SANS

NETWORK SECURITY 2017

Las Vegas, NV | September 10-17

PROGRAM GUIDE

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SEC301	SEC566	FOR585
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SEC501	SEC579	MGT414
SEC503	SEC642	MGT512
SEC504	SEC660	MGT514
SEC505	FOR500	DEV522
SEC506	FOR508	DEV541
SEC511	FOR518	AUD507
SEC542	FOR526	LEG523
SEC560	FOR572	ICS410
	FOR578	

To receive the discounted rate, you must sign up before Monday, September 18th at 8:00pm EDT

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All students who register for a 4-6 day course will be eligible to play NetWars for FREE. *Space is limited. Please visit the Registration Support desk to register today.*

GENERAL INFORMATION

Badge & Courseware Distribution

Location: Roman I Ballroom (Promenade Level)

Sat, Sept 9 (WELCOME RECEPTION) . . . . . 5:00pm - 7:00pm
Sun, Sept 10 - Mon, Sept 11 . . . . . 7:00am - 9:00am

Location: Octavius Ballroom Foyer (Promenade South Level)

Sat, Sept 16 (SHORT COURSES ONLY) . . . . . 8:00am - 9:00am

Registration Support

Location: Promenade Foyer (Promenade Level)

Sun, Sept 10 - Thu, Sept 14 . . . . . 8:00am – 5:00pm
Fri, Sept 15 . . . . . 8:00am - 2:00pm

Internet Café

Location: Imperial Ballroom

Sun, Sept 10 . . . . . Opens at noon
Mon, Sept 11 - Thu, Sept 14 . . . . . Open 24 hours
Fri, Sept 15 . . . . . Closes at 2:00pm

Course Times

All full-day courses will run 9:00am - 5:00pm (unless noted)

Course Breaks

Morning Coffee 7:00am-9:00am
Morning Break 10:30am-10:50am
Lunch (ON YOUR OWN) 12:15pm-1:30pm
Afternoon Break 3:00pm-3:20pm

First Time at SANS?

Please attend our **Welcome to SANS** talk designed to help you get the most from your SANS training experience. The talk is from **8:00am - 8:30am** on **Sunday, September 10** in *Milano VII/VIII*.

Photography Notice

SANS may take photos of classroom activities for marketing purposes. SANS Network Security 2017 attendees grant SANS all rights for such use without compensation, unless prohibited by law.

Feedback Forms and Course Evaluations

The SANS planning committee wants to know what we should keep doing and what we need to improve – but we need your help! Please take a moment to fill out an evaluation form after each course day and bonus session and drop it in the evaluation box.

Wear Your Badge

To confirm you are in the right place, SANS Work-Study participants will be checking your badge for each course and event you enter. For your convenience, please wear your badge at all times.

Bootcamp Sessions and Extended Hours

The following classes have evening bootcamp sessions or extended hours. For specific times, please refer to pages 4-6.

Bootcamps (Attendance Mandatory)

SEC401: Security Essentials Bootcamp Style

SEC511: Continuous Monitoring and Security Operations

SEC660: Advanced Penetration Testing, Exploit Writing, and Ethical Hacking

SEC760: Advanced Exploit Development for Penetration Testers

MGT414: SANS Training Program for CISSP® Certification

Extended Hours:

SEC504: Hacker Tools, Techniques, Exploits, and Incident Handling

SEC560: Network Penetration Testing and Ethical Hacking

MGT512: SANS Security Leadership Essentials for Managers with Knowledge Compression™

COURSE SCHEDULE

START DATE: **Sunday, September 10**
Time: 9:00am - 5:00pm (Unless otherwise noted)

SEC401: Security Essentials Bootcamp Style
Stephen Sims . . . . . Location: Neopolitan I
Bootcamp Hours: 5:00pm - 7:00pm (Course days 1-5)

SEC503: Intrusion Detection In-Depth
David Hoelzer . . . . . Location: Octavius 20

SEC504: Hacker Tools, Techniques, Exploits & Incident Handling
John Strand . . . . . Location: Roman II
Extended Hours: 5:00pm - 7:15pm (Course Day 1 only)

SEC505: Securing Windows and PowerShell Automation
Jason Fossen. . . . . Location: Octavius 14

SEC506: Securing Linux/Unix
Hal Pomeranz. . . . . Location: Octavius 3

SEC511: Continuous Monitoring and Security Operations
Bryan Simon . . . . . Location: Octavius 17/18
Bootcamp Hours: 5:15pm - 7:00pm (Course days 1-5)

SEC542: Web App Penetration Testing and Ethical Hacking
Eric Conrad . . . . . Location: Milano VII/VIII

SEC555: SIEM with Tactical Analytics
Justin Henderson. . . . . Location: Octavius 6

SEC560: Network Penetration Testing and Ethical Hacking
Ed Skoudis . . . . . Location: Roman IV
Extended Hours: 5:00pm - 7:15pm (Course Day 1 only)
Extended hours will be led by John Strand in the SEC504 classroom located in Roman II

SEC561: Immersive Hands-on Hacking Techniques
Kevin Fiscus . . . . . Location: Florentine III

SEC573: Automating Information Security with Python
Michael Murr . . . . . Location: Neopolitan II

SEC575: Mobile Device Security and Ethical Hacking
Joshua Wright. . . . . Location: Pompeian III

SEC617: Wireless Ethical Hacking, Penetration Testing, and Defenses
Larry Pesce . . . . . Location: Pompeian IV

SEC642: Advanced Web App Penetration Testing, Ethical Hacking, and Exploitation Techniques
Adrien de Beaupre . . . . . Location: Florentine IV

SEC760: Advanced Exploit Development for Penetration Testers
Jake Williams . . . . . Location: Octavius 13
Bootcamp Hours: 5:15pm - 7:00pm (Course days 1-5)

FOR500: Windows Forensic Analysis
Chad Tilbury . . . . . Location: Florentine II

FOR508: Advanced Digital Forensics, Incident Response, and Threat Hunting
Rob Lee . . . . . Location: Florentine I

FOR518: Mac Forensic Analysis
Sarah Edwards . . . . . Location: Salerno

FOR526: Memory Forensics In-Depth
Alissa Torres . . . . . Location: Sorrento

FOR572: Advanced Network Forensics and Analysis
Philip Hagen . . . . . Location: Neopolitan III

