



City of Kristiansund – Zero Trust Architecture

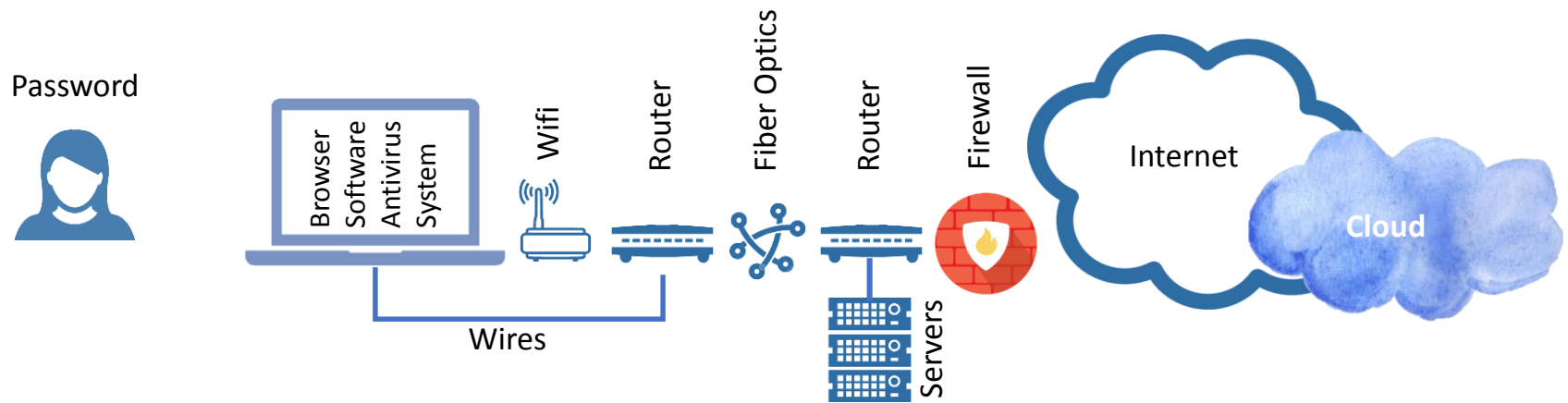


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04-05.11.19

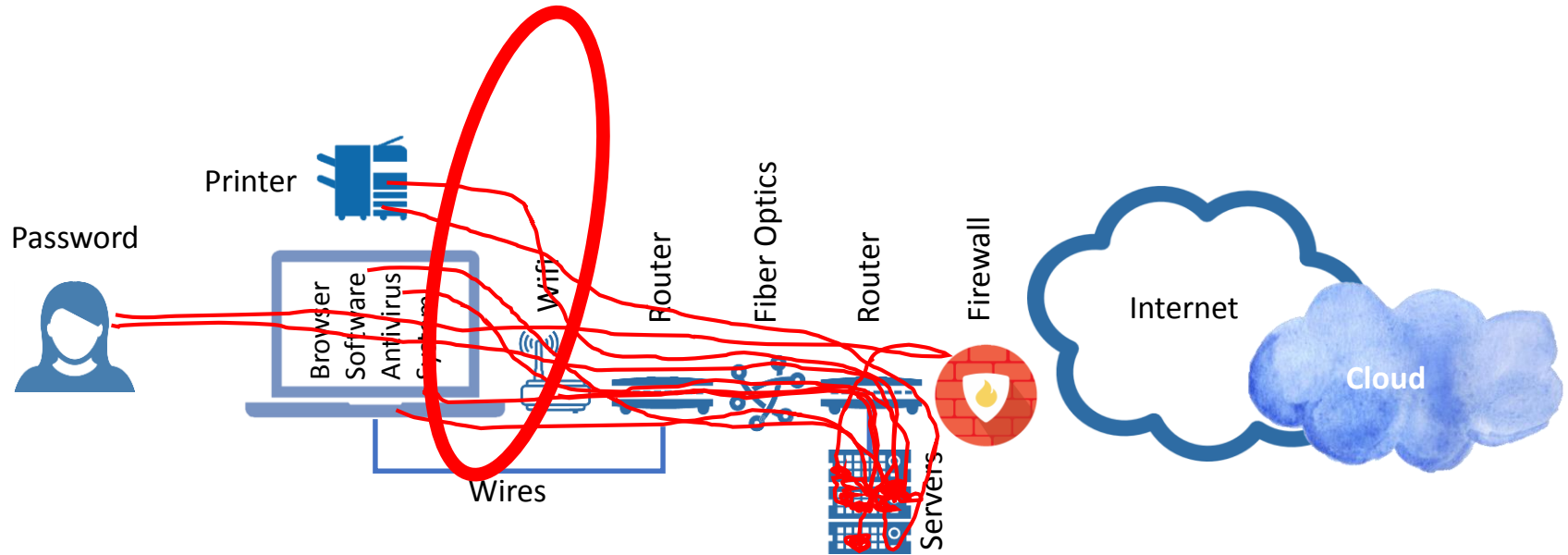


