2017
Network Security Compliance for PIN and Key Management

TR-39 Training and Exam

Presented by
Delap LLP
About the Instructors

Darlene Kargel, Principal
is a CPA and auditor for Delap with over 40 years of accounting and computer application experience. Ms. Kargel has performed Network Security Compliance Reviews since 1992 for ATM and POS transactions. Clients include banks, processors, merchant processors, certificate authorities and key injection facilities in the USA and internationally.

Ms. Kargel is vice chairperson of the ANSI X9F6 Working Group and a US Expert to ISO TC68 SC2 WG13, and holds the following certifications: CPA, CITP, CGMA, CTGA.

David Buchanan, Partner
has over 10 years of extensive experience in information technology (IT) systems across multiple industries, including healthcare, banking, and retail payments. David leads Delap’s PCI DSS and SOC reporting practices, providing domestic and international clients with information security services including risk assessments, internal control reviews, network security analysis, and information security consulting.

Mr. Buchanan holds the following certifications: CPA, QSA, CEH, CCNA & Security, CTGA, PCIP

Other Services:
- Network required ANSI TR-39 and PCI PIN v2.0 Security Compliance Reviews
- PCI DSS Assessments
- SSAE 16 (SOC reports)
- PCI PIN readiness and Remediation
- Symmetric and PKI Consulting for Security Equipment Manufacturers
TR-39 Core Class

The group-live 4-day training course is designed to provide both internal and external auditors with the necessary tools to complete the ANSI X9/TR-39-2009 Compliance Review for NYCE Payments Network, LLC, Pulse® Corporation, and STAR® Network.

4-Day Core Class (CPE 32 credits)

Level–Basic: no prerequisites or additional preparation required.

Day One:
• Processor and Auditor Responsibilities
• Compliance Review Objectives
• Network Respondent Forms
• Symmetric Key Management Introduction
• Key Names and Hierarchy
• Cryptogram Notation
• Diagram of PIN Transaction Flow
• PIN Translation
• Characteristics of TRSMs
• Group Project

Day Two:
• Cardholder Authentication Methods
• PIN Block Formats
• Exclusive-or
• Introduction to Symmetric Key Life Cycle, including:
  – Key Check Values
  – Single-Length vs. Double-Length Keys
  – Single DES vs. Triple DES
• Approved Key Methodologies
• Asymmetric Keys for Distributing Symmetric Keys
  – High Level
• Group Project

Day Three:
• Review and Obtain an Understanding of Each Control Objective in the ANS X9/TR-39 current version, Section 4
• Techniques for Measuring Compliance
• Group Project

Day Four:
• Compliance Review Field Work Activities
• General Key Management Documentation
• Reporting the Findings

Exam

A passing grade is required for all auditors performing a TR-39 review at the processor level, for Pulse® Corporation and STAR® participants only. Auditors receiving a passing grade will also receive the CTGA designation. Examination criteria and relevant information will be provided through each network’s normal communication methods. Exam time allowance is four hours. Delap will offer three opportunities in 2017 to sit for the exam.

Once you have passed the exam, there is no need to re-take it, but you will need to take a refresher class every 24 months.

Note: Please allow the network 5-8 weeks to provide exam results.

Delap LLP is registered with the National Association of State Boards of Accountancy (NASBA), as a sponsor of continuing professional education on the National Registry of CPE Sponsors. State boards of accountancy have final authority on the acceptance of individual courses for CPE credit. Complaints regarding registered sponsors may be submitted to the National Registry of CPE Sponsors through its website: www.learningmarket.org
“Refresher” Classes

A “refresher” class is required every 24 months. We offer two group-live refresher classes described below:

3-Day Symmetric Key Review, ANSI/ISO/Network Updates, Introduction to EMV, E2E and Payment Tokenization Class (CPE 24 credits)

Level–Intermediate: prerequisites—4-day Core Class, 2-day Asymmetric Class

**Day One:**
- Updates on Relevant ANSI Standards and Network Operating Rules
- Review and Obtain an Understanding of Each Control Objective in the ANSI X9/TR-39 Current Version, Section 4
- Group Projects:
  - Analysis of Reports/Applications to TR-39 Section 4
  - Analysis of Various Work Papers/Application to TR-39 Section 4