FOR585: Advanced Smartphone Forensics
Heather Mahalik . . . . . Location: Capri

FOR610: Reverse-Engineering Malware: Malware Analysis Tools and Techniques
Lenny Zeltser . . . . . Location: Milano II

MGT414: SANS Training Program for CISSP® Certification
Seth Misenar . . . . . Location: Octavius 9/10
Bootcamp Hours: 8:00am - 9:00am (Course days 2-6) & 5:00pm - 7:00pm (Course days 1-5)

MGT525: IT Project Management, Effective Communication, and PMP® Exam Prep
Jeff Frisk. . . . . Location: Octavius 5

DEV522: Defending Web Applications Security Essentials
Dr. Johannes Ullrich. . . . . Location: Octavius 19

AUD507: Auditing & Monitoring Networks, Perimeters, and Systems
Clay Risenhoover. . . . . Location: Octavius 21/22

HOSTED: Physical Security Specialist – Full Comprehensive Edition
The CORE Group. . . . . Location: Neopolitan IV

START DATE: **Monday, September 11**
Time: 9:00am - 5:00pm (Unless otherwise noted)

SEC301: Intro to Information Security
Keith Palmgren. . . . . Location: Milano I

SEC501: Advanced Security Essentials – Enterprise Defender
Paul A. Henry . . . . . Location: Octavius 1/2

SEC550: Active Defense, Offensive Countermeasures and Cyber Deception
Bryce Galbraith . . . . . Location: Octavius 23

SEC566: Implementing and Auditing the Critical Security Controls – In-Depth
James Tarala . . . . . Location: Milano III

SEC579: Virtualization and Software-Defined Security
Dave Shackleford. . . . . Location: Octavius 11

COURSE SCHEDULE

SEC660: Advanced Penetration Testing, Exploit Writing, and Ethical Hacking
James Lyne . . . . . Location: Octavius 7/8
Bootcamp Hours: 5:15pm - 7:00pm (Course days 1-5)

FOR578: Cyber Threat Intelligence
Robert M. Lee . . . . . Location: Milano IV

MGT512: SANS Security Leadership Essentials for Managers with Knowledge Compression™
G. Mark Hardy. . . . . Location: Milano VI
Extended Hours: 5:00pm-6:00pm (Course days 1-4)

MGT514: IT Security Strategic Planning, Policy, and Leadership
Frank Kim . . . . . Location: Milano V

MGT517: Managing Security Operations: Detection, Response, and Intelligence
Christopher Crowley . . . . . Location: Pompeian II

DEV541: Secure Coding in Java/JEE: Developing Defensible Applications
Gregory Leonard . . . . . Location: Messina

DEV544: Secure Coding in .NET: Developing Defensible Applications
Eric Johnson . . . . . Location: Anzio

LEG523: Law of Data Security and Investigations
Benjamin Wright . . . . . Location: Pompeian I

ICS410: ICS/SCADA Security Essentials
Justin Searle . . . . . Location: Octavius 15/16

START DATE: **Saturday, September 16**
Time: 9:00am - 5:00pm (Unless otherwise noted)

SEC440: Critical Security Controls: Planning, Implementing, and Auditing
Chris Christianson . . . . . Location: Octavius 9/10

SEC546: IPv6 Essentials
Dr. Johannes Ullrich. . . . . Location: Octavius 21/22

SEC580: Metasploit Kung Fu for Enterprise Pen Testing
Bryce Galbraith . . . . . Location: Octavius 13

MGT415: A Practical Introduction to Cyber Security Risk Management
James Tarala . . . . . Location: Octavius 20

MGT433: Securing The Human: How to Build, Maintain, and Measure a High-Impact Awareness Program
Lance Spitzner . . . . . Location: Octavius 19

DEV531: Defending Mobile Applications Security Essentials
Gregory Leonard . . . . . Location: Octavius 14

DEV534: Secure DevOps: A Practical Introduction
Frank Kim . . . . . Location: Octavius 11

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CERTIFICATIONS

Add a GIAC Certification with your SANS training at SANS Network Security 2017 and

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In the information security industry, certification matters. GIAC Certifications offer skills-based certifications that go beyond high-level theory and test true hands-on and pragmatic skill sets that are highly regarded in the InfoSec industry.

Pay just $689 when you bundle your certification attempt with your SANS training course during SANS Network Security 2017 for a savings of $360! After this event is over, the alumni bundle price goes to $1,049.

Stop by the Registration Support Desk
or via your Portal Account
www.sans.org/account/login?url=history
to add your GIAC certification attempt
before the last day of class for the discount.

Find out more about GIAC at www.giac.org or call 301-654-7267.

BONUS SESSIONS

Enrich your SANS experience!

Morning and evening talks given by our faculty and selected subject matter experts help you broaden your knowledge, get the most for your training dollar, and hear from the voices that matter in network and computer security.

SATURDAY, SEPTEMBER 9

SPECIAL EVENT

Welcome Reception

Saturday, Sept 9 | 5:00pm - 7:00pm
Location: Promenade Foyer

Check in early and network with your fellow students!

SUNDAY, SEPTEMBER 10

SPECIAL EVENT

General Session – Welcome to SANS

Speaker: Bryan Simon
Sunday, Sept 10 | 8:00am - 8:30am | Location: Milano VII/VIII

Join us for a 30-minute overview to help you get the most out of your SANS training experience. You will receive event information and learn about programs and resources offered by SANS. This brief session will answer many questions and get your training experience off to a great start. This session will be valuable to all attendees but is highly recommended for first time attendees.

KEYNOTE

Actionable Detects: Blue Team Cyber Defense Tactics

Speaker: Seth Misenar
Sunday, September 10 | 7:15pm - 9:15pm | Location: Milano VII/VIII

Organizations relying on third parties to detect breaches can go almost a full year before finding out they have been compromised. Detect the breach yourself, and on average you will find it within about a month of the initial occurrence. Considering detection and defense against modern adversaries too costly to perform yourself can be a very expensive miscalculation considering the substantially increased price of response and recovery with breach duration. Seth Misenar's ever evolving Actionable Detects presentation provides you thoughts, tactics, techniques, and procedures to once again take pride in your Blue Team cyber capabilities. Not applying these lessons learned could prove costly in the face of adapting threat actors. Dig in and learn to hold your head high when talking about your defensive cyber operations capabilities.