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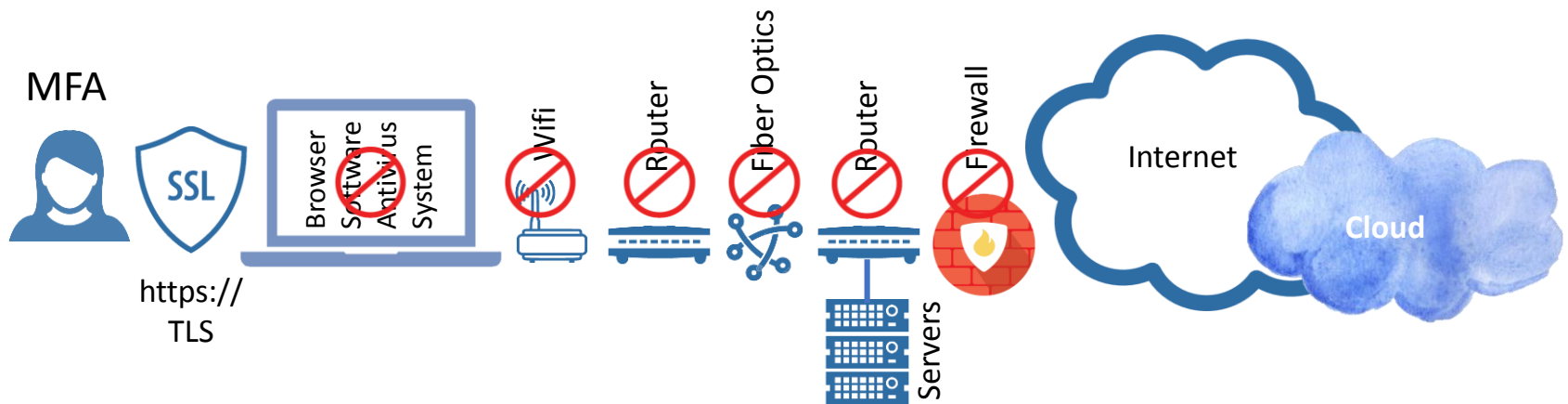


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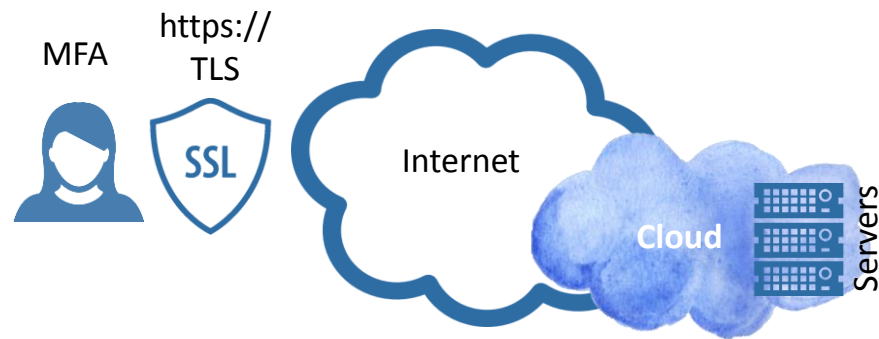
Constantly encrypting and decrypting wireless traffic



