Cisco Physical Security and implemented solution in RRC -

Ljubljana, November, 2013
Nikola Milovanović
Cisco CCNP, CCDP
nikola.milovanovic@rrc.rs
Agenda

RRC and Cisco basic information

Cisco Physical Access Solution

RRC implemented solution

Demonstration of solution

Q&A
• Founded in 1992, the RRC Group is one of the leading international value added distributors across Central and Eastern Europe specializing in IT enterprise solutions for value added resellers.


• RRC offers high end solutions from servers, storage systems, networking, security, data center and virtualization, automatic identification and data capture, as well as voice, data and video communication products, along with maintenance and professional services.

• RRC revenue in Adriatic region in 2012 was approx. 50 mil USD with 43 employees.

• Today RRC Group operate in 26 countries and has facilities in more than 10 countries (The RRC Group achieved 2011 revenues of USD 371,000,000). The RRC Group has become a strong partner, who has improved its position with leading international suppliers of IT solutions, including IBM (HW+SW), EMC, RSA, Avaya, Motorola, Cisco, Iron Port, APC, SonicWALL, CheckPoint and Vasco.
Value Added Distributor

- Technical Support
- Educational Service
- Financial Support
- Marketing Support
- Logistics Service

VAD – Help for presales and also after sales and installation

As “middleware“ between partners and manufacturers

Final aim – to successfully finish a project and to get new projects with that partner/customer
Cisco Systems, Inc. is an American multinational corporation headquartered in San Jose, California, that designs, manufactures, and sells networking equipment.

Key facts:
- **Network market leadership (position #1 or #2)** for routing, telepresence, wireless LAN, security, switching, voice, storage area networks ...
- Nearly **70,000 partners**
- Over **14,000 patents issued**
- Over **160 acquisitions**
- More than **100,000 customers**
- **24,000+ CCIEs**

For more information on Cisco, visit the “About Cisco” area of www.cisco.com.
NEW YORK (WABC) -- The NYPD is searching for the man who robbed a beauty supply store, and they're hoping very clear surveillance video will lead to an arrest.

The robbery happened just before 4 a.m. on May 16 at Exclusive Beauty Supply on Jerome Avenue in the Morris Heights section of the Bronx.

Bronx robber caught on very clear surveillance video

Los Angeles Times

Apr 26, 2013

After Boston, spending on video surveillance expected to surge

Video surveillance, a market that was already on an upward trajectory, is expected to receive a big boost in spending following the bombings in Boston.

The market for video surveillance equipment is expected to grow to $20.5 billion in revenue in 2016, up 114% from 2010's revenue of $9.6 billion, according to IHS.

When IT & Security Worlds Collide

Apr 26, 2013

"Analysts estimate that 50 percent of all video surveillance deployments will be managed by IT or the IT department."....

Poll Finds Strong Acceptance for Public Surveillance

WASHINGTON — Americans overwhelmingly favor installing video surveillance cameras in public places.... A week after the Boston Marathon attack, which was unraveled after the release of video footage of the two suspects flushed them out of hiding, 78 percent of people said surveillance cameras were a good idea, the poll found.

Converge. Connect. Protect.

Protect people and property with Cisco Safety and Security Solutions
Physical Security Is Changing

**Moving From:**

- Proprietary legacy systems
- Siloed organizations and “point products”
- Manual processes: Increases TCO
- Geographically dispersed facilities and personnel
- Separate network and physical security
  - Legacy technology: Analog, DVRs, standard definition
  - Dedicated architecture for hardware, applications, and storage
- Local storage

**Moving To:**

- Open standards-based
- Solutions focus and **converging organizations**
  - Drive automation and efficiencies through new technology
- Centralized security management via IP
  - Converged network and physical security
  - **IP, high definition**, network video surveillance
  - Virtualized architecture for security, applications, and storage
- Local, data center, and **cloud storage**
Security and protection of people and property

Network as the Platform
Cisco Physical Security elements

**IP Cameras**
Get superior performance in a wide variety of environments with high-resolution, professional digital cameras.