**Day Two:**
- Chip Card Technology
  - Concepts of Contact Chip Cards for ATM and POS
  - Introduction to EMV Specifications Documents
  - PIN and Sensitive Data Security
  - Key Management
  - Online and Offline PIN Transactions
- E2E (End-To-End Encryption) / P2PE (Point-to-Point Encryption)
  - Concepts of Encrypting Sensitive Data for Transport and Storage
  - Update on the ANSI Standard X9.119
  - Sensitive Data Security
  - Key Management
  - Group Project
    - Lab
    - Diagram EMV Transactions

**Day Three:**
- Payment Tokenization
  - Card Emulation (CE)
  - Host Card Emulation - Device
  - Host Card Emulation - Cloud
  - Registration and Transaction Flow
- Group Project
  - Lab
  - Diagram EMV Transactions

2-Day Asymmetric Key Class (CPE 16 credits)

Level–Intermediate: prerequisites—4-day Core Class, no additional preparation required.

**Day One:**
- Concepts of Public Key Infrastructure (PKI)
- Remote Symmetric Key Distribution Using Asymmetric Methods Described in ANSI X9.24, Part 2 for:
  - ATM Key Loading
  - POS Key Loading
  - HSM Key Loading
  - ‘Proxy Host’ Solutions

**Day Two:**
- Obtain an understanding of each control objective in the ANSI TR-39 current version, Section 5

Please note all classes meet the Network requirements for “Refresher Class”.

Latest Student Testimonials:

“As always, Darlene did a fantastic job presenting the material. She’s extremely knowledgeable of the material and always goes into excellent detail. Great job!”

“This is always an excellent class, led by an industry subject matter expert, Darlene. She is a credit to her profession.”

“It is hard to find REAL training that teaches relevant skills. This class was a GREAT FIND! I will be recommending it to colleagues. Thank you.”

“As always, Darlene presented the information in a great and understandable way. I love the interactive class & group projects.”

“Darlene is awesome! Extremely knowledgeable, friendly, and fun! Thank you!”

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### 2017 Course Dates

<table>
<thead>
<tr>
<th>Dates</th>
<th>Location</th>
<th>Course Type</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 24-27</td>
<td>Annapolis, MD</td>
<td>4-Day Core Class</td>
<td>None</td>
</tr>
<tr>
<td>May 1-2</td>
<td>Annapolis, MD</td>
<td>2-Day Asymmetric; Remote Key</td>
<td>4-Day Core Class</td>
</tr>
<tr>
<td>May 3-5</td>
<td>Annapolis, MD</td>
<td>3-Day Symmetric; EMV, E2E, and Payment Tokenization</td>
<td>4-Day Core Class; 2-Day Asymmetric</td>
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<tr>
<td>July 10-13</td>
<td>Annapolis, MD</td>
<td>4-Day Core Class</td>
<td>None</td>
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<tr>
<td>July 17-18</td>
<td>Annapolis, MD</td>
<td>2-Day Asymmetric; Remote Key</td>
<td>4-Day Core Class</td>
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<tr>
<td>July 19-21</td>
<td>Annapolis, MD</td>
<td>3-Day Symmetric, EMV, E2E, and Payment Tokenization</td>
<td>4-Day Core Class; 2-Day Asymmetric</td>
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<tr>
<td>September 18-21</td>
<td>Annapolis, MD</td>
<td>4-Day Core Class</td>
<td>None</td>
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<tr>
<td>September 25-26</td>
<td>Annapolis, MD</td>
<td>2-Day Asymmetric; Remote Key</td>
<td>4-Day Core Class</td>
</tr>
<tr>
<td>September 27-29</td>
<td>Annapolis, MD</td>
<td>3-Day Symmetric, EMV, E2E, and Payment Tokenization</td>
<td>4-Day Core Class; 2-Day Asymmetric</td>
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</tbody>
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Note: any of the above classes will meet the NYCE Payments Network, LLC, Pulse® Corporation and STAR® Network requirements for a ‘Refresher Class’. These courses have been approved by NYCE Payments Network, LLC, Pulse® Corporation and STAR® Network for auditors to complete the ANSI X9/TR-39-2009 Compliance Review.