MONDAY, SEPTEMBER 11

SANS@NIGHT

The Cider Press: Extracting Forensic Artifacts from Apple Continuity

Speakers: Heather Mahalik & Sarah Edwards
Monday, Sept 11 | 7:15pm - 8:15pm | Location: Roman IV

Apple Continuity allows us to move between our devices without disruption in activity. Just think of the ultimate handoff where you can start browsing the Internet on your iPhone, continue on your Mac without the hassle of having to type a search a second time. Essentially, your devices work together enabling you to do less. Imagine how this looks on a Mac, iPhone or Apple Watch. Will you be able to tell which device the user conducted an activity on? What will the on-device forensic artifacts look like? Continuity requires inter-device communications, so what artifacts will be present on the WiFi and Bluetooth fronts? What if this feature would make or break your investigation?

SANS@NIGHT

The 14 Absolute Truths of Security

Speaker: Keith Palmgren
Monday, Sept 11 | 7:15pm - 8:15pm | Location: Milano II

Keith Palmgren has identified 14 absolute truths of security – things that remain true regardless of circumstance, network topology, organizational type, or any other variable. Recognizing these 14 absolute truths and how they affect a security program can lead to the success of that program. Failing to recognize these truths will spell almost certain doom. Here we will take a non-technical look at each of the 14 absolute truths in turn, examine what they mean to the security manager, what they mean to the security posture, and how understanding them will lead to a successful security program.

SANS@NIGHT

Introduction to Reversing with IDA

Speaker: Stephen Sims
Monday, Sept 11 | 7:15pm - 8:15pm | Location: Roman II

Have you ever been curious how to use the Interactive Disassembler (IDA) by Hex-Rays to reverse engineer applications, or just find the tool intimidating? Join me for an hour while I give a tour of IDA, its features, and automation through scripting. Various demonstrations will be performed to help tie the information being shared to real world examples. The concepts of disassembly and decompilation will also be addressed, as well as plug-ins and scripts that can be used to aide in exploit development and malware analysis.

BONUS SESSIONS

SANS@NIGHT

Industrial Control System Active Defense and Threat Intelligence

Speaker: Robert M. Lee

Monday, Sept 11 | 7:15pm - 8:15pm | Location: Florentine II

Industrial control systems (ICS) are some of the most defensible environments on the planet. Sure, ICS tend to have legacy equipment and numerous vulnerabilities, but if you really want to make the lights blink it's going to take more than an exploit. In this presentation, the course author for ICS515: ICS Active Defense and Incident Response and FOR578: Cyber Threat Intelligence will talk about what it means to make a defensible environment a defended one by leveraging active defense best practices such as threat hunting and network security monitoring. In addition, what types of threat intelligence are applicable to such environments will be covered with use-cases highlighting lessons learned for both good and bad practices. Ultimately, defending these industrial environments requires a human focus.

SANS@NIGHT

Stuck in the Box: A SIEM's Tale

Speaker: Justin Henderson

Monday, Sept 11 | 8:15pm - 9:15pm | Location: Roman II

Organizations often spend excessive amounts of money on SIEM products only to end up with a log collection box when they thought they purchased a tactical detection system. Most organizations find themselves with a SIEM but unsure how to use its capabilities. Point solutions are quick to defend deficiencies by stating each environment is different so you, the customer, must tell them what you want the SIEM to do and then they'll help with professional services or by replacing your current SIEM with something "better and more advanced." This is hogwash. Organizations tend to have a lot of overlap through the use of Windows systems or network protocols such as DNS. As such there are high-fidelity detects that can be implemented in every organization. Enough is enough. This presentation is for you if you are looking for techniques and methods to get value out of your current SIEM or are interested in seeing how a new open-source big data solution such as the Elasticsearch Stack, formerly ELK, most likely can beat what you have today. It is time to think outside the box, Come find out how one organization spent 14 months deploying a top magic quadrant SIEM solution only to have it beaten by ELK in two weeks.

SANS@NIGHT

Be the Cheat Sheet. Know Memory.

Speaker: Alissa Torres

Monday, Sept 11 | 8:15pm - 9:15pm | Location: Roman IV

There is an arms race between analysts and attackers. Modern malware obfuscates and subverts using techniques such as sophisticated code injection and anti-memory analysis mechanisms to destroy or corrupt volatile data. Examiners must have a deep understanding of memory internals and choose the right tool for the job in order to identify the malware and discern the intentions of attackers or rogue trusted insiders. It's time to re-up your skills at hunting evil in memory. Attend this session, learn the newest memory forensics techniques and tear into our memory images to find your own evil.

STI MASTER'S PRESENTATION

Increase Network Visibility: Methods to Feed IDS Sensors

Speaker: Brandon Peterson, Master's Degree Candidate

Monday, Sept 11 | 8:15pm - 8:55pm | Location: Milano V

IDS sensors are a valuable tool for monitoring malicious activity on a network. However, to be useful, they must be feed with network traffic. This becomes challenging as most organizations no longer use a simple network architecture consisting of just an internal, DMZ, and external network. Instead, organizations split their internal network into many smaller segments, typically have multiple DMZs, and often utilize more than one ISP for Internet access. Additionally, most organizations will have multiple locations and may be using multiple cloud service providers. To inspect the traffic from multiple disparate environments, network security administrators need to understand the pros and cons of the many different methods of packet capturing available. This presentation discusses the most common methods available: Taps, SPANs, RSPANs, and ERSPAN. The discussion will also cover some of the tools and techniques used to benchmark these methods in your own environment. Understanding these methods will help ensure organizations can monitor their entire network in the most cost effective manner possible.

TUESDAY, SEPTEMBER 12

SPECIAL EVENT

Coffee & Donuts with the Graduate School

Speaker: Shelley Moore

Tuesday, Sept 12 | 7:30am-9:00am

Location: Promenade Foyer (Front of Registration Desk)

Join us for coffee, donuts, and conversation with graduate school staff and current students. Learn more about SANS's regionally accredited graduate program which combines SANS technical training and certifications, with leadership and management curriculum specifically designed for the unique needs of aspiring leaders. Find out how the class you're taking this week may be applied towards a master's degree or graduate certificate program. Visit www.sans.edu for complete information on curriculum, admissions, and funding options.

