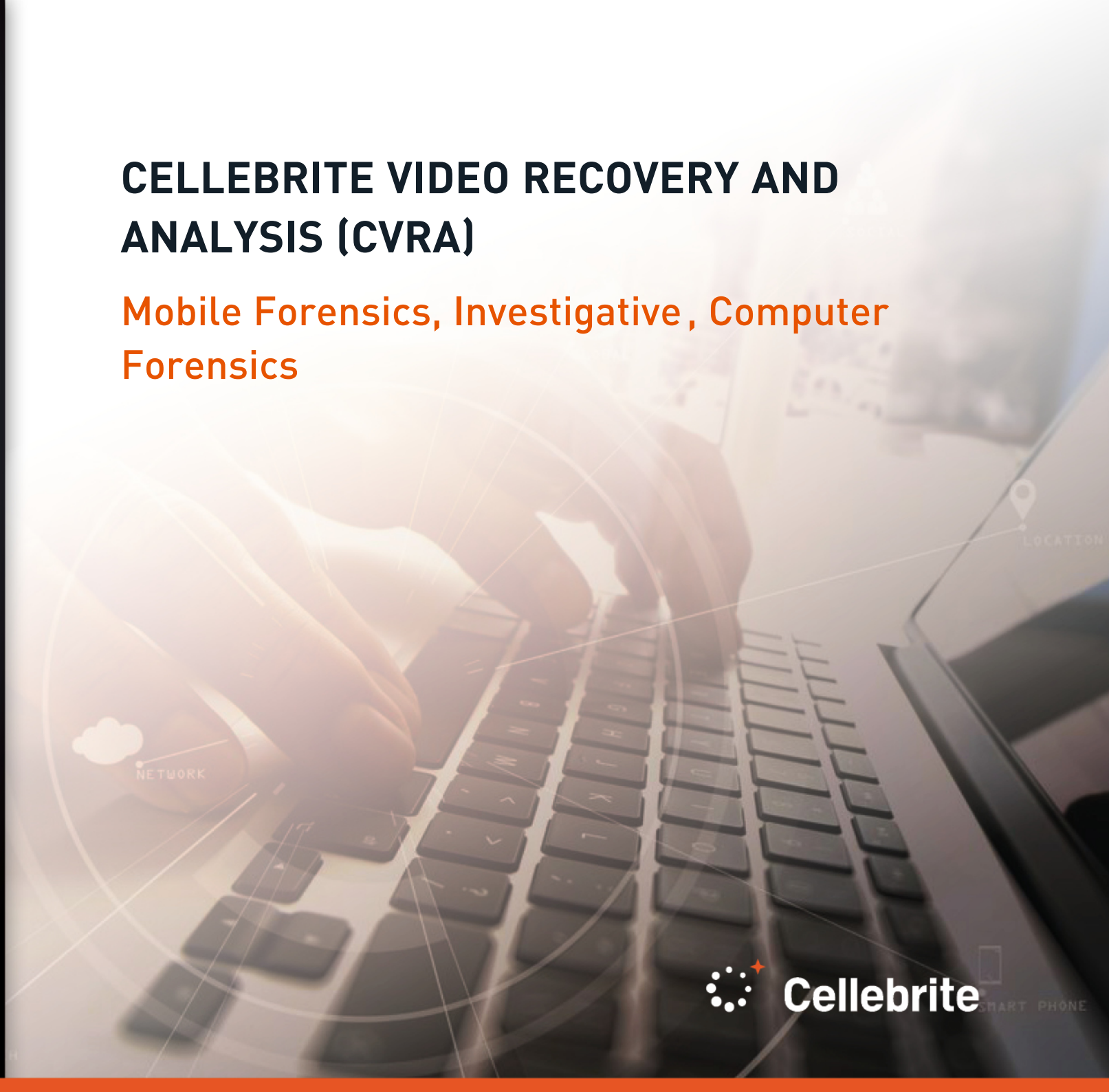
CELLEBRITE VIDEO RECOVERY AND ANALYSIS (CVRA)

