Verimatrix University
Training Courses
For IPTV, DVB, Internet TV, and PlayReady
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1. Verimatrix Training Camp

As the recognized leader in software-based security solutions for premier service providers, Verimatrix is committed to providing the finest next-generation digital TV security solutions. Verimatrix backs up this commitment with the Verimatrix Training Camp, a 2-part program that correlates available training with Verimatrix products and technology/solution areas.

The Verimatrix Training Camp combines self-paced classroom learning with real-world instructor-led hands-on training sessions. By integrating relevant training with your Verimatrix solution, you gain the most from investment faster — increased productivity, reduced cost of network ownership, and accelerated adoption of advanced technologies for a competitive edge.

Part 1: Verimatrix University

The Verimatrix Training Camp begins with Verimatrix University. Verimatrix University consists of flexible, reusable, self-paced online training modules designed to give partners and customers a level of proficiency with Verimatrix’s Content Authority System (VCAS™) and ViewRight™ solutions.

At Verimatrix University, students sign-up for online “classroom” modules that they can attend at their leisure. All teaching occurs within a relaxed, self-paced environment using any computer or device connected to the Internet. Starting with the VCAS Platform module, students can attend various product-training sessions and complete a final exam, which leads to certification.

Part 2: Verimatrix University Hands-On Sessions

Following the successful completion of the Verimatrix University online modules, students can complete their education by attending instructor-led hands-on sessions. Sessions are conducted in a structured, hands-on, question-and-answer environment.

During these sessions, students learn how to install, configure, test, and troubleshoot a Verimatrix VCAS system. These skills are designed to equip students with valuable knowledge and skills that directly transfer from the classroom to the workplace.

Classes typically are limited to 12 students to ensure sufficient one-on-one interaction with a Verimatrix subject-matter expert. Hands-on sessions are conducted regularly worldwide. A complete schedule is available at www.verimatrix.com/verimatrix-university/training-schedule.
2. Verimatrix University Training Courses

Verimatrix offers the following product training courses that will leave you with hands-on experience, in-depth knowledge of the VCAS solution, and recognized validation as a [Verimatrix Certified Engineer](#).

**Verimatrix University Online**

- VMX 07-1001: VCAS Platform Training (Online, Prerequisite for All Other Classes)
- VMX 07-1101: VCAS for IPTV Training (Online)
- VMX 07-1201: VCAS for DVB Training (Online)
- VMX 07-1301: VCAS for Internet TV (Online)
- VMX 07-1401: VCAS MultiRights (Online)
- VMX 07-1801: Migrating From VCAS 2.4 to VCAS 3.6 (Online)

**Verimatrix University Hands-On**

- VMX 07-1002: VCAS Platform Installation & Configuration (1 Day On-Site)
- VMX 07-1102: VCAS for IPTV Configuration & Troubleshooting (1 Day On-Site)
- VMX 07-1202: VCAS for DVB Configuration & Troubleshooting (1 Day On-Site)
- VMX 07-1302: VCAS for Internet TV Configuration & Troubleshooting (1 Day On-Site)
- VMX 07-1402: VCAS MultiRights Configuration & Troubleshooting (1 Day On-Site)
- VMX 07-1900: VCAS Custom Training Session (Per Day)
VMX 07-1001: VCAS Platform

Overview: Provides an overview of the VCAS platform and the building blocks common to all VCAS security solutions. This class includes a detailed overview of the technologies used in VCAS, such as Linux, Oracle, networking, encryption, Moving Pictures Experts Group (MPEG), Operator Management Interface (OMI), troubleshooting, and support.

Target Audience: Systems Engineers, Network Engineers, Sales Engineers, Systems Integrators

Location: Online, self-paced

Duration: 6 to 10 hours

Prerequisites: None

Course Outline

- Introduction to Verimatrix
- Ecosystem Partners
- VCAS Overview
  - VCAS for IPTV
  - VCAS for Internet TV
  - VCAS MultiRights
  - VCAS for DVB
- Linux Basics
  - Hardware requirements
  - Red Hat distribution
  - Kickstart DVD
  - Tools to remote access servers
  - Linux commands
- Oracle Basics
  - Oracle architecture
  - Oracle configuration
- Redundancy and scalability
- Operation and troubleshooting
- Backup procedures

- Networking
  - Understanding IP networking
  - Unicast / Multicast
  - SSL

- MPEG
  - Functional understanding
  - MPEG tables
  - ECM / EMM

- System installation
  - Kickstart DVD
  - VCAS software
  - VCAS certificates
  - VCAS license

- OMI (Operator Management Interface)
  - Implementation and architecture
  - Entitlements
  - Web services
  - SOAP API and integration

- Troubleshooting
  - Approaches to troubleshooting
  - Linux tools for troubleshooting
  - External tools

- Verimatrix Global Services
  - Customer and partner training
  - Support channels
  - Case creation and escalation
VMX 07-1101: VCAS for IPTV Training

Overview: Provides detailed and functional understanding of the VCAS for IPTV solution. This class addresses the challenges of IPTV and IP-Hybrid networks. Students will be able to install, configure, operate, troubleshoot, and monitor all components of a VCAS for IPTV security solution. The course covers day-to-day operational tasks such as VOD and broadcast encryption, configuring entitlement integration, and troubleshooting within the IPTV ecosystem.