BONUS SESSIONS

SPECIAL EVENT

Women's CONNECT Event

Hosted by the SANS COINS Program and ISSA WIS SIG
Tuesday, Sept 12 | Location: Genoa
6:00pm - 7:30pm – Networking Reception
7:15pm - 9:15pm – SANS@Night Bonus Sessions

Joins SANS and the ISSA International Women In Security Special Interest Group (WIS SIG) as we partner with local association chapters and groups to foster an evening of connections. Association members and group representatives will be on hand to discuss their activities and the benefits of membership. From Jean Jennings Bartik to Diane Greene, women have always been a driving force in the field of information technology. Their experiences have been filled not only with stories of overcoming challenges but also ones of innovation and inspiration. Enjoy the connection building and camaraderie of your peers, while discussing the recent successes relating to local luminaries such as Joann Maguire, Sandra Rothenberg, Pam Shockley-Zalabak, and Judith Wagner, among MANY others.

SPECIAL EVENT

GIAC Program Presentation

Speaker: Jeff Frisk
Tuesday, Sept 12 | 6:15pm - 7:15pm | Location: Florentine II

Global Information Assurance Certification (GIAC) develops and administers the premier certifications for information security professionals. More than 30 GIAC certifications align with SANS training and ensure mastery in critical, specialized InfoSec domains. GIAC certifications provide the highest and most rigorous assurance of cybersecurity knowledge and skill available to industry, government, and military clients across the world. Join us for an informational presentation along with a Q and A session. We'll cover everything from why you should get certified, what testing looks like, how to keep certifications current and more. GIAC staff will be present to answer your questions before and after the presentation.

SANS@NIGHT

You've Got Ransomware! Managing the Legal Risk of Cyber Fraud

Speaker: Benjamin Wright
Tuesday, Sept 12 | 7:15pm - 8:15pm | Location: Roman IV

Today most fraud has a cyber component, and most fraud investigations involve digital evidence. Cyber fraud like ransomware can trigger a legal crisis for your firm or your client. Mr. Wright will share insights on how to manage the legal risk. He will examine legal measures such as disclaimers, cyber insurance and invocation of attorney confidentiality rules.

SANS@NIGHT

Introducing DeepBlueCLI, a PowerShell Module for Hunt Teaming via Windows Event Logs

Speaker: Eric Conrad
Tuesday, Sept 12 | 7:15pm - 8:15pm | Location: Milano VII/VIII

A number of events are triggered in Windows environments during virtually every successful breach. These include service creation events and errors, user creation events, extremely long command lines, compressed and base64 encoded PowerShell functions, and more. Microsoft has added a wealth of blueteam tools to its operating systems, including native support of logging the full command line used to launch all processes, without requiring third-party tools (or Sysmon). KB3004375 adds this feature to Windows 7 and Server 2008R2. DeepBlueCLI can automatically determine events that are typically triggered during a majority of successful breaches, including use of malicious command lines including PowerShell.

SANS@NIGHT

The Seven Deadly Sins of Incident Response

Speaker: Jake Williams
Tuesday, Sept 12 | 7:15pm - 8:15pm | Location: Roman II

In this session, Jake will walk you through the seven deadly sins of incident response. Incident response is not for the faint of heart and it's far easier to get wrong than it is to get right. Jake's been in the trenches working incident response with a huge number of clients, ranging in size from a few credit card records to one case where hundreds of millions of dollars were at stake. You'll take away some valuable lessons to help prevent an incident response catastrophe that you can't walk back.

SANS@NIGHT

Control Things Platform

Speaker: Justin Searle
Tuesday, Sept 12 | 8:15pm - 9:15pm | Location: Milano VII/VIII

SamuraiSTFU was a great start to help Electric Utilities do penetration testing of their DCS and SCADA networks, however it just wasn't enough. SamuraiSTFU has expanded its goals to include all control systems and IoT devices, thus requiring a name change and a complete rebuild of the pentest distribution. Come check out the new Control Things Platform, a pentesting platform to help you learn, calibrate, and perform security testing of control networks in any ICS organization.

SANS@NIGHT

Lets Go Hunting Bad Guys

Speaker: John Strand
Tuesday, Sept 12 | 8:15pm - 9:15pm | Location: Roman II

In this presentation, John will share custom free tools with you to hunt bad guys inside and outside of your network – with awesomeness and math. But mostly math.

BONUS SESSIONS

SANS@NIGHT

Ten Tenets of CISO Success

Speaker: Frank Kim

Tuesday, Sept 12 | 8:15pm - 9:15pm | Location: Roman IV

The era of CISO-as-dictator is at an end. The increased importance of cybersecurity as a vital component of business growth requires that security leaders find new ways to work with executive leaders, business partners, and their own team members. Learn 10 tenets that CISOs and security leaders can utilize to go beyond technical skills, successfully lead organizations through change, and ultimately get to "yes" with the business.

WEDNESDAY, SEPTEMBER 13

SANS@NIGHT

How to Become a SANS Instructor

Speaker: Eric Conrad

Wednesday, Sept 13 | 12:30pm - 1:15pm | Location: Milano VII/VIII

This presentation is free of charge, but space is limited to the first 40 registrations. Please register online at www.sans.org/network-security

Have you ever wondered what it takes to become a SANS instructor? How does your SANS instructor rise to the top and demonstrate the talents to become part of the SANS faculty? Attend this session and learn how to become part of the faculty and learn the steps to make that goal a reality. Eric Conrad, a SANS Certified Instructor, will share his experiences and show you how to become part of the SANS top-rated instructor team.

Core NETWARS EXPERIENCE

Hosted by Tim Medin

Wednesday, Sept 13 - Thursday, Sept 14

6:30pm - 9:30pm | Roman Ballroom

SANS Core NetWars Experience is a computer and network security challenge designed to test a participant's experience and skills in a safe, controlled environment while having a little fun with your fellow IT security professionals. Many enterprises, government agencies, and military bases are using NetWars to help identify skilled personnel and as part of extensive hands-on training. With Core NetWars, you'll build a wide variety of skills while having a great time.

