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Security for lighting in IoT – group communication

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Tridonic

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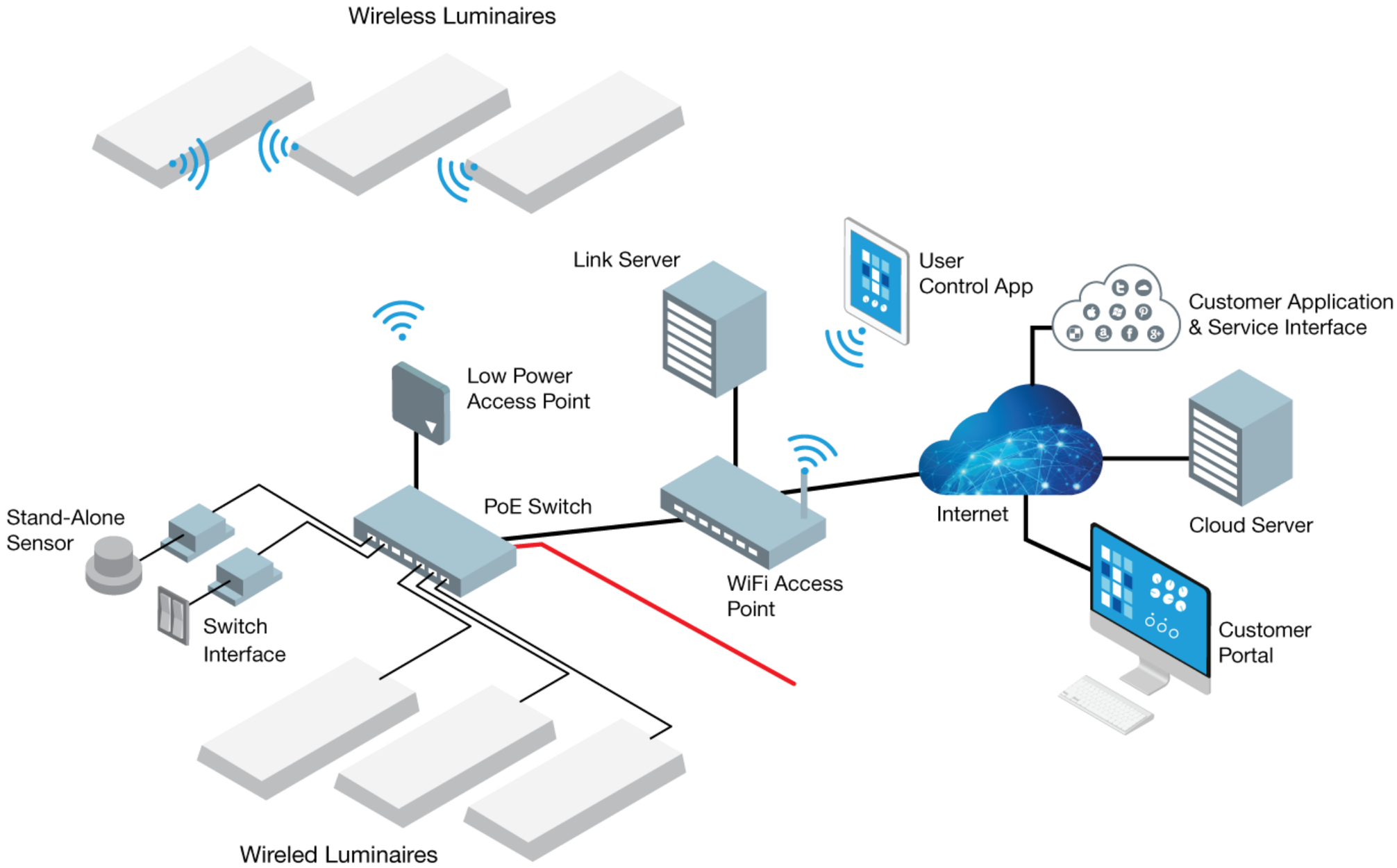
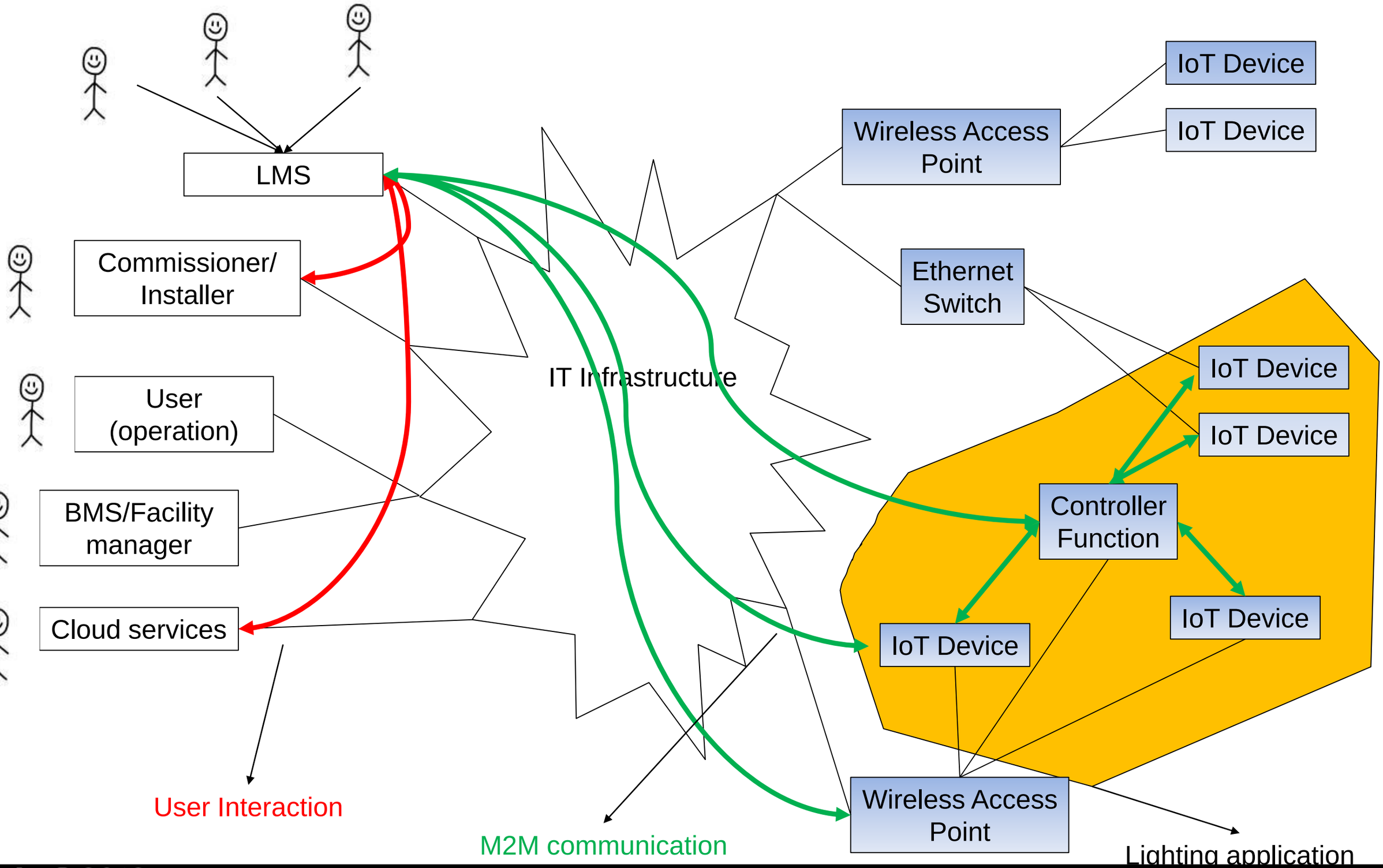
The big picture