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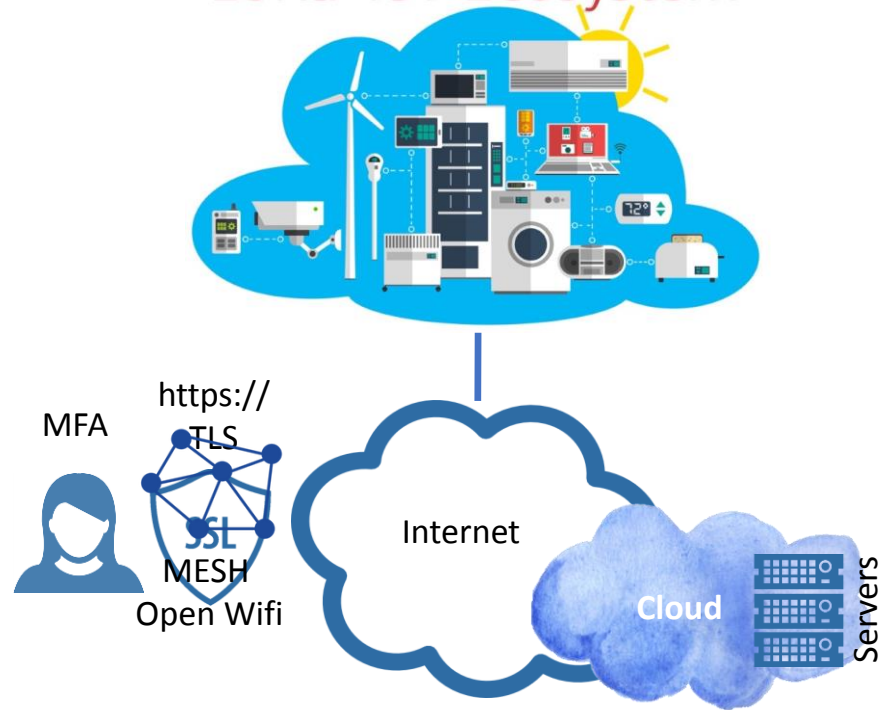


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LoRa® IoT Ecosystem



Kristiansund – Zero Trust Architecture



- Less advanced and costly equipment
- Reduced vendor dependency
- IT resources can focus on quality
- Less demand for computing power
- Office work and mobility is seamless

REDUCED COMPLEXITY



ENHANCED SECURITY

- Two factor for safe authentication
- SSO with 3rd parties is now pain free
- More secure printing
- Less vulnerability to loop holes, cryptovirus, ransomware and other threats
 - WPA2 hack
 - The Huawei fear
- Screen scraping still unsolved.



- Use of known national security standards
- Expectations of the citizen succeeded
- Quick deployment
- Swift involvement in user acceptance
- One door to public administration
 - We admire Estonia 😊

FROM THE EYES OF A CITIZEN



- 3. Good Health

More patient facetime. Sensors - Digital safety alarms, electronic door locks, digital drug dispensers. Hospital @ Home.

- 4. Quality Education

Cheaper computers – one device per child. Open wifi

- 6. Clean Water and Sanitation

Sensors in both downstream and upstream services

- 9. Industry, innovation and infrastructure

Easier deployment and co-operation with the city's businesses, keyless

- 11. Sustainable Cities

City wide free network. Keyless entry, less energy use.

- 13. Climate Action

Digitized Climate data collection, action and follow up.