DFIR NETWARS TOURNAMENT

Hosted by Sarah Edwards & Heather Mahalik

Wednesday, Sept 13 - Thursday, Sept 14

6:30pm - 9:30pm | Florentine I & II

SANS DFIR NetWars Tournament is an incident simulator packed with a vast amount of forensic and incident response challenges covering host forensics, network forensics, and malware and memory analysis. It is developed by incident responders and analysts who use these skills daily to stop data breaches and solve crimes. Sharpen your team's skills prior to being involved in a real incident.

CYBER DEFENSE NETWARS TOURNAMENT

Hosted by Eric Conrad & Seth Misenar

Wednesday, Sept 13 - Thursday, Sept 14

7:15pm - 10:15pm | Milano VII & VIII

The all-new NetWars Defense Competition is a defense-focused challenge aimed at testing your ability to solve problems and secure your systems from compromise. With so much focus on offense, NetWars Defense is a truly unique experience and opportunity to test your skills in architecture, operations, threat hunting, log analysis, packet analysis, cryptography, and much more!

SANS@NIGHT

So, You Wanna be a Pentester?

Speaker: Adrien de Beaupre

Wednesday, Sept 13 | 7:15pm - 8:15pm | Location: Milano I

This presentation will discuss the things that you will actually need to become a penetration tester. Be prepared for a no-fluff honest discussion. You will need attitude, aptitude, initiative, desire, dedication, discipline, integrity, ethics, experience, knowledge, and tools.

SANS@NIGHT

Three Keys to Mobile Security: Are You Doing Everything You Can to Protect Your Apps?

Speaker: Gregory Leonard

Wednesday, Sept 13 | 7:15pm - 8:15pm | Location: Milano III

The threat landscape against mobile applications continues to grow. Malicious apps are still being discovered in the Apple and Google Play app stores, and questions continue to grow about how well-protected mobile users really are. To combat this increasing threat landscape, mobile devices are providing new hardware and software features to help protect users from exploitation. We will discuss how developers can use features such as fingerprint scanning, on-device cryptography, and MDM/MAM to provide a secure environment for users and their data.

BONUS SESSIONS

SANS@NIGHT

Malware Analysis for Incident Responders: Getting Started

Speaker: Lenny Zeltser

Wednesday, Sept 13 | 7:15pm - 8:45pm | Location: Milano II

Knowing how to analyze malware has become a critical skill for incident responders and forensic investigators. A good way to get started with such efforts involves examining how malicious software behaves in a controlled laboratory environment. In this 90-minute briefing, Lenny Zeltser demonstrates key aspects of this process, walking you through behavioral analysis of a malware specimen by using several free tools and even peeking into the world of code analysis. You will see practical techniques in action and understand how malware analysis will help you to triage the incident to assess key capabilities of the malicious software. You will also learn how to determine ways of identifying this malware on systems in your environment by establishing indicators of compromise (IOCs). This presentation will help you start learning how to turn malware inside out.

STI MASTER'S PRESENTATION

Don't Always Judge a Packet by Its Cover

Speaker: Gabriel Sanchez, Master's Degree Candidate

Wednesday, Sept 13 | 8:15pm - 8:55pm | Location: Milano V

This presentation is on research that tackles the challenges of honing in on packets of interest that may contain malicious intentions. Traditional approaches to this challenge typically rely on heuristics or signatures with a known bad which tend to be ineffective to the advanced attacker. This presentation will look at the approach of behavior analysis and profiling of packets to defend against attackers that bypass traditional detection.

SANS@NIGHT

Anti-Ransomware

Speaker: G. Mark Hardy

Wednesday, Sept 13 | 8:15pm - 9:15pm | Location: Milano I

OMG! We just got hit with Ransomware! What you don't usually hear next is LOL! You can build defenses that prevent Ransomware from paralyzing your organization – we'll show you how. Ransomware is a billion dollar industry, and it's getting even bigger. Lost productivity costs far more than the average ransom, so executives just say, "Pay the darn thing." But what if you could stop Ransomware in its tracks? We'll demonstrate tools and methodologies that are battle-proven and ACTUALLY WORK as evidenced by fully contained Ransomware "explosions" that went nowhere. We'll offer insights into the future of this attack vector, and we'll venture predictions on how this "industry" will evolve and what to expect next.

SANS@NIGHT

Secure DevOps: Static Analysis & the Puma's Tail

Speaker: Eric Johnson

Wednesday, Sept 13 | 8:15pm - 9:15pm | Location: Milano III

DevOps is changing the way that organizations design, build, deploy and operate online systems. Engineering teams are making hundreds, or even thousands, of changes per day, and traditional approaches to security are struggling to keep up. Security must be reinvented in a DevOps world and take advantage of the opportunities provided by continuous integration and delivery pipelines. In this talk, we will explore how static analysis fits into Secure DevOps and introduce you to Puma Scan, an open-source .NET static analysis rules engine. Live demonstrations will show Puma Scan identifying vulnerabilities inside Visual Studio and in a Jenkins continuous integration (CI) build pipeline. Attendees will walk away with a better understanding of the role static analysis play in DevOps and a .NET static analysis engine to help secure your organization's applications.

THURSDAY, SEPTEMBER 14

SANS@NIGHT

The Three Cs to Building a Mature Awareness Program

Speaker: Lance Spitzner

Thursday, Sept 14 | 7:15pm - 8:15pm | Location: Milano II

After working with hundreds of organizations we have found three common obstacles to a successful awareness program, which we call the three Cs: Communication, Collaboration and Culture. Learn how the most effective organizations are overcoming these three challenges and how you can apply their lessons learned to your own security awareness program.

STI MASTER'S PRESENTATION

Selling Your Information Security Strategy

Speaker: David Todd, Master's Degree Candidate

Thursday, Sept 14 | 7:15pm - 7:55pm | Location: Milano V

It is the information security leader's responsibility to identify the gaps between the most significant security threats and vulnerabilities, compared with the organization's current state. The information security leader should develop a strategy that aligns with the strategic goals of the organization and sells the gap mitigation strategy to executive management and the board of directors. Before embarking on this new adventure, clearly articulate what success looks like to your organization. What is the result you are driving to accomplish? Then develop a strategy to get you there. Take a play directly from the sales organization's playbook - know yourself; know your customer; and know the benefits from your customer's perspective. Following this simple strategy will help the information security leader close the deal of selling your information security strategy.

