



**seclab**  
-cybersecurity-

# ICS CYBERSECURITY

ENERGY – TRANSPORTATION – CRITICAL  
INDUSTRIES – DEFENCE & GOVERNMENTS

# SECLAB ELECTRONIC AIR GAP



**BEST PRODUCT  
FOR NETWORK  
SEGREGATION**



National Renewable Energy Laboratory  
of the United States  
Department of Energy

## Nine-Layer Security Architecture

Layer	Security Application	Seclab Denellis	BlackRidge TAC	Cisco Firewall + Switches	NexDefense Integrity	N-Dimension N-Sentinel	Albedo PRISM
GWAC 5-6 Business							
GWAC 4 Semantic							
OSI 7 Application							
OSI 6 Presentation							
OSI 5 Session							
OSI 4 Transport							
OSI 3 Network							
OSI 2 Data Link							
OSI 1 Physical							

**Not a PC!**

**3 parts custom made  
cybersecure electronic**



# DEDICATED

SECLAB is a cybersecurity company dedicated to meeting the integrity and availability needs of connected industries and critical infrastructures



# CERTIFIED

SECLAB products are certified by the French Cybersecurity Agency (ANSSI) for being used in critical infrastructures ("CIIP Law")



# DEPLOYED

SECLAB products are deployed on critical systems and other french nationwide infrastructures (Energy, Railways, Telecoms, Défense, Government Institutions)