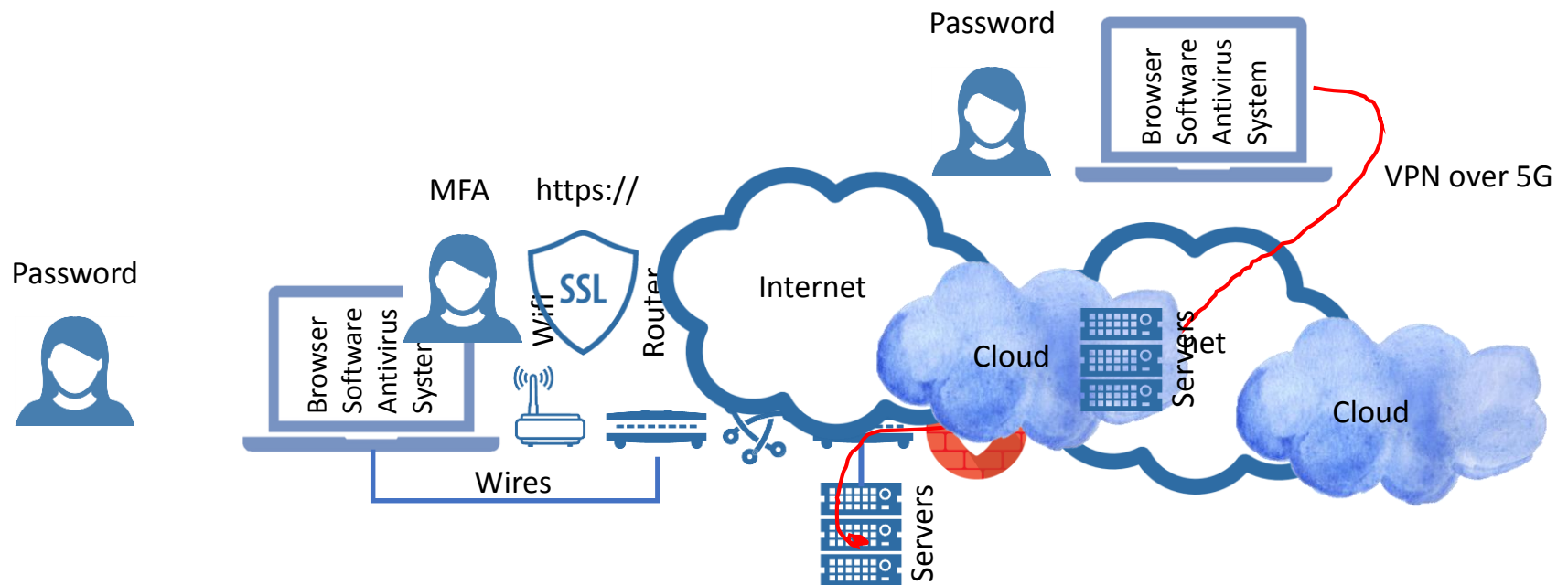
- 17. Partnerships

Easier collaboration with surrounding municipalities

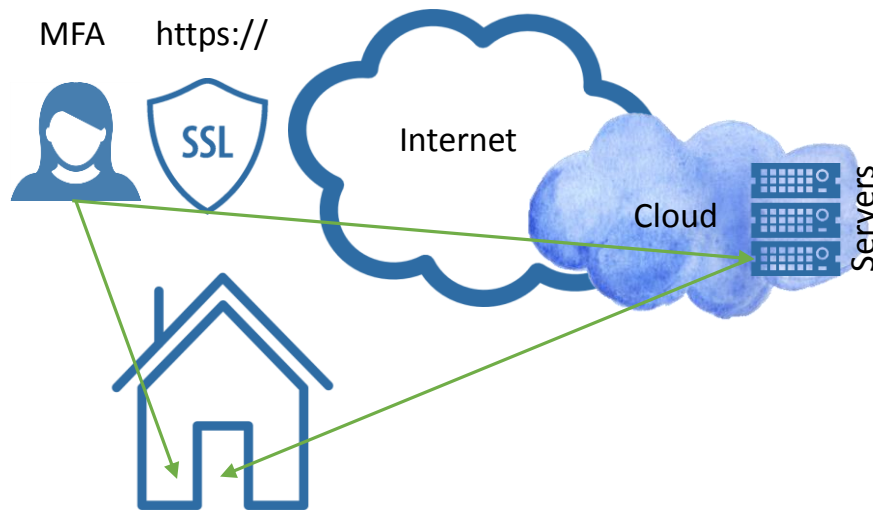
UNITED NATIONS SUSTAINABILITY GOAL IMPACT



- With 5G on the horizon with 1Gb bandwidth, do we really need Wifi?
- But VPN is just SSL/TLS.....



FUTURE PROOFING



- Anything can be added to an open network. Its how you prototype before adding support for security.
- Virus or crash?
Just reset to factory default settings
- All secured Wifi has overhead or «throughput degradation».

Examples:

- Mobility / working from home
- Door locks : €4 per door
- CO2 (our city is «one house»)

Consumer tech is designed to roam in the same network

ORGANIZATIONAL AGILITY



4000 computers - saving €200 / pc
1000+ consultant hours - €160 / hr
1400 access points - saving €400 / ap
€20.000 / yr in routers
€60.000 / yr in firewall

That is €65 per citizen / year

Assuming everyone is like Kristiansund,
that is €33,5 Bn / yr for Europe.

...but there is a cloud **cost** that is elastic

REDUCED COST



- 3000 students learn in a pain free digital environment
- Nurses work on the move
- Service innovation is thriving
- We are now attracting the best talent to public administration
- Home based care is and feels safer
- The gap is gone between our 4 islands...and the rest of the world



THIS IS NO LONGER A PLAN – THIS IS REALITY



**YESTERDAY
YOU SAID
TOMORROW**

JUST DO IT.



Thank you so much for your attention!