Security in IoT – organizational

- Data privacy
- Regulation/compliance
- Incident management
- Human resouces

System Overview



Some security issues – technical

- Initial trust – bootstrap
- Data to cloud
- Peer-to-peer
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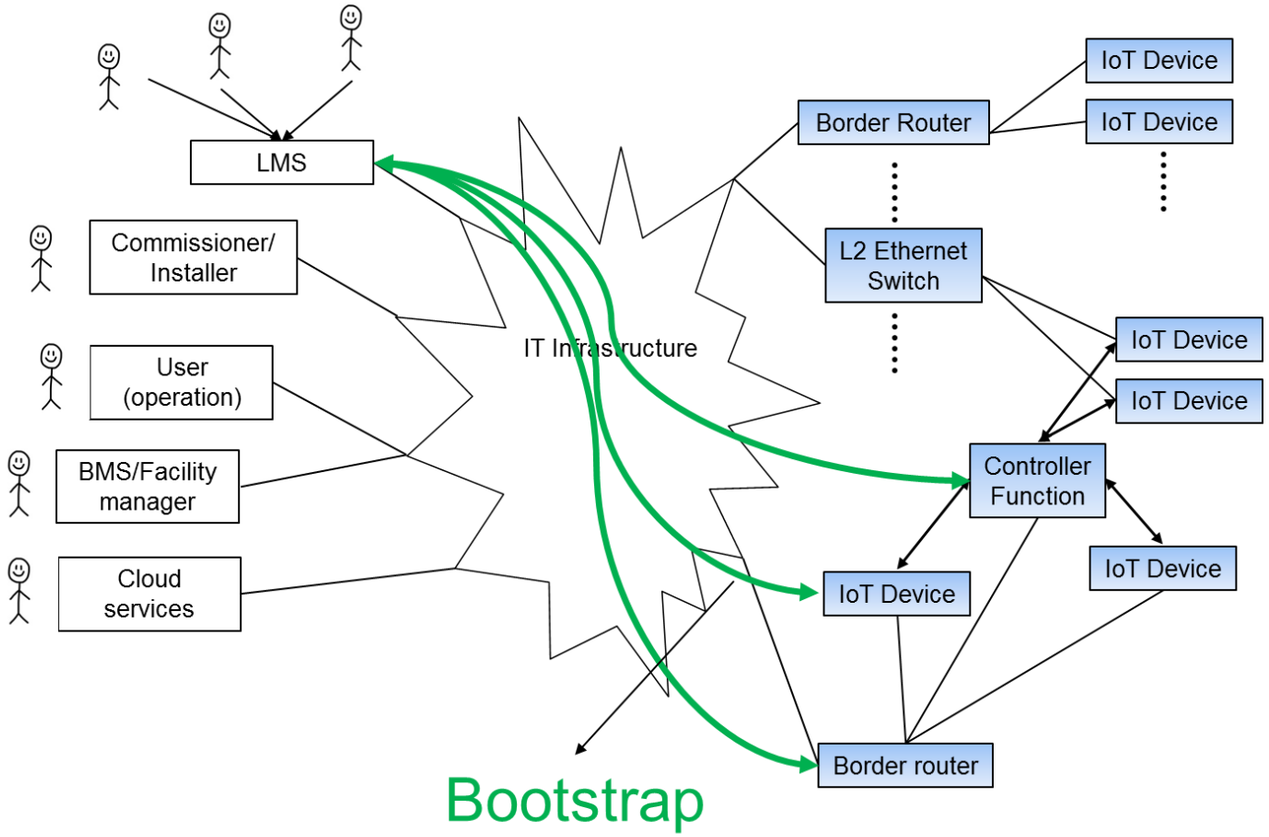