**Video Surveillance Software**
Optimize cost, performance, and capability with high-quality video surveillance solutions.

**Access Control**
Achieve electronic access control using the IP network in a comprehensive solution with hardware and software components.

**Platforms**
Improve availability, scalability, and business efficiency with solutions-led building-block platforms.

**Incident Response**
Quickly deliver valuable information to the right people in emergency situations when time is critical.
Get superior performance in a wide variety of environments with high-resolution, professional digital cameras.
Cisco Video Surveillance 3000 Series IP Cameras

• High-definition, full-function video endpoints with industry-leading image quality and processing power.
• When deployed in a Cisco Medianet enabled network, they are automatically discovered and configured, greatly reducing the time required to add each camera.
• Outstanding performance and image quality
• H.264 and MJPEG compression
• Dual streaming
• A wide variety of indoor and outdoor mounting options
• Motion detection and event notification
• Simplified installation and maintenance through Cisco Medianet
• Support for Power over Ethernet
Camera Placement—Overview or Detail

Influences codec, Frame Rate, Resolution

**Overview**

- Traffic cameras—viewing congestion
- Parking lots
- Single Megapixel or multiple SD cameras
- Wide angle lens
- MPEG-4

**Detail View**

- Point of sale transactions
- Face or license plate recognition
- Megapixel (HD) cameras
- Zoom lens
- Camera close to subject
- M-JPEG
Video Surveillance Software

• Optimize cost, performance, and capability with high-quality video surveillance solutions

**Cisco Video Surveillance Manager**
- Support the transmission, monitoring, recording, and management of surveillance video
- Designed for surveillance and security personnel
- Flexible, standards-based solutions support a broad range of devices

**Cisco Physical Security Operations Manager**
- Unify video surveillance, access control, and incident response with a command and control console
- Get complete view of facilities, sensors, and alarms in a map-enabled GUI
- Comprehensive management system with powerful workflow and business logic engine

**Cisco Video Analytics**
- Embedded software on video endpoints enables innovative video analysis
- Classify objects, detect tampering, trigger alerts, and count people and vehicles
- Analyze surveillance video in real time and improve incident response
Video Surveillance Manager (VSM)
Operations Managers (VSOM and PSOM)

- **VSOM**
  - Secure web portal to configure, manage, display, and control video in an IP network

- **PSOM**
  - Unifies management and operation of Cisco VSM, Cisco PAM, and IPICS
  - Get complete view of facilities, sensors, and alarms in a map-enabled GUI
Video Surveillance Virtual Matrix

- Controls an infinite number of video displays on network
- Delivery of both live and archived video
- Distributes to video wall for command centers
- Event Based Video (triggered based)
- Push video to remote screens
Network Impact

• What is the impact of all this on the network?
• Best practice guidance for this?
• Secure the environment!
Access Control

• Cisco Physical Security

Cisco Physical Access Gateway
- Connect door hardware, locks, and readers to the IP
- Provide security personnel with building-access monitoring capabilities
- Scale from one to thousands of doors, at a fixed cost per door

Cisco Physical Access Manager
- Configure gateways and modules, monitor activity, enroll users, and integrate with IP applications and data stores
- Improve security by monitoring access to buildings
- Increase situational awareness with integrated Cisco Video Surveillance Manager
Physical Access Gateways

- Primary means for the Cisco Physical Access Control solution to connect door hardware, such as locks and readers, to your IP network. One gateway can control up to two doors.
- Offers a distributed architecture to simplify installation of electronic access control.
- Uses a Power over Ethernet (PoE) switch or external 12 to 24 VDC source.
- Lets you power badge readers and locks/strikes with PoE.
- Is directly configurable through a built-in Web server.
- Supports offline operation to allow doors to function if network connectivity is lost.
Cisco Physical Access Control