Mobile Forensics, Investigative, Computer Forensics



Cellebrite

Level

Intermediate

Length

Five-Day (35 hours)

Training Track

Mobile Forensics
Investigative
Computer Forensics

Delivery Mode

Instructor-Led
Live Online

Course Description

Cellebrite Video Recovery and Analysis (CVRA) is a five (5) day intermediate level course designed to introduce investigators, examiners, and analysts to digital video technology and to meet the specific needs of the digital video examiner and analyst. Students will learn proper methods to interrogate digital video evidence devices while receiving guided instruction throughout the process of recovering valuable evidence from video images. CVRA instruction will also focus on specialized investigative techniques for the examination of video to explore issues relating to the use of force, speed estimation and identification. A variety of DVR, body-worn and in-car video sources will be examined in depth, testing data acquisition, file identification, image accuracy, video processing workflows and report writing.

Computer Forensics, Mobile Forensics, Investigative

Cellebrite aims to support learners in the pursuit of excellence in Digital Intelligence specialty areas without the need to commit to any degree program. Cellebrite's Academic & Learning Paths provide guided training programs and continuous skill set development to achieve various levels of educational or professional goals.

By following a learning path, students can target personal, professional, and leadership skills in a Digital Intelligence career for law enforcement, military, intelligence, and private sector practitioners. Cellebrite's curriculum reflects its commitment to digital intelligence excellence by helping professionals around the world achieve a higher standard of competence and success. Below are general audiences and focus areas relative to this course.

- Digital Forensic Examiners
- Corporate Investigators

Course Learning Objectives

Upon successful completion of this course, students will be able to:

- Define the different video standards, frame rates and aspect ratios.
- Contrast the various types of video compression, codecs, file formats and containers.
- Identify Digital Video Recording (DVR) devices and technology.
- Demonstrate Best practices and methods of video extraction.
- Accurately document video extractions for investigative purposes.
- Demonstrate the hands-on use of DVE Examiner and iNPUT-ACE.

INTRODUCTION

In this module, you will learn about Cellebrite's products, services, training, and certification processes available under Cellebrite's Training programs. Learners will be introduced to the course objectives, requirements, and administrative options to establish the foundation to succeed in your educational or professional goals. You will use the Cellebrite Learning Center and CelleConnect Portal to connect with various resources.

- Identify Cellebrite's global presence and service industry
- Describe Cellebrite's core training and certification process
- Recount Cellebrite's accolades and accomplishments
- Review the capabilities engineered in Cellebrite platforms and digital forensic solutions
- Identify other people in the community that can serve as a training or help resource
- Identify the learning objectives related to the course or training product
- Discuss a practitioner's legal responsibilities using Cellebrite products, software, and services

BASIC TECHNICAL OVERVIEW

- Define video standards, frame rates and aspect ratios.
- Recognize compression, codecs, file formats and containers
- Classify Digital Video Recording devices and technology
- Demonstrate Best practices and methods of video extraction
- Accurately document video extractions
- Demonstrate the hands-on use of DVE Examiner and iNPUT- ACE

TRADITIONAL DVR ACQUISITION AND RECOVERY

- Identify the common challenges associated with traditional DVR acquisition and recovery.
- List the requirements necessary for an ideal recovery process or technique.
- Demonstrate the most common recovery methods in use today.
- Recognize how common recovery methods perform relative to recovery requirements.

TRADITIONAL PLAYBACK AND PROCESSING OF DIGITAL VIDEO EVIDENCE

- Identify the common challenges associated with traditional DVR playback and processing.
- Explain the traditional methods used by investigators to playback and process digital video using proprietary players.
- Identify and explain the most common mistakes made by proprietary players when reading video data.