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- **Data to cloud**
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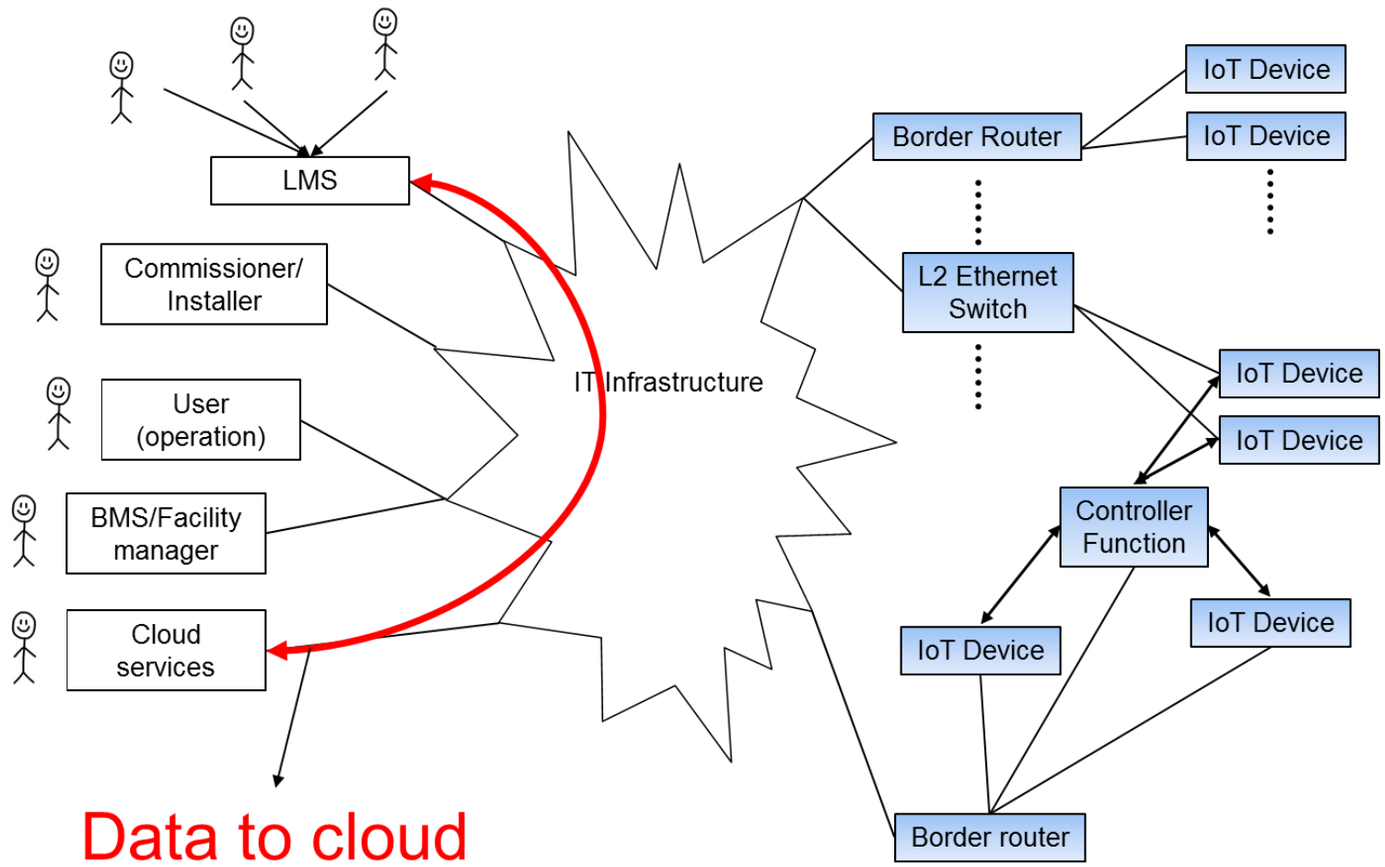

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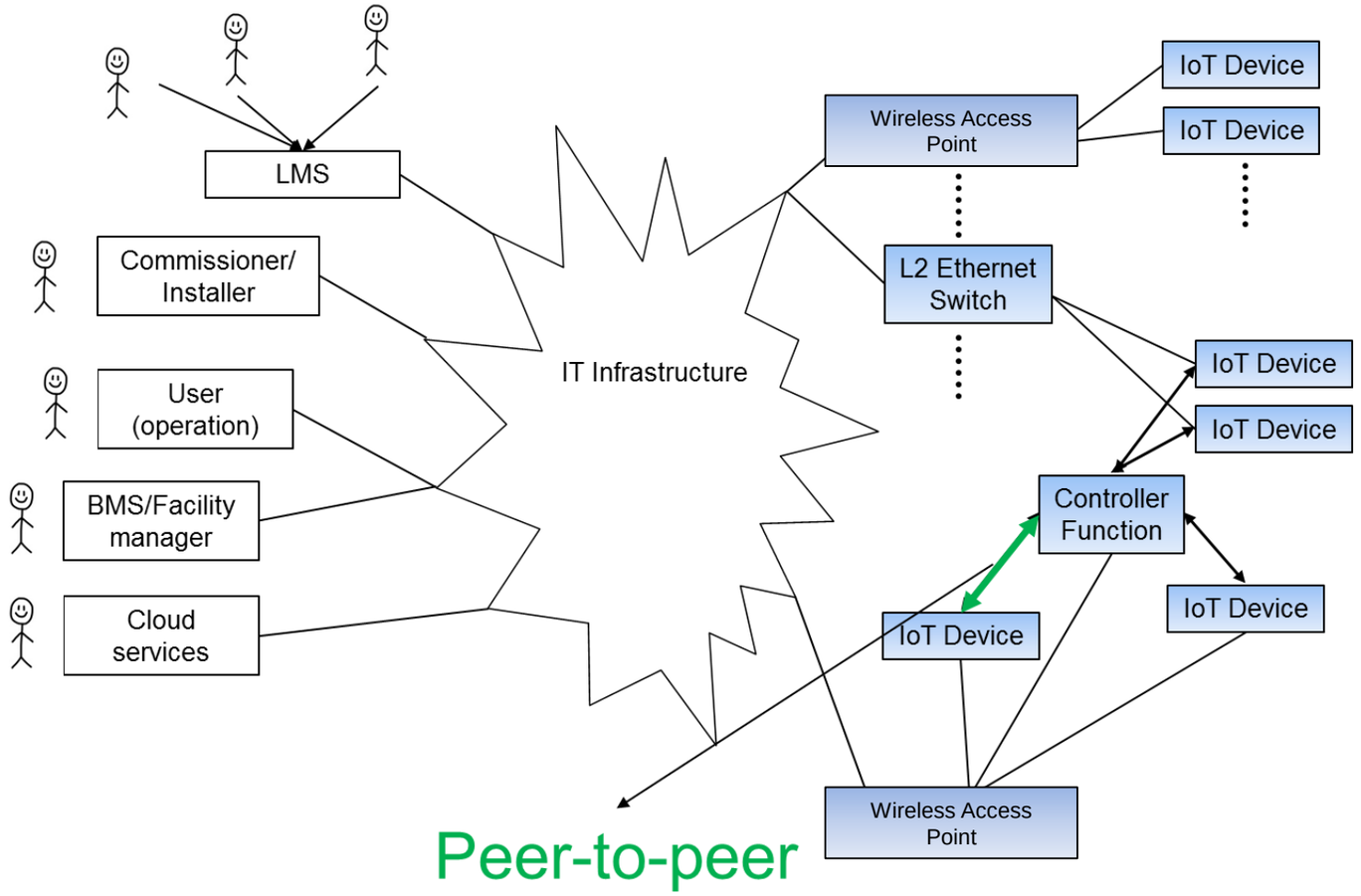