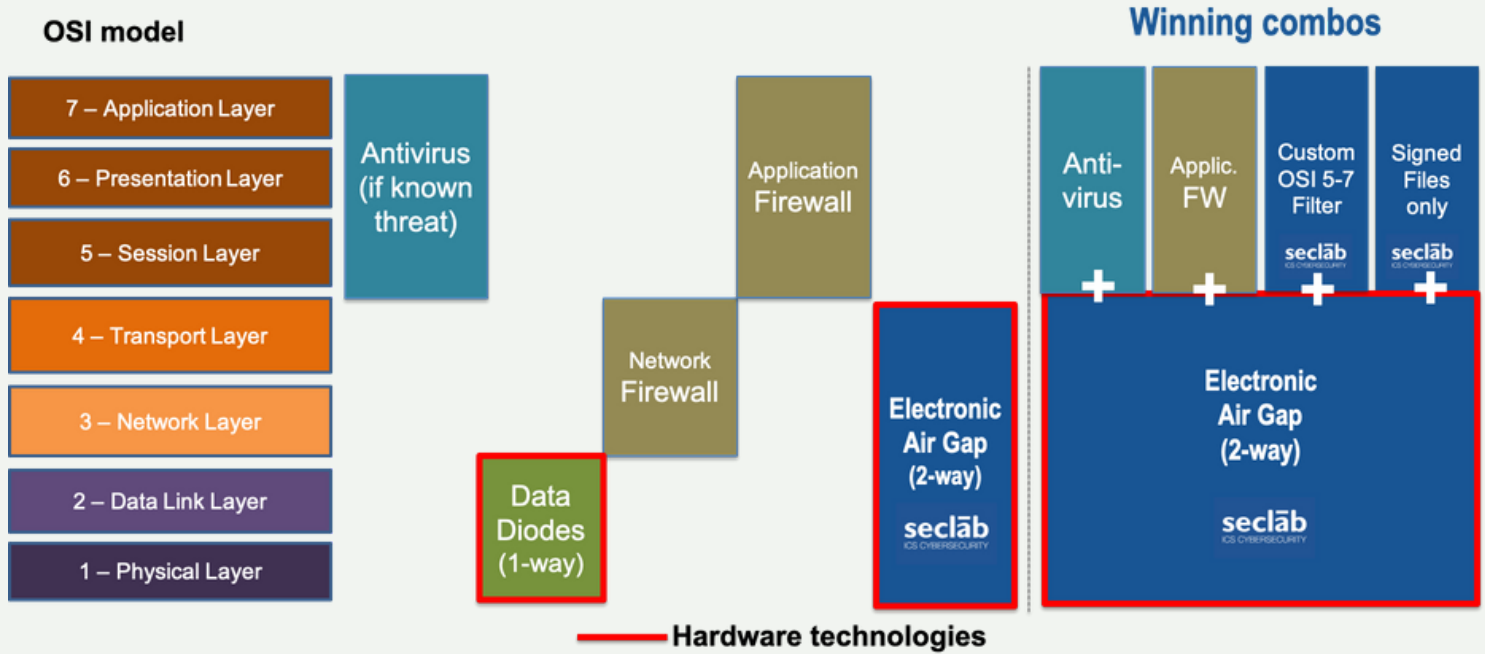




# TYPICAL USE CASES OF SECLAB ELECTRONIC AIR GAPS

- Complying with laws & security requirements for Operators of Essential Services
- Ensuring your antimalware policy is applied on all your industrial assets
- Receiving genuine software updates from your vendors on your critical networks
- Doing remote maintenance, monitoring and cyber-supervision

# THE ONLY HARDWARE-BASED SYSTEM ENABLING 2-WAY COMMUNICATIONS



## Electronic protection against cyber attacks



### SECURE XCHANGE NETWORK

Functionalities of a firewall or a data-diode. Security level of an Air Gap.



### SECURE XCHANGE USB

File exchange without risk of infection via usb.

## Hardware-enforced



Embedded electronic  
Cannot be modified  
Immune to Zero-Day attacks



### Physical Segregation

Strict segregation of domains  
Direction Control



### Plug and Protect

Easy to install & maintain  
Zero impact on infrastructure



### Easy Control of Data & Process Exchanges





# SECURE XCHANGE NETWORK

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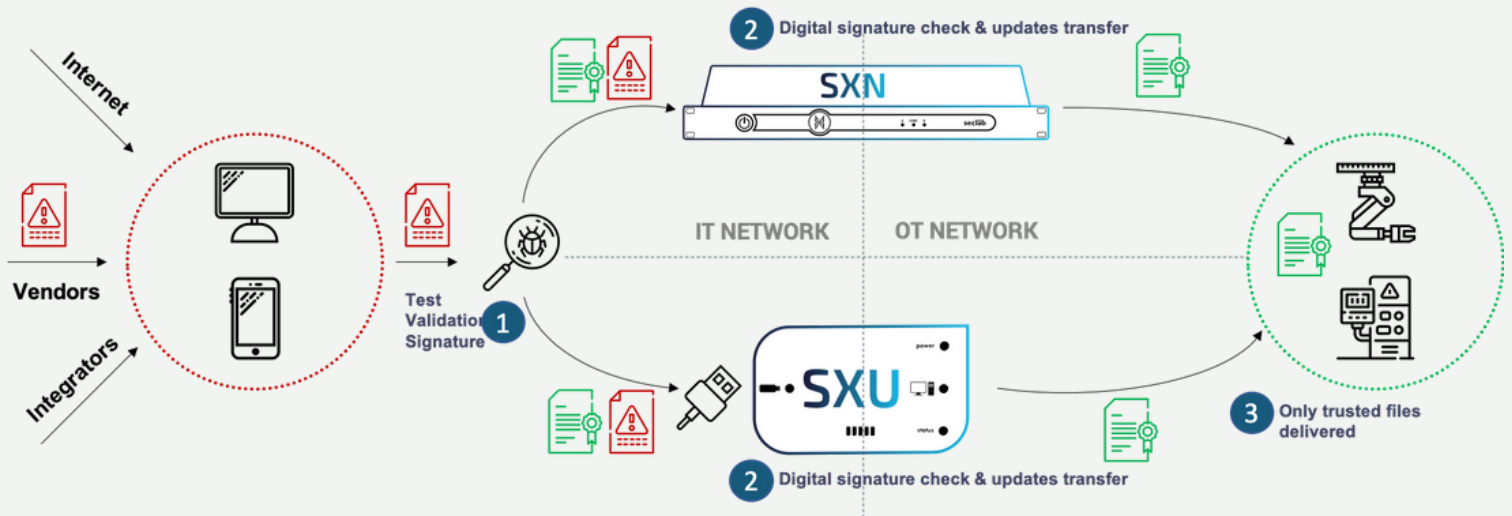
- **Secure Xchange Network** role is to **Neutralize non expected content** between 2 networks
- It's an **Appliance** (1U)
- Its core features are :
  - **Destroying the Transport layers**, of any protocol and **recreating a trusted transport layer**
  - **Preventing any attack** at transport level, by having a chip-based architecture (vs SW)
  - **Providing Direction Control**
  - **Content analysis / filtering**, or chaining other products for such (Ex: Firewall)



