# INTEGRATION OF NETWORK CAMERAS IN D-LAB





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### 1. General Hardware Setup

Setup of the overall system:

- connect network cams via network cable to PoE-Switch
- connect D-Lab computer via network cable to PoE-Switch
- provide PoE-Switch with energy.

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The D-Lab Computer and the Network-Cameras should be set to a common IP-Address-Space. The D-Lab computer needs to have a fixed IP-Address. Suggestion:

- D-Lab IP: 192.168.10.100
- Camera1: 192.168.10.50
- Camera2: 192.168.10.51
- ...

Firewalls should be turned off on both computers and no Anti-Virus software or decrypted harddrives should be used. It should be possible to ping the Cameras from the D-Lab computer via the Command-Interface of Windows.



### 2. Camera Configuration (IP-Adress)

Use the Axis IP Utility Tool (please see manufacturers guide for further information) to access the single cameras.

- Run IP Utility Tool → Application shows all connected Cameras
- Double Click on a certain camera to open it via browser (alternatively type IP-Address of the camera into the address-line your browser)
- Change from live Visualization to "Setup" → The following window should appear

| AXIS A)                         | Live View Setup Help  |  |  |  |
|---------------------------------|---|--|--|--|
| Basic Setup                     | Basic TCP/IP Settings   |  |  |  |
| Instructions                    | Network Settings  |  |  |  |
| 2 TCP/IP                        | View current network settings: View                           |  |  |  |
| 3 Date & Time<br>4 Video Stream | IPv4 Address Configuration                                    |  |  |  |
| 5 Audio Settings                | Enable IPv4   |  |  |  |
| Video & Audio                   | Obtain IP address via DHCP                                    |  |  |  |
| Live View Config                | Use the following IP address:                                 |  |  |  |
| 017                             | IP address: 2 192.168.0.50 Test                               |  |  |  |
| PIZ                             | Subnet mask: 255.0.0.0  |  |  |  |
| Detectors                       | Default router:   |  |  |  |
| Applications                    | IPv6 Address Configuration                                    |  |  |  |
| Events                          | Enable IPv6   |  |  |  |
| Recordings                      | Services  |  |  |  |
|                                 | Enable ARP/Ping setting of IP Address                         |  |  |  |
| System Options                  | Enable AVHS   |  |  |  |
| About                           | One-click enabled O Always                                    |  |  |  |
|                                 | Proxy:  |  |  |  |
|                                 | Proxy port: 3128  |  |  |  |
|                                 | Proxy login:  |  |  |  |
|                                 | Proxy password:   |  |  |  |
|                                 | Proxy authentication method:      Basic      Digest      Auto |  |  |  |
|                                 | AXIS Internet Dynamic DNS Service Settings 3 Save Reset       |  |  |  |
|                                 | See also the advanced TCP/IP settings                         |  |  |  |

- Assign an IP Address to the Camera (Suggestions see above)
  - (1) Go to Basic Setup  $\rightarrow$  TCP/IP
  - (2) Select "Use the following IP Address"
  - (3) Click on Save



#### 3. Set remote access configuration for D-Lab

- Add a User
  - (1) Go to System Options  $\rightarrow$  Users
  - (2) Add a User with the Login "root" and the password "root"
  - (3) Click on Save

|  | <mark>S Q6035</mark>   | Network Camera                         | Live View   Setup   Help |
|--|------------------------|--|--------------------------|
| • Basic Setup  | Users                  |  | 0                        |
| Video & Audio  | User List<br>User Name | User Group                             | User Info                |
| Live View Config   | root                   | Administrator                          |                          |
| ▶ PTZ  |                        |  |                          |
| Detectors  |                        |  |                          |
| Applications   |                        |  |                          |
| • Events   |                        | _                                      |                          |
| • Recordings 2   | Add                    | Modify Remove                          |                          |
| - System Options   | HTTP/RTSP              | Password Settings                      |                          |
| 1 Users  | Allow password         | d type: Encrypted & unencrypted 🔻      |                          |
| IP Address Filter<br>HTTPS 3                             | User Setting           | 5                                      |                          |
| IEEE 802.1X<br>Audio Support                             | 🗷 Enable ano           | nymous viewer login (no user name or p | assword required)        |
| Date & Time<br>Network                                   | 🗹 Enable ano           | nymous PTZ control login (no user name | e or password required)  |
| <ul> <li>Storage</li> <li>Ports &amp; Devices</li> </ul> | Enable Bas             | sic Setup                              |                          |
| Maintenance<br>Support                                   |                        | Save Re                                | set                      |
| Advanced   |                        |  |                          |
| About  |                        |  |                          |

- Add an Onvif-User

- (1) Go to System Options  $\rightarrow$  ONVIF
- (2) Add a User with the Login "root" and the password "root"

|  | S Q6035        | Network Camera | Live View   Setup   Help |
|--|----------------|----------------|--------------------------|
| <ul> <li>Basic Setup</li> <li>Video &amp; Audio</li> </ul>   | ONVIF Version: | 1.02           | 0                        |
| Live View Config   | User Name      | User Group     |                          |
| ▶ PTZ  | root           | Administrator  |                          |
| <ul> <li>Detectors</li> </ul>  |                |                |                          |
| Applications   |                |                |                          |
| Events   |                |                |                          |
| <ul> <li>Recordings</li> <li>System Options<br/>Security</li> <li>Security</li> <li>Users:</li> <li>I ONVIF<br/>IP Address Filter<br/>HTTPS<br/>IEEE 802.1X<br/>Addio Support<br/>Date &amp; Time<br/>Network<br/>Storage</li> <li>Ports &amp; Devices<br/>Maintenance<br/>Support<br/>Advanced</li> </ul> | Add            | Modify Remove  |                          |



## 4. Set D-Lab Configuration

- Go to Plan-Mode
- Add an Onvif-Video Source (1)
- Give the Video Source a name of your choice
- Fill in the Username and Password of the ONVIF User created above (suggestion: root / root)
- Fill in the IP Address of the Camera

| Recording Sensors                                      |                                     |                                       |        |  |  |  |  |
|--|-------------------------------------|---------------------------------------|--------|--|--|--|--|
| TE T   |                                     |                                       |        |  |  |  |  |
| Name <b>T</b>  | All • Type Visualizations           | Status Description                    |        |  |  |  |  |
| <ul> <li>Local</li> <li>Audio</li> </ul>               | Add Onvif Data Plugin Configuration |                                       | ×      |  |  |  |  |
| Mikrofonbuchse<br>Wiedergabeerfassung<br>Dock-Mikrofon | Name Username<br>Kamera1 root       | Password IP Address root 192.168.0.50 |        |  |  |  |  |
| Internes Mikrofon<br>Network Data Stream 🛛 💠           | Denebig                             | fest                                  | Cancel |  |  |  |  |
| Network Tasks 🛛 📥                                      |                                     |                                       |        |  |  |  |  |
| 1 Onvif Video  |                                     |                                       |        |  |  |  |  |