After completing the theoretical part of this course online, a hands-on session will establish practical knowledge for everyday use. After completing the hands-on session, students can take the certification test to become a Verimatrix Certified Engineer.

Target Audience: Systems Engineers, Network Engineers, Sales Engineers, Systems Integrators
Location: Online, self-paced
Duration: 6 to 10 hours
Prerequisites: VMX 07-1001 – VCAS Platform Course

Course Outline:

- VCAS for IPTV Application Overview
  - IPTV with RTES
  - IPTV MultiCAS with VECMG
  - IPTV IP-Hybrid with VECMG

- System Architecture
  - Server roles
  - Common modules
  - Application specific modules

- ViewRight clients
• Understanding encryption
  – Channel keys / control words
  – STB boot process
  – X.509 certificates

• VCAS licensing

• Software distribution and versioning

• System Configuration
  – INI files
  – Graphical user interface
  – ViewRight clients

• System operation
  – Start / stop system
  – Iptables firewall
  – SNMP network management
  – System backup

• Scalability and redundancy
  – Network design
  – Building a redundant IPTV network
  – Scaling an IPTV network

• Troubleshooting
  – Troubleshooting tools
  – Common troubleshooting scenarios
  – Log files
  – Global Services solutions site
VMX 07-1201: VCAS for DVB Training

Overview:
Provides detailed and functional understanding of the VCAS for DVB solution. This class addresses the challenges for DVB networks. Students will be able to install, configure, operate, troubleshoot, and monitor all components of a VCAS for DVB solution.

After completing the theoretical part of the course online, a hands-on session will establish practical knowledge for everyday use. After completing the hands-on session, students can take the certification test to become a Verimatrix Certified Engineer.

Target Audience:
Systems Engineers, Network Engineers, Sales Engineers, Systems Integrators

Location:
Online, self-paced

Duration:
6 to 10 hours

Prerequisites:
VMX 07-1001 – VCAS Platform Course

Course Outline

• Introduction to VCAS for DVB
  – Overview of DVB Ecosystem
  – Role of VCAS for DVB

• System architecture

• ViewRight clients

• System installation

• System configuration
  – Configuring BCSM with Multiplexer and SI Server components
  – Initialization of the Encryption Engine
  – Configuring Services and Packages
  – Configuring Entitlements
  – Sending On-Screen-Messages
  – Testing Decryption

• Redundancy and scalability
Troubleshooting

- VCAS for DVB server log files and monitoring
- Basic Linux Troubleshooting
VMX 07-1301: VCAS for Internet TV Training

Overview: Provides detailed and functional understanding of the VCAS for Internet TV solution. This class addresses the challenges of adaptive streaming and HLS / MPEG-DASH. Students will be able to install, configure, operate, troubleshoot, and monitor all components of a VCAS for Internet TV solution.

After completing the theoretical part of the course online, a hands-on session will establish practical knowledge for everyday use. After completing the hands-on session, students can take the certification test to become a Verimatrix Certified Engineer.

Target Audience: Systems Engineers, Network Engineers, Sales Engineers, Resellers, Systems Integrators

Location: Online, self-paced

Duration: 12 to 16 hours

Prerequisites: VMX 07-1001 – VCAS Platform Course

Course Outline

- VCAS for Internet TV overview
- HTTP Live Streaming (HLS)
- MPEG-DASH
- System architecture
  - Server roles
  - Common modules
  - Application specific modules
- ViewRight clients
  - ViewRight Web for PC
  - ViewRight Web for Mac
  - ViewRight Web for iOS
  - ViewRight Web for Android
- VCAS licensing
• Software distribution and versioning

• System configuration
  – INI files
  – Graphical user interface
  – ViewRight clients

• System operations
  – Start / stop system
  – Iptables firewall
  – System backup

• Redundancy and scalability
  – Network design
  – Building a redundant Internet TV network
  – Scaling an Internet TV network

• Encoder configuration

• Troubleshooting
VMX 07-1401: VCAS MultiRights Training

Overview: Provides detailed and functional understanding of the Verimatrix MultiRights solution. This class addresses the challenges of Microsoft PlayReady and Smooth Streaming. Students will be able to install, configure, operate, troubleshoot, and monitor all components of a MultiRights solution.

After completing the theoretical part of the course online, a hands-on session will establish practical knowledge for everyday use. After completing the hands-on session, students can take the certification test to become a Verimatrix Certified Engineer.