## SECURE XCHANGE USB

- **Secure Xchange USB** role is to **Neutralize non expected content** between a **USB mass-storage device** and a **host**.
- It's a USB Appliance (2,5" HDD size)
- Its core features are :
  - **Destroying the USB layer**, and recreating a trusted USB layer
  - **Preventing any attack** at USB layers level
  - **Providing Direction Control**
  - **Files filtering and / or chaining other products** for analysis (Ex: Antivirus)

# CASE STUDY: SECURING SYSTEM CONFIGURATIONS & SOFTWARE UPDATES



## DEPLOYMENT OF BOTH SECURE XCHANGE NETWORK & USB

### SECURE XCHANGE

- Securing System Configurations & Software Updates
- 100 % Network segmentation & segregation
- Only Trusted Files are transferred
- Secure Xchange USB protects USB ports of non-connected systems
- USB can be used with the exact same security policy as a risk coverage of any unavailability of the network

### Challenge

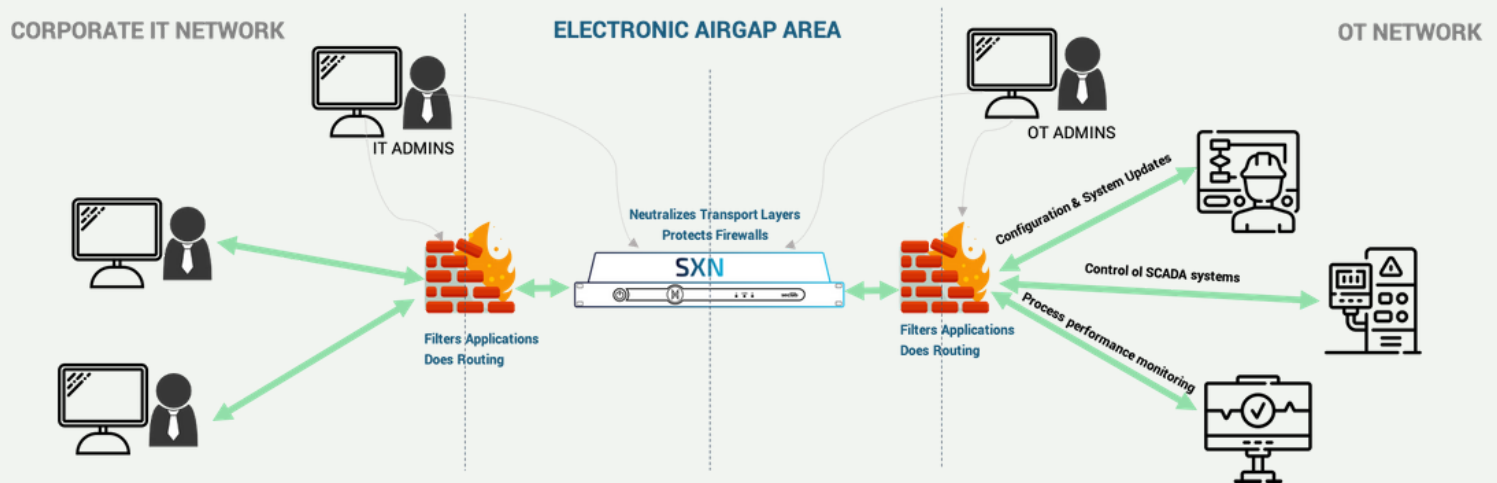
Protect the safety & reliability of critical systems within Nuclear Sites while allowing system configuration and software updates from different sources

### Benefits

- 100% Secure
- Easy to deploy
- Easy to maintain
- Business Continuity Plan



# CASE STUDY: ENABLING SECURE COMMUNICATIONS BETWEEN IT AND OT NETWORKS



## DEPLOYMENT OF SECURE XCHANGE NETWORK in addition to firewalls

### SECURE XCHANGE

- Securing IT-OT Data Exchanges
- 100 % Network segmentation & segregation
- Firewalls protected by SECLAB AIR GAP technology

### Challenge

More DATA exchanges between IT & OT Networks could compromise both safety & cyber security

### Benefits

- Better IT/OT Process performance without compromising security
- Easy to maintain and administrate

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