門。

#### 2. 探勘階段（Discovery）

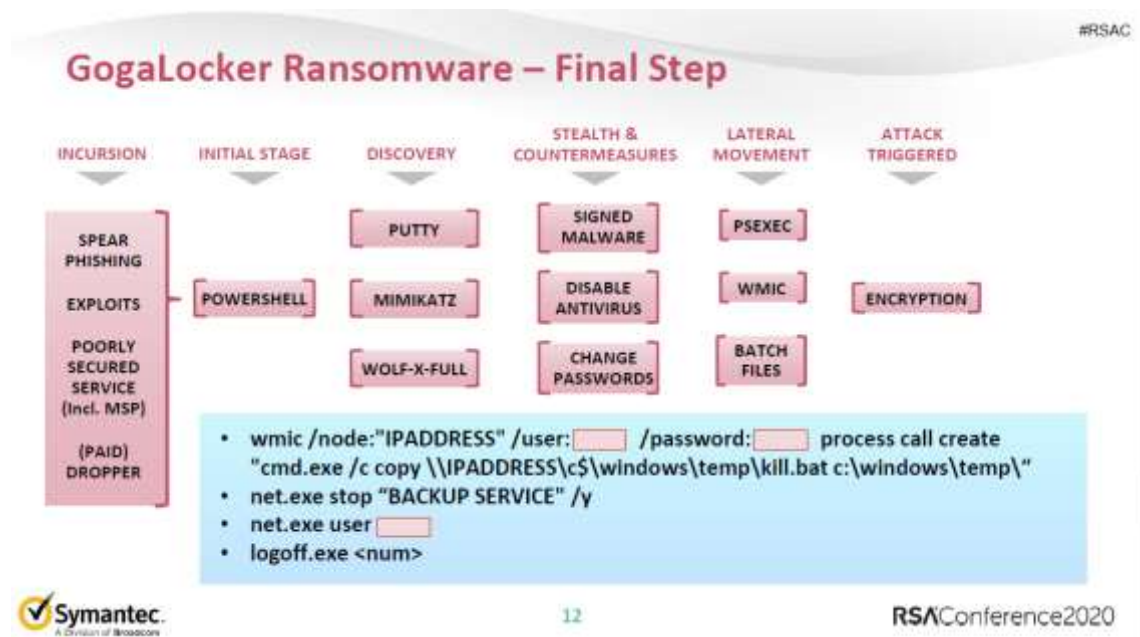
利用 Putty 遠端登入目標，進行全網段掃描、Mimikatz 獲取帳號、密碼、Wolf-X 試圖取得最高 AD 執行權限並偷取重要資料、刪除備份。

### 3.隱匿部署階段 (Stealth)

關閉防毒程式後利用 AD 派送並執行惡意程式各重要目標電腦。

### 4.資料加密階段 (Encryption)

將所有資料加密，並顯示勒索訊息或寄送勒索信件。



## (二) 預防措施：

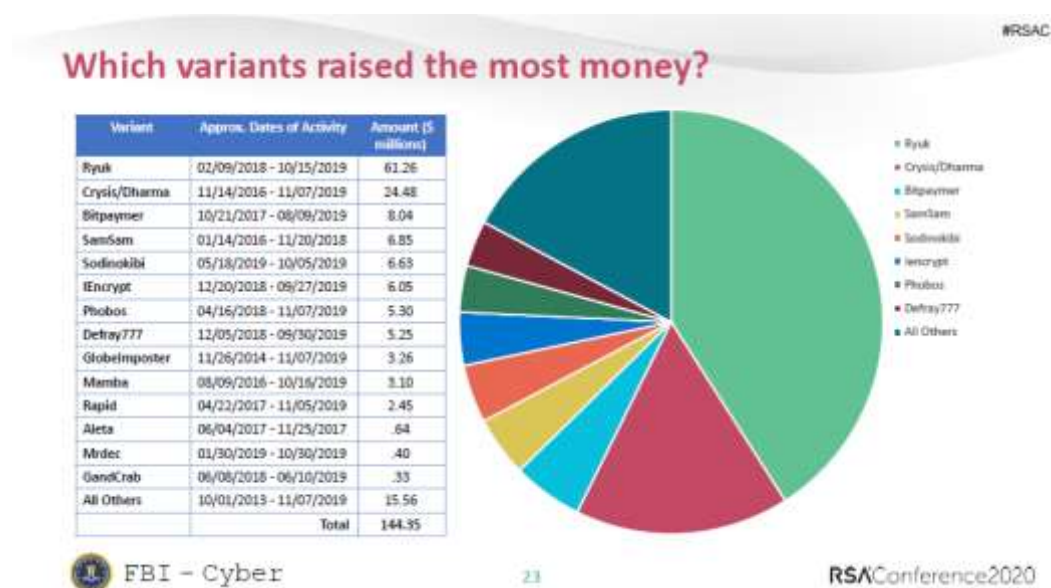
- 1.建立資料備份與回復機制。
- 2.系統定期更新與即時修補漏洞。
- 3.建立郵件安全過濾機制並阻絕任何可疑來源信件。
- 4.開啟系統紀錄檔並定期檢視異常紀錄、排程。
- 5.建立勒索軟體資安意識並執行演習。