- Management app is used to configure hardware, monitor activity, enroll users, and integrate with IT applications and data stores
Platforms

• Improve availability, scalability, and business efficiency with solutions-led building-block platforms

  Virtualized Applications for UCS
  • Extend physical security capabilities to virtual environments
  • Ideal for large scale safety and security operations
  • Gain innovative virtualization, memory, I/O, and management capabilities

  Cisco Physical Security Multiservices Platform
  • Easy-to-use and easy-to-deploy server suite
  • Offers choices for deploying video surveillance, access control, and incident response
  • Provides system resiliency, hardware diagnostics, and high performance

• Video Surveillance Manager for the Cisco Unified Computing System Express (UCS Express)
  – VMware vSphere 5.0 or later with VMware ESX or ESXi
  – Max 32 cameras
Incident Response

• Quickly deliver valuable information to the right people in emergency situations when time is critical

**Cisco IP Interoperability and Collaboration System (IPICS)**
- Comprehensive IP-based dispatch and incidence response solution
- Ideal for public safety personnel who need to communicate with incompatible devices
- Enhanced dispatch console, UHF/VHF radio interoperability, emergency first responder notification

**Cisco IPICS Dispatch Console**
- End-to-end radio dispatching solution for mission-critical radio communications
- Ideal for organizations who need to respond rapidly to incidents, emergencies, and facility events
- Removes communication barriers between land mobile radio systems and devices

**Cisco IPICS Mobile Client**
- Smartphone application allows responders to interact with other participants
- Ideal for physical security providers and emergency first responders
- Complements conventional radios when situations require real-time video, pictures, and responder status
Solution Characteristics

- An **IP network infrastructure** is required to link all components.
- **IP cameras** are under the control of and feed **Media Servers**. The **VSOM interface** is the viewing station portal into the video archives and live feeds.
- The **amount of disk storage** for archiving camera feeds depends on factors that include the retention period requirements, image resolution, image quality, format, and encoding. Storage requirements might be difficult to plan and predict.
- **Encryption through IPSec** may be implemented between video endpoints to ensure data privacy, integrity, and authentication.
- Camera feeds traverse the IP network to the Media Server either as **Motion JPEG (MJPEG)** or **MPEG-4** or **H.264**.
- **Viewing stations** are PCs running Internet Explorer (IE) with Active-X controls. The PC must have a sufficient CPU clock rate to decode the video feeds.
• **Network Time Protocol (NTP)** must be configured for an accurate and consistent time source for all video surveillance devices.

• **Camera feeds for MJPEG** can be reduced to save bandwidth and disk storage (from 30fps to 10fps).

• Access control techniques to **limit the workstations** that are allowed to configure and view an IP camera directly should be implemented.

• Where possible, use **PoE for IP cameras**. It simplifies installation.

• IP Video Surveillance traffic is to be marked with the **QoS DSCP** value of CS5 and provisioned in either a priority or bandwidth queue.

• In most instances, configuring a camera **feed constant bit-rate (CBR) value of 1024Kbps** is an acceptable starting value for reasonable video quality.

• **Latency** between client viewing station and VSOM should be less than 80 msec RTT for best results.
Case studies in Serbia &

Video: Serbian Postal Bank deploys video surveillance from Cisco
http://www.youtube.com/watch?v=4_uiABWrcdo

PRESS RELEASE

Serbian Postal Savings Bank Deploys Cisco Connected Physical Security Solutions

In addition to physical security, several of the bank’s key functions, including call center, data center and stock trading system run on Cisco intelligent network and Cisco unified computing system.

BELGRADE, Serbia, March 19, 2012 – Cisco today announced that Serbia’s biggest retail bank, Banka Postanska Stedionica (Serbian Postal Savings Bank), has implemented a Cisco Connected Physical Security Solution at its headquarters in Belgrade and across a network of over 40 branches in Serbia.

