WP7/8 - Managed and Monitored Wireless
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The SCOTT vision for 2030

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secure connected trustable things

Common vision

- **Wireless needs management**
  - interference (other networks,
  - bad connectivity ("bad apple", near-far challenge)
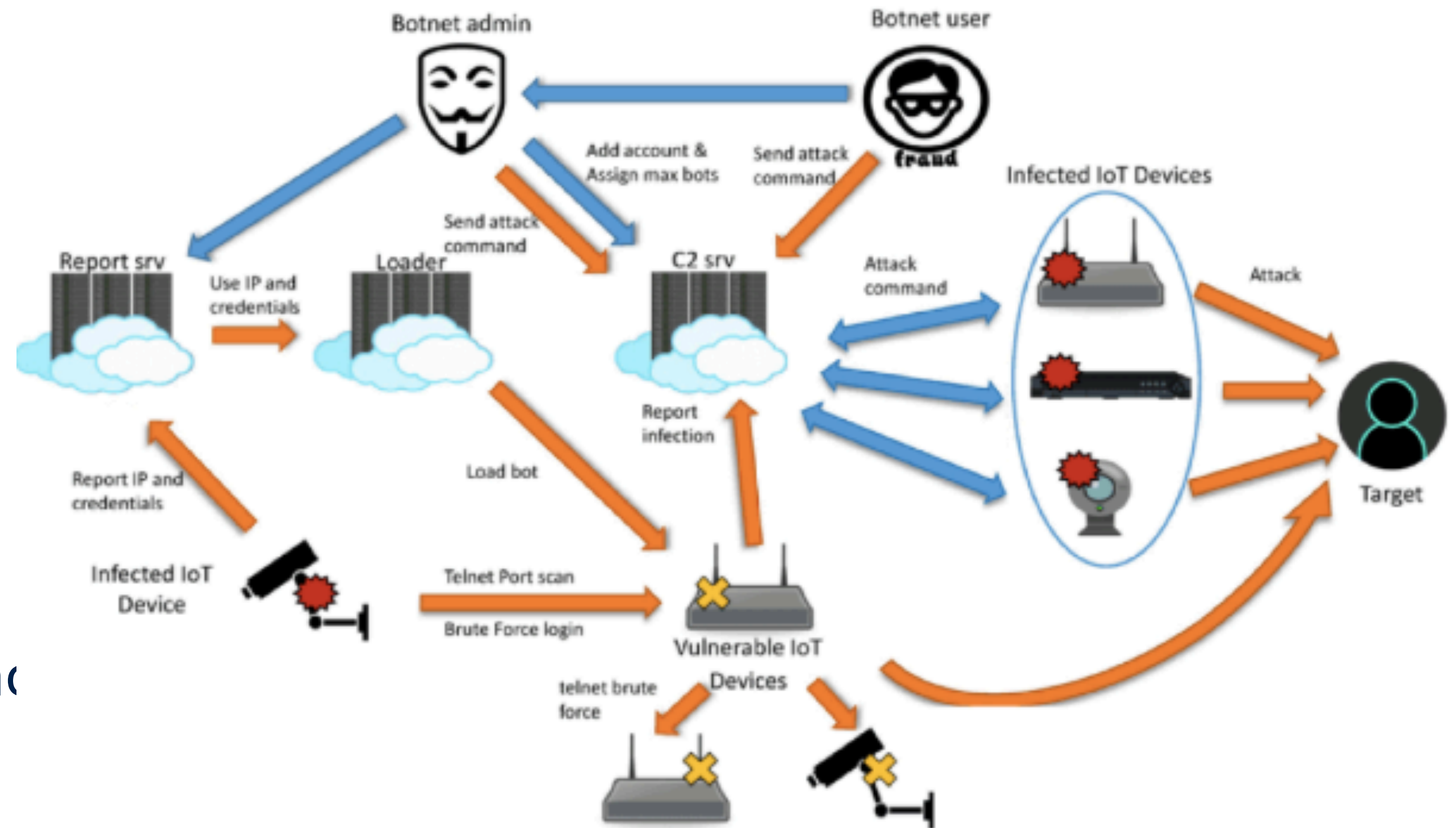 - bad devices (electric heating,…)

- **Attacks through wireless**
  - DDoS
  - Ransomware, …

- **SCOTT contribution**
  - Security classes (SIL 1-3)
  - Trust through knowledge and transparenc
  - Managed and monitored

[source: https://www.fortinet.com/blog/threat-research/shinoa--owari--mirai--what-s-with-all-the-anime-references-.html]

Trust, Security and Privacy in Communications

Table identified in Oslo workshop

Trust/Sec/Priv in Comm	ISP	Mobile Operators	Loran/Wifi
Sensors			
Communications			
Intelligence			
Services			

Air Qualtiy
- Customer segment
- health, quality of life
- costs
- quality/sec/trust…

- **Ongoing discussions**
  - Autonomous systems ("graceful degradation")
  - Probability of values
    - Virtual sensors / Watchdog / Monitoring layer
  - Communications according to application demands (sec/priv/trust)

"Managed and monitored WiFi" - WP7/WP8 contrib

Trust/Sec/Priv in Comm	Solutions / Choices	Benefits	Impact	Partners	
Sensors	Wifi	autonomy, e.g. optimised battery capacity, OPEX		Wifi device	
Communications	Gateway monitoring (RSSI, packet loss,…, clients)	insight - Quality - Security	- guaranteed quality - system performance	Telecom & ISPs: services across networks	
Intelligence	AI for quality	better knowledge	- attack knowledge	ISP: increased knowledge, decreased costs (customer requests)	
Services	"guaranteed Wifi"		reliable communications, high speed Internet (500 Mbit/s) Countermeasures on IoT attacks	IoT Security, Societal Security - Security-monitoring National authorities	

Eval Criteria

Managed and Monitored Wifi
- bad device identification
- interference
- customer satisfaction

- Ongoing work
  - AI improvements for Wifi knowledge
  - Customer Care management (empower the people)
  - Societal Empowerment "free access to information"

"Air quality monitoring" - WP7/WP8 contrib

Trust/Sec/Priv in Comm	Solutions / Choices	Benefits	Impact	Partners
Sensors	Tiny and MCF sensors: temp., humidity, CO2, motion	better air quality energy/climate		End customer: - quality of meeting
Communications	BLE, MQTT/IP, REST/https/IP LoRaWAN	insight - Quality - Security	real-time multi-sensor data collection system	Telecom & ISPs: - quality of meeting/ conf rooms
Intelligence	AI for air quality	better knowledge		
Services	comfortable meeting rooms better climate	CO2 reduction, energy costs		

Eval Criteria

Air Qualtity
- Customer segment
- health, quality of life
- costs
- quality/sec/trust…

- Ongoing work
  - Multi-sensor integration
  - Proactive maintenance
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