BONUS SESSIONS

SANS@NIGHT

Securing Your Kids

Speaker: Lance Spitzner

Thursday, Sept 14 | 8:15pm - 9:15pm | Location: Milano II

Technology is an amazing tool. It allows our kids to access a tremendous amount of information, meet new people, and communicate with friends around the world. In addition, for them to be successful in the 21st century they have to know and understand how to leverage these new tools. However, with all these capabilities come a variety of new risks, risks that as parents you may not understand or even be aware of. In this one-hour presentation we cover the top three risks to kids online and the top steps you can take to protect them.

STI MASTER'S PRESENTATION

Privacy and Legal Dimensions in Increasingly Connected Digital World

Speaker: Muzamil Riffat, Master's Degree Candidate

Thursday, Sept 14 | 8:15pm - 8:55pm | Location: Milano V

The benefits of the reliance on the Internet and Digital Communication for our day-to-day activities are accompanied by complex privacy and legal related challenges. In the realm of privacy, there are subjective interpretations of the concept that are not universally accepted. Therefore, what privacy really means or entails is influenced by auxiliary factors such as culture, location, use of technology and perceived benefits from information sharing. The legal apparatus is inherently slow and not able to keep up with the rapid changes in the technology landscape. As technology is becoming more and more integral to our daily life, it was always feared that legal apparatus will sooner or later be tested with the cases involving information technology and privacy considerations. The presentation will explain the definition of privacy in the light of US constitution as well as what does it really mean to have a "reasonable" expectation of privacy. A case-study about the recent high-profile legal cases will be used to illustrate the complexities involved in such cases from information security and privacy perspectives.

VENDOR EVENTS

Vendor Solutions Expo

Tuesday, Sept 12 | 12:00pm - 1:30pm | 5:30pm - 7:30pm
Location: Octavius Ballroom 24/25

All attendees are invited to meet with established and emerging solution providers as they reveal the latest tools and technologies critical to information security. The SANS Vendor Expo showcases product offerings from key technology providers in the commercial tools and services market. Vendors arrive prepared to interact with a technically savvy audience. You'll find demonstrations and product showcases that feature all the best that the security industry has to offer!

Vendor-Sponsored Lunch Session

Tuesday, Sept 12 | 12:00pm-1:30pm | Location: Octavius Ballroom 24/25

Sign up at the SANS vendor table to receive a ticket for a free lunch brought to you by sponsoring vendors. Please note, by accepting a lunch ticket your badge will be scanned and your contact information shared with the sponsoring vendors. Join these sponsoring vendors and others on the expo floor for an introduction to leading solutions and services that showcase the leading options in information security. Take time to browse the expo floor and get introduced to providers and their solutions that align with the security challenges being discussed in class.

Luncheon sponsors are:

Anomali
Bracket Computing
Bricata
Corelight
Crossmatch
Cylance
Datacom Systems
Forcepoint
ForeScout Technologies
InfoArmor
Kaspersky Labs
LogRhythm
Minerva Labs
Pwnie Express
Qualys
RiskIQ
SecurityZONES/Spamhaus
Sophos
Terbim Labs
VM Ray

Vendor-Sponsored Lunch & Learns

Since SANS course material is product neutral, these presentations provide the opportunity to evaluate vendor tools in an interactive environment to increase your effectiveness, productivity, and knowledge gained from the conference. These sessions feature a light meal or refreshments provided by the sponsor. Sign-Up Sheets for the events below are located on the are located at the Vendor Registration Desk.

VENDOR EVENTS

FORCEPOINT
POWERED BY Raytheon

LUNCH AND LEARN

Does Your Current Firewall Rise Above the Evasion Gap?

Speaker: Michael Knapp, Director, Network Security Architects for the Americas and Office of the CISO

Monday, Sept 11 | 12:30pm - 1:15pm | Location: Milano I

The 2017 NSS Labs NGFW Test reports that many of the leading next generation firewalls are vulnerable to Advanced Evasion Techniques (AETs) that can let exploits and malware (including aggressive ransomware attacks like WannaCry) to into your network undetected. Michael Knapp will demonstrate how well your firewalls and IPS defenses stand up to evasions with Evader, the world's premier software-based testing environment for evasions. Watch how Evader by Forcepoint lets you interactively throw different types of attacks at firewalls and IPS devices to see whether they do their job – or just give lip service to security.

TERBIUM LABS
Data Intelligence

LUNCH AND LEARN

Data Breaches on the Dark Web: Between Defense and Response

Speaker: Alex Viana, VP of Engineering

Monday, Sept 11 | 12:30pm - 1:15pm | Location: Milano III

Data breaches are a constant threat, even to organizations that follow data security best practices. Once a breach is detected, incident response protocols kick in to mitigate their effect. But between breach and response, an interval estimated to be over 300 days on average, is an entire world of hidden forums, economic incentives, anonymous actors, and even marketing campaigns. This presentation will provide some insight into what happens to certain types of data between breach and response as briefly show how Terbium Lab's Matchlight tool can help close this gap.

ForeScout

LUNCH AND LEARN

How ForeScout Supports the Critical Security Controls

Speaker: Peter Underwood, Systems Engineer, ForeScout Technologies

Monday, Sept 11 | 12:30pm - 1:15pm | Location: Milano II

Automated endpoint visibility and control is a consistent theme in the Critical Security Controls (CSCs). Without the ability to see and effectively manage the diverse and growing population of devices that access your network resources, securing them is impossible. How can you streamline CSC adoption without cutting corners? During this session, we will explain how businesses are using an agentless visibility and control solution to accelerate this process with quick wins in the first four steps of this multistep process. We will also discuss the role agentless visibility and control plays in 13 other critical security controls.