### Exam Dates and Times

<table>
<thead>
<tr>
<th>Dates</th>
<th>Location</th>
<th>Exam Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 28</td>
<td>Annapolis, MD</td>
<td>Exam (1/2 day 8:00 - Noon)</td>
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<tr>
<td>July 14</td>
<td>Annapolis, MD</td>
<td>Exam (1/2 day 8:00 - Noon)</td>
</tr>
<tr>
<td>September 22</td>
<td>Annapolis, MD</td>
<td>Exam (1/2 day 8:00 - Noon)</td>
</tr>
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Registration
Please fax your registration to (503) 343-9456. Online registration form for faxing is at registration form. For more information call Delap LLP (Sheryl Malm or Jeanette Smith) at (888) 697-1040 (7 a.m. – 5 p.m. Pacific time).

4-Day Core Class fee…$1,675
Exam fee…$425
3-Day Symmetric Key…$1,365
2-Day Asymmetric Key…$995

Class hours all day: 8:00 a.m. – 4:30 p.m.
Continental breakfast starts all days: 7:30 a.m.

Fee includes classroom materials, continental breakfast, lunch, and afternoon break refreshments. Registration will be confirmed upon receipt of payment. Payment can be made by:
1) American Express®, Discover®, MasterCard®, or Visa®, or
2) sending a check

Cancellation and Substitution Policy
Registrations may be cancelled up to 14 days prior to class by paying a $100 cancellation fee. Cancellations within 14 days will not be refunded; however, substitutions will be accepted. Refunds & Cancellations

Schedule Changes
Delap may occasionally find it necessary to reschedule or cancel sessions and will give registrants advance notice of such changes.

For details on Cancellation/Refunds and Schedule Changes policy, please see our website at Refunds & Cancellations or contact Ms. Sheryl Malm at (888) 697-1040.

Accommodations
Please see class location and hotel directory below.

Class Location and Hotel Directory

Annapolis
Accredited Standards Committee X9, Inc
(Class Location)
(ASC X9, Inc.) – headquarters
275 West Street, Suite 107
Annapolis, MD 21401
Telephone: (410) 267-7707

Recommended Hotel
The Westin Annapolis
100 Westgate Circle
Annapolis, MD 21401

Please visit this website for hotel information and reservations http://www.westinannapolis.com/

Online Hotel Reservations
Rates:
Guest room daily rate: $129.50

Corporate Name:
ASC X9

SET Corporate Account #:
526459

Cancellation Policy:
24 Hours

Room Block Expires:
None
Registration Form

Use this form to register by fax. Or use our convenient on-line form, which can be downloaded at: Registration form

Name

Company

Address  City, State, Zip

Phone  Fax  email

❑ 4-Day  $1,675  ❑ Exam  $425  ❑ 2-Day Asymmetric Key  $995
❑ 3-Day Symmetric Key Review and Updates, Introduction to EMV, E2E and Payment Tokenization  $1,365

Class Date  Location

Exam Date  Location

Payment Method

❑ Check enclosed (Delap LLP)

Charge to my:  ❑ American Express  ❑ Discover  ❑ MasterCard  ❑ VISA

Account #  V-Code  Expiration Date  Signature

Card-owner’s Name

Card-owner’s Billing Address (if different than Company address)

Address  City, State, Zip

FAX this form to (503) 343-9456. We cannot accept registration or payment via email or phone.

If paying by check, mail a copy of this form and your check to:

Delap LLP
5885 Meadows Rd, Suite 200
Lake Oswego, OR 97035

For more information,
call Sheryl Malm or Jeanette Smith at (888) 697-1040 (Pacific time)
email: smalm@delapcpa.com, jsmith@delapcpa.com or
Fax: (503) 343-9456, or
visit our Web site at http://www.delapcpa.com

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“Better? IMPOSSIBLE!
What a talent to be able to take complex terminology and explain it to such a diverse audience and keeping everyone awake and interested.”

“Anyone who does not get to take a course from Darlene is really missing out on someone special. A wealth of knowledge. Very personable class interactions. Very dynamic and encouraged.”