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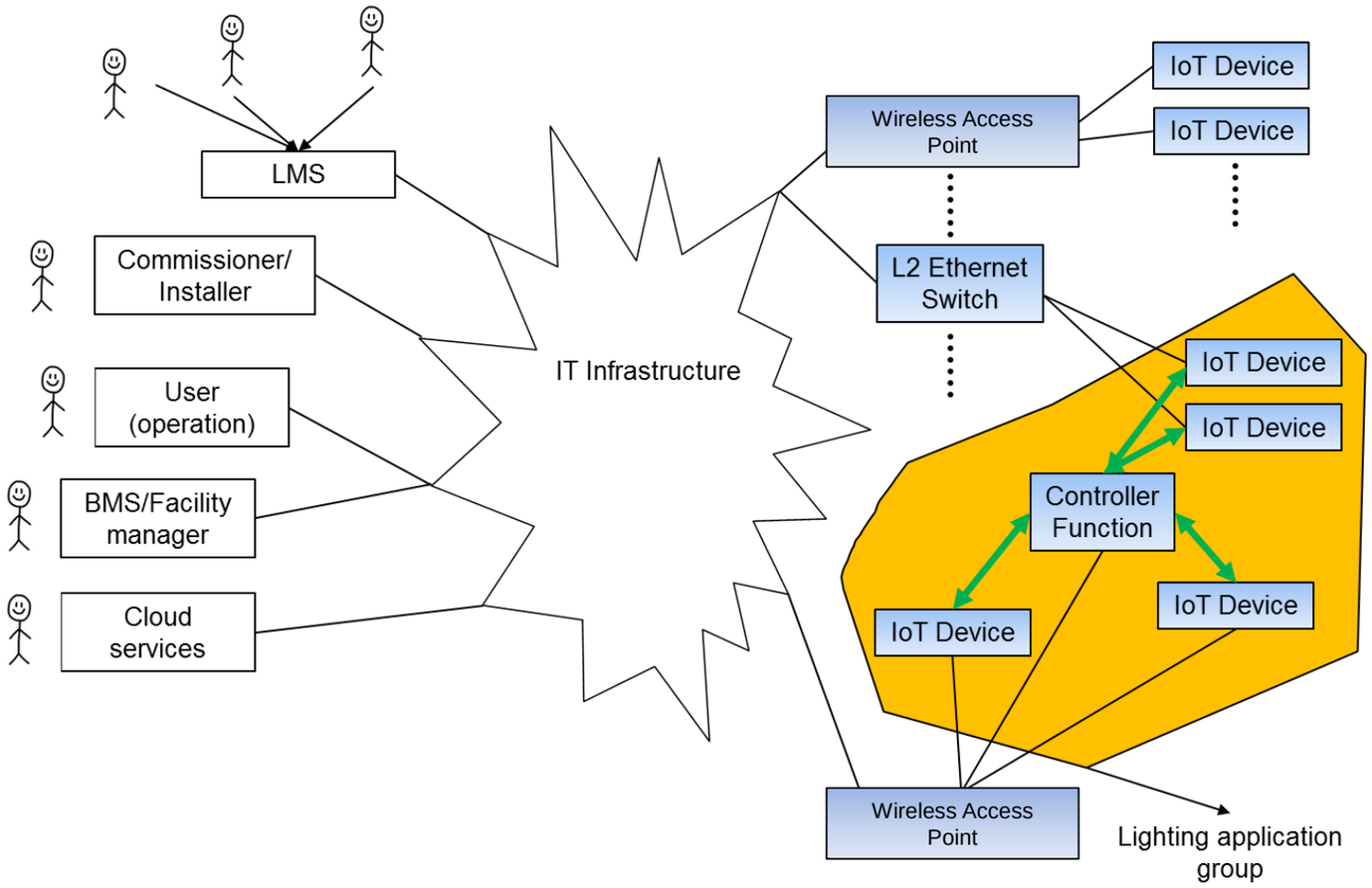
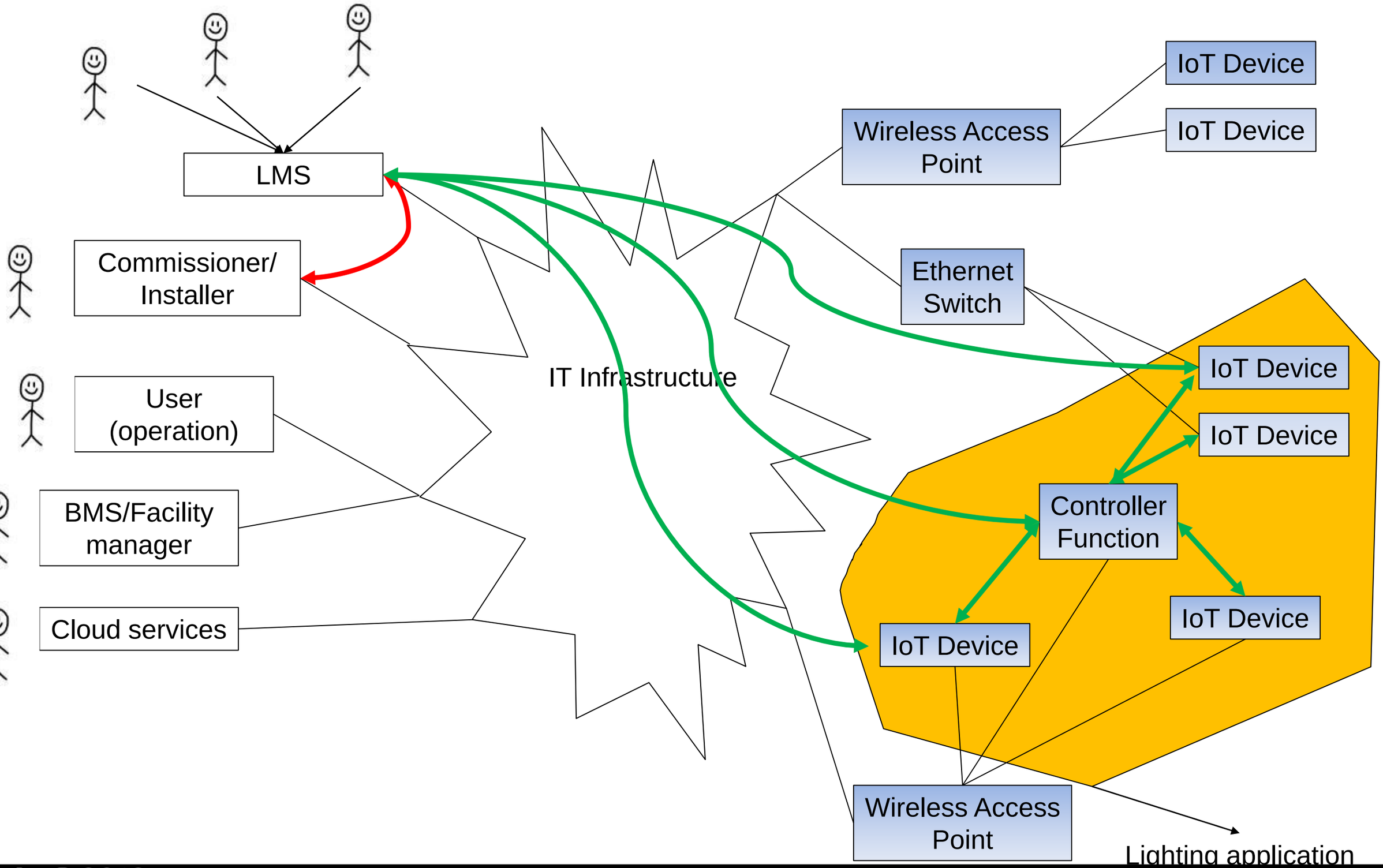