SOPHOS

LUNCH AND LEARN

The Next Evolution of Protection: Introduction to Deep Learning

Speaker: Cameron Byers, Enterprise Sales Engineer

Monday, Sept 11 | 12:30pm - 1:15pm | Location: Milano IV

Sophos has over 30 years of experience in creating an effective defense against ever-changing threats. One constant truth is that there is no silver bullet in security, solutions need to evolve to adapt the ever changing threat landscape. In this presentation, we share what tools are needed and how to best protect customers, and introduce you to the latest techniques in machine learning.

MINERVA

LUNCH AND LEARN

How to Beat Evasive Malware at Its Own Game

Speaker: Lenny Zeltser, VP Products

Monday, Sept 11 | 12:30pm - 1:15pm | Location: Milano V

Developing sophisticated attacks takes time and requires heavy investment. Attackers safeguard their methods by designing malicious software to remain unnoticed by security tools for as long as possible. This educational session discusses some of the common evasive techniques that malware authors incorporate into their creations. Moreover, it proposes several innovative approaches for turning such capabilities against malware to defend endpoints, turning adversaries' strengths into weaknesses. Attend this session to learn how evasive malware achieves its objectives and to consider methods for defending against such threats without relying on signatures, behavioral patterns or machine learning models.

SECURITY ZONES
REALTIME THREAT INTELLIGENCE

SPAMHAUS TECHNOLOGY

LUNCH AND LEARN

Response Policy Zones (RPZ): Using DNS to Choke Malware, Botnets, and Ransomware

Speakers: Matt Stith, Spamhaus Technology; Arnie Bjorklund, SecurityZones

Wednesday, Sept 13 | 12:30pm - 1:15pm | Location: Milano V

Learn the best practices from Spamhaus: threat intelligence to choke botnets, mitigate ransomware, and block connections to malicious domains. Prevent the resolution of known, bad domains within your DNS resolver. DNS RPZ is a proven, cost effective, way to choke botnets, malware and mitigate DDoS attacks and it lets you apply policy, deny access, and control DNS resolution on your infrastructure, stopping connections to malicious domains and IPs.

ANOMALI™

LUNCH AND LEARN

Looking Beyond Your Four Walls: Periphery Threat Intelligence

Speaker: Josh Fu, Senior Sales Engineer

Wednesday, Sept 13 | 12:30pm - 1:15pm | Location: Milano I

Over 63% of the breaches last year involved compromised credentials and phishing scams. As such, organizations need to strongly consider the importance of looking beyond their four walls vital to protecting your organization. This presentation will teach you about the various ways that adversaries can and will use these techniques against you and what you can do to proactively protect yourselves.

VENDOR EVENTS

CYLANCE

LUNCH AND LEARN

ICS Down...It's Go Time!

Speaker: Jason Dely, Professional Services Technical Director, ICS and Critical Infrastructure

Wednesday, Sept 13 | 12:30pm - 1:15pm | Location: Milano IV

For years, we have read about security risks to companies that produce what we need that help run our society. Time and money have been spent, precautions have been taken and protections are in place. The moment of truth has now arrived to put security investments to the test. Yet, there's direct evidence we're not ready to defend and respond. Where have we gone wrong? Did we prepare for the right attacks? Have we admired threats yet ignored our ability to respond and recover? Direct from the battlefield, let's examine where we are and how ready we are for a fight.

Qualys. Continuous Security

LUNCH AND LEARN

Visibility and Security in the Age of Digital Transformation

Speaker: Gill Langston, Director of Product Management

Wednesday, Sept 13 | 12:30pm - 1:15pm | Location: Milano II

As the move to digitally transform accelerates, IT and Security teams face entirely new challenges. From securing devices beyond the traditional perimeter, to establishing security in the "shared responsibility model" of public clouds, IT organizations of all sizes are struggling to achieve visibility and prioritization across multiple platforms and resources. Learn about processes and technologies that will help you keep pace with this acceleration, and about best practices to ensure the most secure environment for you and your customers.

BRACKET COMPUTING

LUNCH AND LEARN

Using In-Memory Techniques to Battle Linux Malware

Speaker: Nolan Karpinski, Product Lead

Wednesday, Sept 13 | 12:30pm - 1:15pm | Location: Milano VI

Linux malware increased 300% from 2015 to 2016*, and the threat is growing as organizations move more workloads to the cloud. Worse, malware is becoming increasingly sophisticated. Yet the common approach is to double down on existing signature and behavior-based detection techniques, which don't prevent zero day attacks. Such malware will eventually beat your perimeter defenses. We need to be ready. Attendees will learn about the use of guest introspection technology to prevent common Linux malware techniques like in-memory privilege escalation, rootkits, and file-level persistence.

LogRhythm

The Security Intelligence Company

LUNCH AND LEARN

Why a Holistic Approach is Crucial in Cybersecurity

Speaker: Keith Buswell, Sales Engineer

Wednesday, Sept 13 | 12:30pm - 1:15pm | Location: Milano III

Learn how log analytics can help you dive deeper into the attack phases. .