SIMPLIFIED ACQUISITION OF DIGITAL VIDEO EVIDENCE

- Identify the benefits of accessing video and metadata directly from the hard drive.
- Compare DVR Examiner and traditional recovery methods.
- Recall the basic workflow to acquire video and metadata using DVR Examiner.
- Complete a basic recovery using DVR Examiner with a forensic image.
- Process evidence using a simplified workflow.

SIMPLIFIED PROCESSING OF DIGITAL VIDEO EVIDENCE

- Utilize iNPUT-ACE to work with proprietary video files in a forensically sound, easy and fast manner.
- Recall the components of the video File List and how to add a file to the File List.
- Define the Workflow Tab and how files can be converted and processed in different ways.
- Utilize the Interrogate Tab and demonstrate the Playback functions within iNPUT-ACE.
- Use iNPUT-ACE to mark Images, create sub-clips, create and save projects and work with proprietary codecs.

LEGAL AND EVIDENTIARY CONSIDERATIONS

- Recall the importance of the Chain of Custody as it relates to video evidence.
- Apply the Federal Rules of Evidence to video evidence.
- Apply Bag and Tag Best Practices to identifying, packaging and transporting video evidence.
- Define the legal requirements of Consensual Searches, Warrants, Searches and Seizures with respect to video evidence.
- Demonstrate video evidence Integrity

ACQUISITION BEST PRACTICES

- Recall the best practices to use when acquiring DVR evidence.
- Define the types and advantages of various write-protection methods.
- Recount the factors that go into the decision of whether to create a forensic copy.
- Contrast the different methods of creating a forensic copy of the evidence and their advantages and disadvantages.
- Recognize the process of disassembling a DVR, connecting a write-blocker, and creating a forensic image of the hard drive.

DVR EXAMINER OVERVIEW

- Scan and export video using DVR Examiner.
- Utilize the DVR Examiner scan options screen to configure an automated export to be completed after the scan.
- Use DVR Examiner to adjust for any inaccuracies with the DVRs date/time settings.
- Apply filters, recover video properties, preview, and mark pertinent clips in order to quickly locate video of interest.
- Recover video data no longer accessible via DVR interface.

BUILDING PROJECTS WITH INPUT-ACE

- Organize and manage video evidence within iNPUT-ACE.
- Track suspect activity across multiple cameras.
- Demonstrate associating metadata to relevant clips.
- Sort and filter activity based on tagged metadata.
- Save and transfer Project information to other machines/storage locations.
- Conduct a thorough video investigation.

TECHNICAL CONSIDERATIONS FOR PROCESSING VIDEO

- Recall and interpret the effect that IR cameras have on the appearance of objects (eg. Clothing) in an image.
- Define, interpret, and correct the effect that interlacing has on a video image.
- List and correct improper aspect ratios in a video image.
- Identify, interpret, and measure the effect of variable refresh rates.

BUILDING NARRATIVE REPORTS WITH INPUT-ACE

- Create demonstrative exhibits with the Canvas Editor and Concatenate nodes in iNPUT-ACE.
- Utilize the Narrative Report tool within iNPUT-ACE.
- Produce PDF files with embedded video and image content.
- Create and load Report Templates to expedite report writing.

SPATIAL AND TEMPORAL COMPRESSION

- Recognize the difference between spatial and temporal compression.
- Identify the effect of compression on how images appear.
- Create visualizations of the effect of compression on a video.
- Define the difference between I-frames, P-frames, and B-frames.
- Perform basic video enhancements.

FINAL EXAM

- Complete a knowledge-based exam
- Evaluate the course components using the Feedback Survey
- Download a Certificate of Attendance
- Download a Certificate of Completion (if awarded)*

Get skilled. Get certified.

"Every day around the world, digital data is impacting investigations. Making it intelligent and actionable is what Cellebrite does best.The Cellebrite Academy reflects our commitment to digital forensics excellence; training forensics examiners, analysts, investigators and prosecutors around the world to achieve a higher standard of professional competency and success."

Learn more at: cellebritelearningcenter.com

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