Commissioner: Authorization



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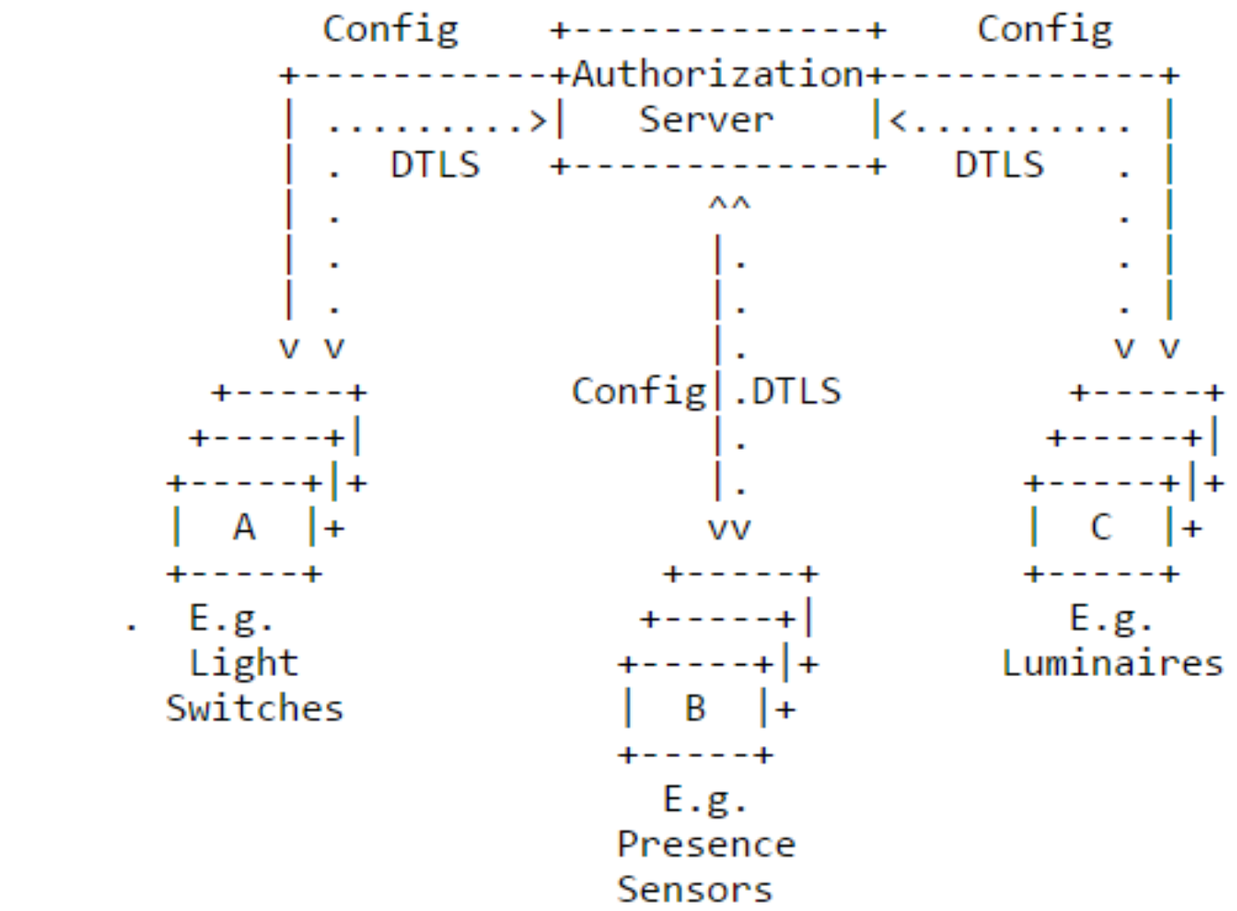

Legend:

Config (Configuration Data): Includes configuration parameters, authorization information encapsulated inside the access token (AT-KDC) and other meta-data.