Target Audience: Systems Engineers, Network Engineers, Sales Engineers, Resellers, Systems Integrators

Location: Online, self-paced

Duration: 6 to 10 hours

Prerequisites: VMX 07-1001 – VCAS Platform Course

Course Outline

- VCAS MultiRights
- Microsoft PlayReady DRM
- System architecture
  - Server roles
  - Common modules
  - Application-specific modules
- VCAS licensing
- Software distribution and versioning
- System installation
  - PlayReady License server
  - PlayReady VoD Encryptor
- System configuration
  - INI files
– Graphical user interface
– PlayReady Windows server configuration

• System operations
  – Start / stop system
  – Iptables firewall
  – System backup

• Redundancy and scalability
  – Network design
  – Building a redundant MultiRights network
  – System Upgrade

• Troubleshooting
### VMX 07-1801: Migrating from VCAS 2.4 to VCAS 3.7

| Overview:          | Provides a detailed overview of the steps required to upgrade a VCAS 2.4 installation to VCAS 3.7. The course outlines the planning and execution of such an upgrade, including compatibility requirements to 3rd party IPTV ecosystem components (i.e. interface to Middleware).
<table>
<thead>
<tr>
<th></th>
<th>This course is offered online only.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Audience:</strong></td>
<td>Existing customers who have a VCAS for IPTV 2.4 / 3.1 / 3.2 system installed, Systems Engineers, Network Engineers, Sales Engineers, Project Managers, Resellers, Systems Integrators</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>Online, self-paced</td>
</tr>
<tr>
<td><strong>Duration:</strong></td>
<td>4 to 6 hours</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong></td>
<td>none</td>
</tr>
</tbody>
</table>

**Course Outline**

- System Architecture Changes
  - Understanding what is new and what has changed in VCAS 3.x
  - Architecture Overview of VCAS 3.x
  - Red Hat and Oracle versions used in VCAS 3.x
- New Features in VCAS 3.7
- VCAS 3.7 Migration Plan
- Backup of Installed VCAS System
- System Installation VCAS 3.7
- System Configuration VCAS 3.7
- Database Migration
- VES – Entitlement Migration
- RSM – Migration of Wholesale / Retail Systems
- ViewRight Clients
VMX 07-1900: VCAS Custom Training Session

<table>
<thead>
<tr>
<th>Overview:</th>
<th>1 day custom training session, delivered at a customer site as required. Covers VCAS online courses (prerequisite), installation, operation, hands-on troubleshooting and overall system design for a specific VCAS solution. Priced per session day, for a maximum of 12 (twelve) students, not including travel expenses and shipping expenses for training equipment.</th>
</tr>
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<tbody>
<tr>
<td>Target Audience:</td>
<td>Operators who require a larger number of students to be trained on a specific VCAS solution.</td>
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<tr>
<td>Location:</td>
<td>Worldwide</td>
</tr>
<tr>
<td>Duration:</td>
<td>8 hours</td>
</tr>
<tr>
<td>Prerequisites:</td>
<td>none</td>
</tr>
</tbody>
</table>

**Course Outline**

- Custom training session delivered on-site. Includes:
  - VCAS System Installation
  - VCAS System Configuration
  - VCAS System Operation
  - VCAS System Troubleshooting
- Available for all VCAS solutions
Hands-On Sessions

| Overview: | Hands-on sessions enable students who complete the online course materials to work with an actual Verimatrix VCAS system. During these sessions, students will install, configure, and troubleshoot the VCAS system using real-world use case scenarios. Sessions are conducted regularly worldwide. A complete schedule is available at [http://www.verimatrix.com/verimatrix-university/training-schedule](http://www.verimatrix.com/verimatrix-university/training-schedule).
If you are unable to attend one of these planned sessions, contact your Verimatrix sales representative to discuss other options. |
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<tbody>
<tr>
<td>Target Audience:</td>
<td>Systems Engineers, Network Engineers, Sales Engineers, Resellers, Systems Integrators</td>
</tr>
<tr>
<td>Location:</td>
<td>Varies worldwide</td>
</tr>
<tr>
<td>Duration:</td>
<td>1 day per module, 8 to 9 hours</td>
</tr>
</tbody>
</table>
| Prerequisites: | [VMX-07-1001: VCAS Platform (Online)](http://www.verimatrix.com/verimatrix-university/training-schedule) and one or more of the following: [VMX-07-1101: VCAS for IPTV Training (Online)](http://www.verimatrix.com/verimatrix-university/training-schedule)  
[VMX-07-1201: VCAS for DVB Training (Online)](http://www.verimatrix.com/verimatrix-university/training-schedule)  
[VMX-07-1301: VCAS for Internet TV Training (Online)](http://www.verimatrix.com/verimatrix-university/training-schedule)  
Verimatrix Certified Engineer

Students who complete the VCAS Platform exam and VCAS solution-specific exams successfully, and attend the VCAS solution-specific hands-on courses, will become Verimatrix Certified Engineers. Certifications are available in the following disciplines, depending on the product-specific sessions completed:

- Verimatrix Certified Engineer for IPTV
- Verimatrix Certified Engineer for DVB
- Verimatrix Certified Engineer for Internet TV
- Verimatrix Certified Engineer for MultiRights

Verimatrix Certified Engineers are required to attend a refresher course every two years to maintain certification.

Verimatrix Certified Partner

A Verimatrix Certified Partner indicates a specific level of achievement for configuration, installation, and maintenance of Verimatrix VCAS solutions. A minimum of two students must be certified from each systems integrator or partner to become a Verimatrix Certified Partner.

Verimatrix Certified Partners are identified on the Verimatrix Web site and referenced in promotional programs.