## 六、FBI 現今偵辦勒索軟體(Ransomware)策略與因應措施

主題：Feds Fighting Ransomware: How the FBI Investigates and How You Can Help，  
主講者：Joel DeCapua 為 FBI 督導特別探員。據 FBI 統計 2013 年至 2019 年，全美受到勒索軟體影響且以比特幣 (Bitcoin) 作為支付管道案件，贖金高達美金 1 億 4,400 萬，



前三勒索病毒分別為 Ryuk、Crysis/Dharma、Bitpaymer。入侵管道為遠端桌面協定（RDP）、社交釣魚郵件利用作業系統漏洞、弱密碼攻擊，並提醒所有使用者應檢查網路異常活動及養成資料備份的好習慣。



## (一)偵辦策略

FBI 為了偵辦此類案件，實施特定地區辦公室負責人處理特定勒索軟體，如 Ryuk 由安克雷奇/波特蘭地區辦公室負責；SamSam 則由紐瓦克地區負責，同時必配合熟稔科技犯罪檢察官及技術團隊支援，分析被害人可能受駭的管道來源、程式執行細節(加密法)、釐清虛擬貨幣（錢包）位址贖金流向，掌握各項犯罪跡證將犯罪者繩之以法、釋出加密金鑰、封鎖可疑資金管道。

## (二)偵辦工具

- 1.傳票（Grand Jury Subpoenas）。
- 2.搜索令（ECPA Search Warrant）。
- 3.遠端取證（Remote Searches）。
- 4.司法互助（Mutual Legal Assistance Treaties）。

## (三)面臨難題及挑戰

- 1.使用國外勒索軟體（如 Turnkey Ransomware），增加偵查難度。
- 2.個資外洩泛濫，容易取得被害人帳號、密碼及所屬資訊，入侵管道多元，難以有效防範。
- 3.資金流向複雜化，每筆贖金可能牽動數十個虛擬帳戶，追查費時且容易造成斷點。

4. VPN、VPS、Proxy 匿名技術發達，追蹤實際使用者不易。
5. 攻擊程式網路教學普及化、模組化、不需擁有高超知識、技術，任何人只要一鍵操作即可達成入侵動作。
6. 網路管轄權爭議。

#### (四)因應措施

1. 歸納同類案例網路封包運行模式、使用加密法、被害人類型、資金管道及流向，進而找出潛在受害者，期先應處。
2. 定期清查特殊網路封包行為、通報修補系統漏洞、取締可疑帳戶，增加犯罪難度。
3. 勒索軟體種類眾多，使用的技術層面亦不同，參加資安社群分享並進行最新加密、駭侵事件討論，增加自身偵辦技術。

## 參、心得及建議

### 一、心得

科技日新月異，許多新產品、新技術如雨後春筍般不斷湧出，現今最新科技物聯網、區塊鏈、人工智慧技術也不過發展數十載，就有爆炸性的進步，但也因為其帶來之便利性，讓人疏於防範，有心人士遂利用這個漏洞，趁虛而入，運用新興科技從事各種犯罪，而執法機關往往受限於法律及偵查技術無法跟上時代的尖端，面臨不少困境，許多案件出現斷點，無法繼續再向上溯源，揪出真正的犯罪者，引發民眾的不信任感危機。

有效提升偵防量能，除了自身的努力外，參加相關研討會也是另一途徑，尤其是國外大型資安研討會，更是如虎添翼般實力大幅增加。筆者曾多次參加國內各大研討會(如臺灣駭客年會、臺北國際安全科技應用博覽會…)，眼見國外規模、人數遠超國內，連會外參與之廠商也都是國際級大廠，無法相提並論。值得一提，本次活動主辦單位甚至邀請各大企業 CIO、政府組織共同商討最新科技議題，主題新穎且多元、500 場次小組討論、30 場大型專題演講，並將簡報內容免費在官網、影音頻道及場外大螢幕播放，讓每場專題都有濃厚興趣的學員們，彌補無法同時至現場聆聽精闢演說之遺憾！



## 二、建議

本次國際研討會之所以能吸引眾多觀眾不遠千里而來，除因為 RSA 資訊安全研討會為世界著名資安活動，展示全球最新科技及偵防技術、工具，最重要的是每個參與者皆樂於分享知識，透過彼此交流與互動，可以知曉其他國家最新的偵查技術、駭侵趨勢及面臨困境，尋求解決之道。因此持續派員參加與會，絕對是最正確的選擇，不僅可強化國內資安事件處理能力、培養國際觀，與世界技術接軌。面對未知的挑戰，將能更快速找到問題徵點，運用最適當的工具、設備，有效率解決各種困境，期將成功經驗推廣至各警察機關、其他國家，遏止新興犯罪的發生。