Future Training Events

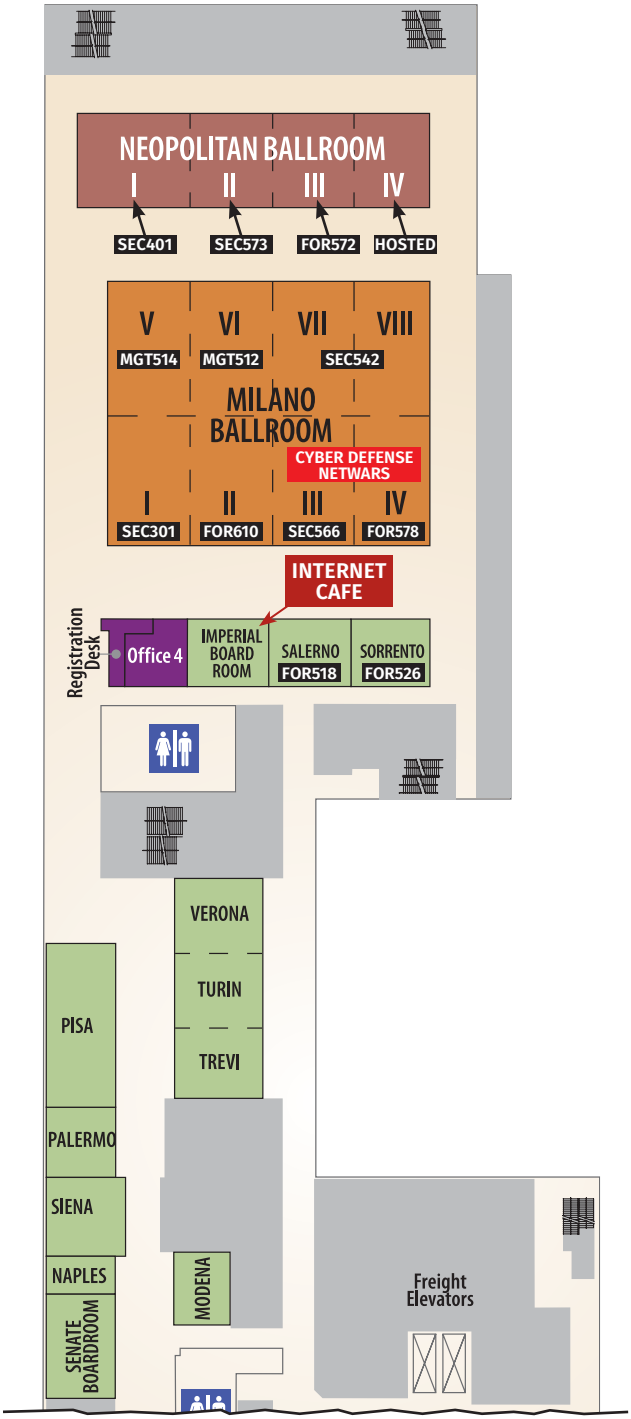
Baltimore Fall		
Baltimore, MD	Sep 25-30	#SANSBaltimore
Rocky Mountain Fall		
Denver, CO	Sep 25-30	#SANSRocky
Phoenix – Mesa		
Mesa, AZ	Oct 9-14	#SANSMesa
Tysons Corner Fall		
McLean, VA	Oct 14-21	#SANSTysons
San Diego		
San Diego, CA	Oct 30 - Nov 4	#SANSSanDiego
Seattle		
Seattle, WA	Oct 30 - Nov 4	#SANSSeattle
Miami		
Miami, FL	Nov 6-11	#SANSMiami
San Francisco Winter		
San Francisco, CA	Nov 27 - Dec 2	#SANSSanFrancisco
Austin Winter		
Austin, TX	Dec 4-9	#SANSAustin
Cyber Defense Initiative		
Washington, DC	Dec 12-19	#SANSCDI
Security East		
New Orleans, LA	Jan 8-13	#SANSSecurityEast
Northern VA Winter		
Reston, VA	Jan 15-20	#SANSReston
Las Vegas		
Las Vegas, NV	Jan 28 - Feb 2	#SANSLasVegas
Miami		
Miami, FL	Jan 29 - Feb 3	#SANSMiami
Scottsdale		
Scottsdale, AZ	Feb 5-10	#SANSScottsdale

Future Summit Events

Pen Test Hackfest		
Bethesda, MD	Nov 13-20	#SANSHackfest
SIEM & Tactical Analytics		
Scottsdale, AZ	Nov 28 - Dec 5	
Cyber Threat Intelligence		
Bethesda, MD	Jan 29 - Feb 5	

HOTEL FLOOR PLANS

PROMENADE LEVEL



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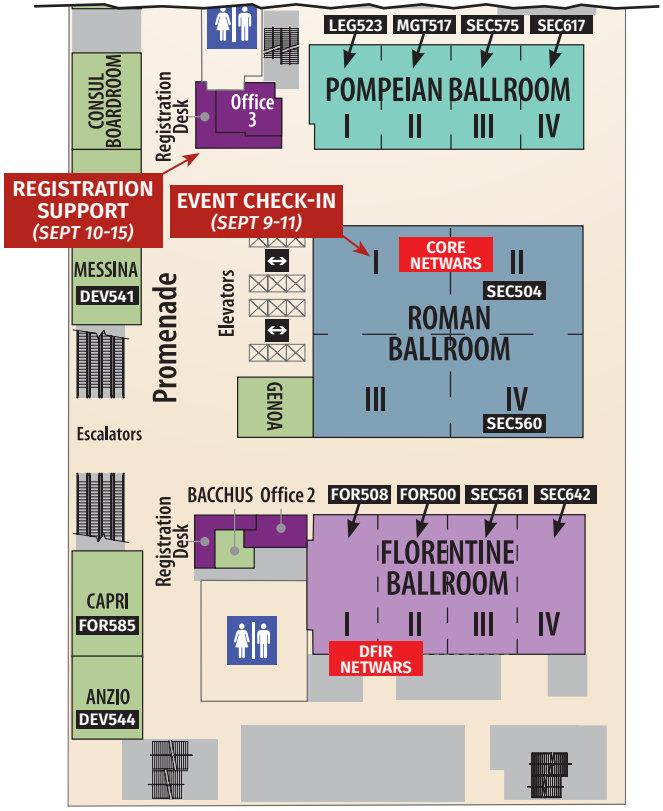
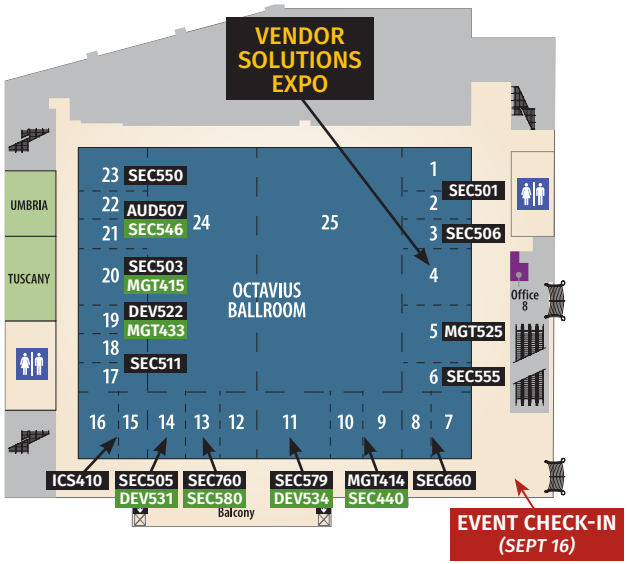


PROMENADE SOUTH



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