Figure 1: Architecture: Commissioning Phase.

Commissioner: Authorization

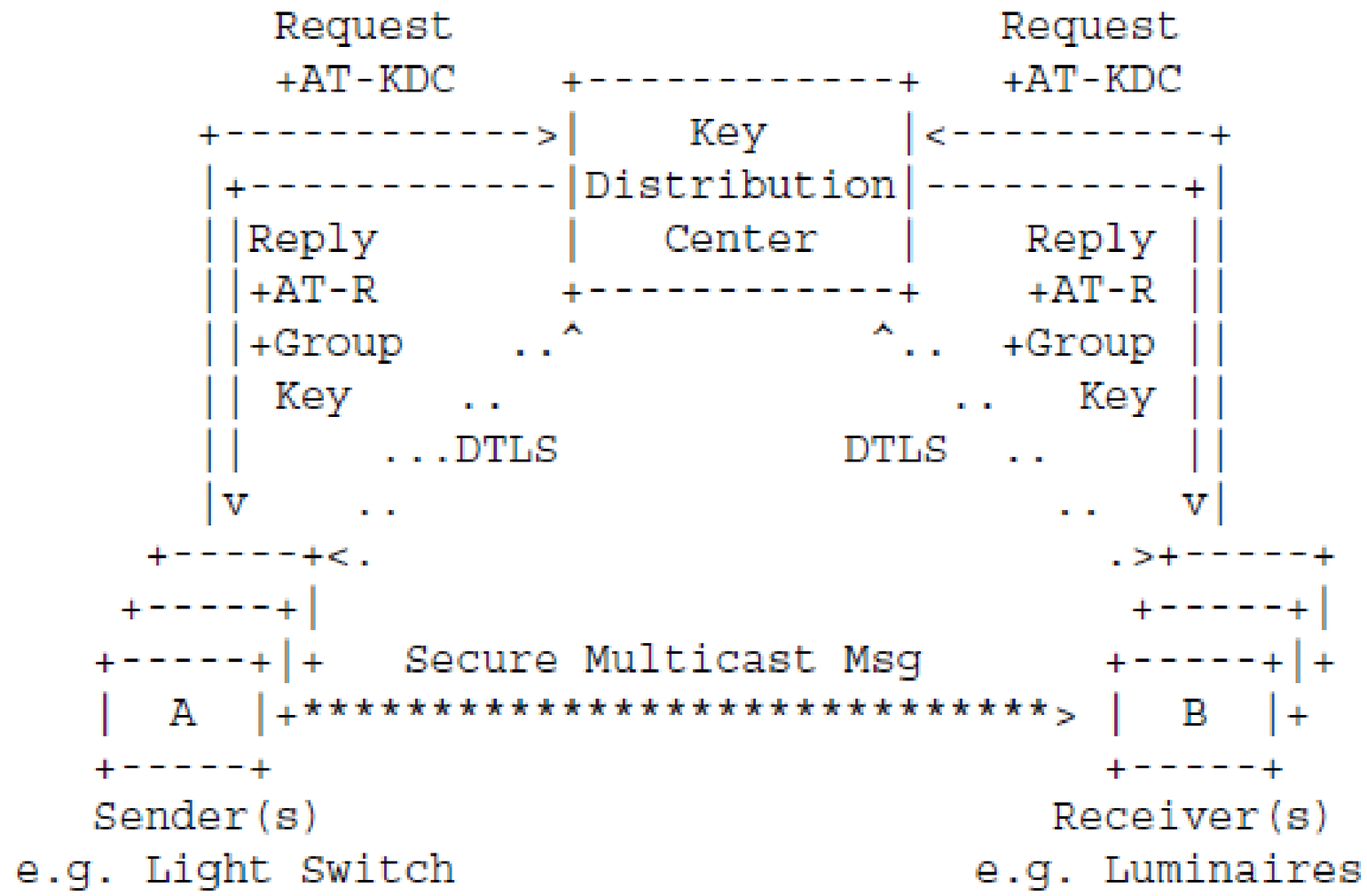

Figure 2: Architecture: Group Key Distribution Phase.

Conclusion

- Organizational vs technical issues
- Several aspects to consider: bootstrap, peer-to-peer, privacy etc.
- Focused on group communication:
  - Authorization: Which devices belong to which group
  - Key distribution: Allow authorized devices to send messages
  - Group communication: Use symmetric keys for authentication