Course Outline

Security Center Training: Advanced Troubleshooting	
Code	SC-OTC-002
Duration	3 days - Instructor-led
Target audience	Technicians, Administrators, and IT Professionals
Prerequisites	- Genetec's technical certification trainings (SC-OTC-001 <u>and</u> SC-ETC-001) - IP networking training (CCNA or equivalent) 2 years of experience with VMS deployment, configuration, administration 1 year of experience with Security Center 5.x <u>For the online version of this course:</u> - REQUIRED: Reliable, stable internet connection, Mic and speaker (Headset preferred), Local administrator access into your own PC - STRONGLY recommended: IP camera on your own local network - Recommended: Genetec server software or SV server appliance
Objectives	To equip the participant with a deeper understanding of Security Center's video architecture with an emphasis on troubleshooting, thereby increasing autonomy and decreasing reliance on Genetec's support: - Understand and apply logical troubleshooting methodology - Understand Security Center's server and video streaming architecture - Understand the basics of the RTSP protocol - Use built in troubleshooting tools - Use command-line IP utilities and Wireshark to diagnose networking issues - Use Wireshark to diagnose video streaming issues - Understand and configure SQL server to accept outside connections - Understand the Genetec server console and run debug traces - Understand the Diagnostic task and configure the Genetec Harvester tool - Understand the Genetec servers' default logging options - Use 3rd party tools like Process Monitor, Process Explorer, Windows Performance Monitor
Certification	An open-book, practical exam will be given at the end of day 1 & 2 of this course. Additionally, A theory exam will be given on day 3. Each participant will have their own VM server(s). You will be asked to apply specific configurations, troubleshoot, and fix specific issues on your own system.

Day	Topic	Description
Day 1	**Module 1:** *Introduction* (2 hours)	• What to expect from this course? • Troubleshooting methodology • Genetec Portal • Documentation online
	Module 2: *Architecture review* (4 hours)	• Role based architecture • Processes • Default video streaming architecture • Archivers • Archiving queue full
Day 2	**Module 3:** *Network* (3 hours)	• Networking review • Network view & Media Router • Multicast requirements • Command line IP utilities • NIC configurations • Config Tool's built in troubleshooting tools • RTSP Basics • RTP
	Module 4: *Built in Tools* (3 hours)	• Server Watchdog • The Diagnostic task and Harvester Tool • Default server logs • Video File Analyzer tool • Diagnostic keyboard shortcuts • Windows Task Manager, Performance Monitor & Resource Monitor • Server and client Console
Day 3	**Module 5:** *Packet capturing* (3 hours)	• Capturing packets • Identifying the root causes of packet loss • Overview of packet capturing techniques • Capture filters • Display filters • HTTP capture settings • Following TCP streams • Decode video stream as UDP
	Module 6: *The databases* (1 hour)	• Security Center's databases • Role to database connections • Genetec Service user and SQL connection(s) • Configuring SQL for remote access • SQL Management Studio (Express) • Single-user vs Multi-user modes