With the Internet Protocol (IP) network, video streams from any branch can be monitored from a PC in the central office or any other branch on the network. In addition to physical security, the bank is using the Cisco Borderless Network Architecture and Cisco Unified Computing System™ to integrate data and voice communication, customer relationship management and data center on a single, intelligent and highly secure network platform.

Key Facts, Highlights:

- The objective of the bank was to replace its legacy analog systems with an end-to-end, branchwide surveillance system, thus improving the protection of clients and employees, making operation more efficient, and reducing costs.

- Banka Postanska Stedionica is using its Cisco Borderless Network Architecture with Cisco Integrated Services Routers as the foundation for physical security. The network connects 400 cameras, most of them high-resolution digital Cisco IP video surveillance cameras placed both indoors and outdoors.
Agenda

1. RRC and Cisco basic information
2. Cisco Physical Access Solution
3. RRC implemented solution
4. Demonstration of solution
5. Q&A
RRC security requirements

1. High quality video surveillance system for whole building
2. Electronic access control to offices, classrooms, storehouses and employees time control
3. Fire and theft protection
4. Integration with existing systems and IP network
5. Scalability
6. Common infrastructure for many companies
7. Granululary control of access to RRC’s resources
# Bill of Material

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Cisco Video Surveillance

- **Cisco Video Surveillance**
  - Comprehensive solution based on IP

- **Cisco Video Surveillance Manager**
  - Supports transmission of video, monitoring, recording and control of video surveillance
  - Designed for monitoring and security
  - Flexible and standard based solution with wide support for devices

- **Cisco IP cameras**
  - High quality professional cameras with Mpix resolution
System components

- Outdoor cameras Cisco CIVS-IPC-3530
- Indoor cameras CIVS-IPC-3421V
- Video server (monitoring cameras and archivings)
  - CPS-MSP-1RU-K9 with Video Surveillance Manager
  - 4TB space for recordings
- Additionally: LED reflectors with movement detections and LED strips
Indoor and Outdoor cameras layout
Cisco Access Control

– **Cisco Access Control**
  - Completely IP based solution
  - Granulary defines user access
  - Scalable and flexible solution

– **Cisco Physical Access Manager**
  - Configures gateways and modules, monitors activities and user roles and integrates with IP applications
  - Improves security of whole building
  - Integrates with Cisco Video Surveillance Manager and provide completely situation picture

– **Cisco Physical Access Gateway**
  - Connects and controls all doors, locks, ID card readers
  - Offers possibility of monitoring access to a building
System components

• Access gateway
  – CIAC-GW-K9, with extended input modules CIAC-GW-IP10

• Server access control
  – CPS-MSP-1RU-K9
  – Cisco PAM software (Physical Access Manager)

• Card readers
  – on all main doors, storehouse, server room

• Rex tasters
  – for inside opening doors

• ID cards
Card readers and sensors layout

- Magnetic contacts, sensors (breaking-glass, movement)
Access policy for employees

• Policy control rules are precisely defined
  – RRC SRB, SLO and HR; guest access
  – Storehouse
  – Server room

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Integration of VSOM and CPAM
Manual for employees

- Detailed manual and procedures for employees
  - Regular comings/goings: “Time check-in and check-out”
  - Official: “OFFICIAL time check-in and check-out”
  - Rex taster for opening doors
Time reports for employees

- Monthly time reports
  - Generating (manually or automatically) for every employee
  - Excel sheets
After successfully implementation

RRC Announcement

“Company RRC believes that with installation of our system we define the highest standards in implementation of physical security systems in our market, and moreover we demonstrates superior quality of Cisco’s security solution which company distributes”.

RRC’s Press release
Belgrade, 2013, September 17th
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Questions and answers

- Additional info on www.cisco.com/go/physec
- RRC technical team on www.rrc-bt.com
Thank you!

- www.rrcgroup.com
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