

Basic Enterprise Network Architectures



Foreword

Enterprise business requirements highlight a need for networks that are capable of adapting to ever changing business demands in terms of enterprise business growth and evolving services. It is imperative therefore to understand the principles of what constitutes an enterprise network and how it is formed and adapted to support real world business demands.



Objectives

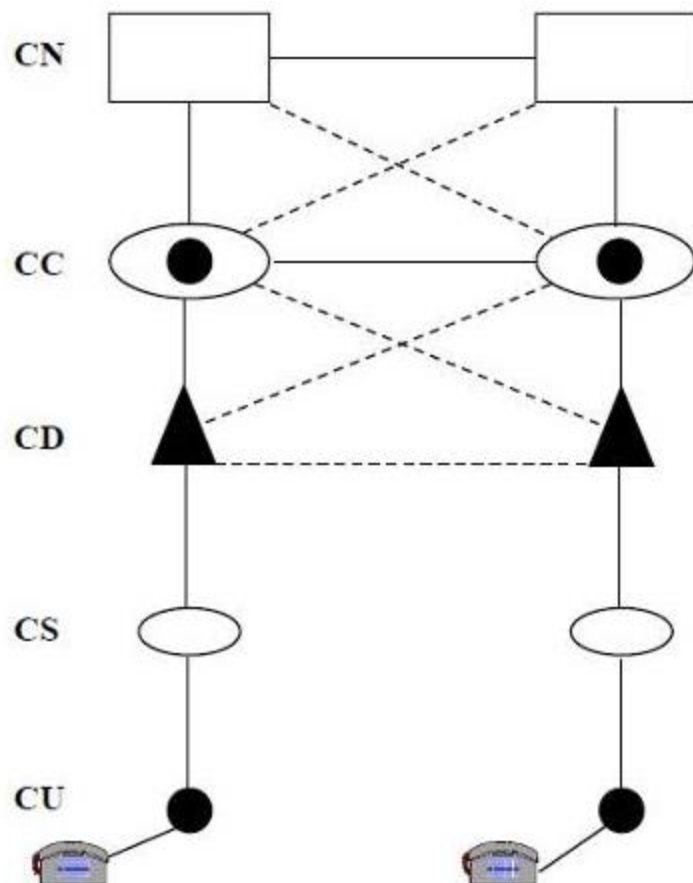
Upon completion of this section, trainees will be able to:

- Explain what constitutes an enterprise network.
- Describe the common enterprise network architecture types.
- Describe some of the solutions commonly implemented within an enterprise network to support business operations.

IT o OT?

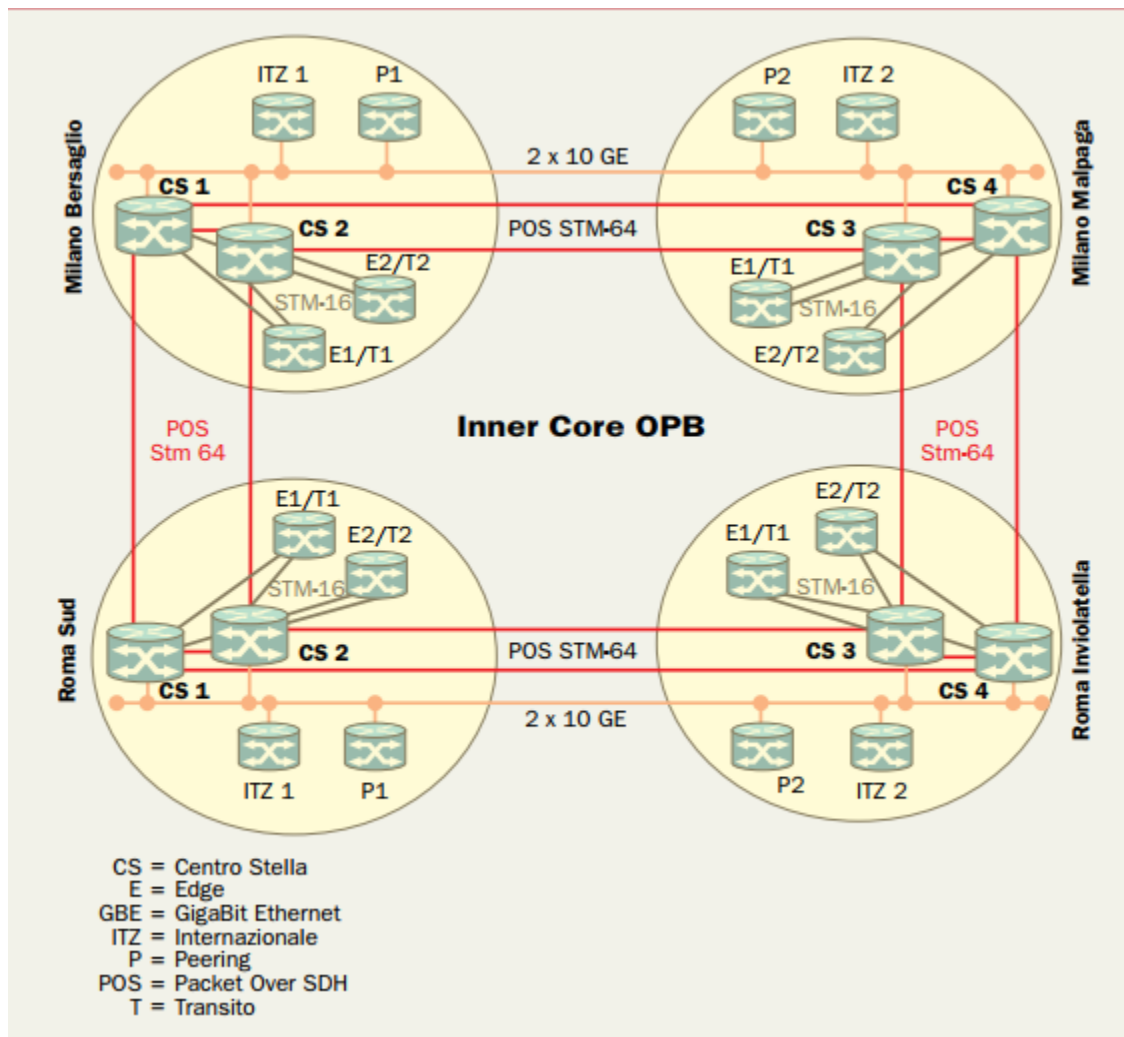
- Operational Technology:
 - Reti di sensori ed attuatori che sono dedicati al controllo ed alla attuazione in processi fisici.
 - Ottimizzazione delle prestazioni di controllo
 - Vincoli temporali stringenti.
- **Information Technology**
 - Reti di dispositivi che scambiano tra loro dati ed informazioni per fornire o usufruire di servizi.
 - Ottimizzazione della banda;
 - Nessun controllo sulla latenza o sul ritardo.

Topologia della rete telefonica - legacy

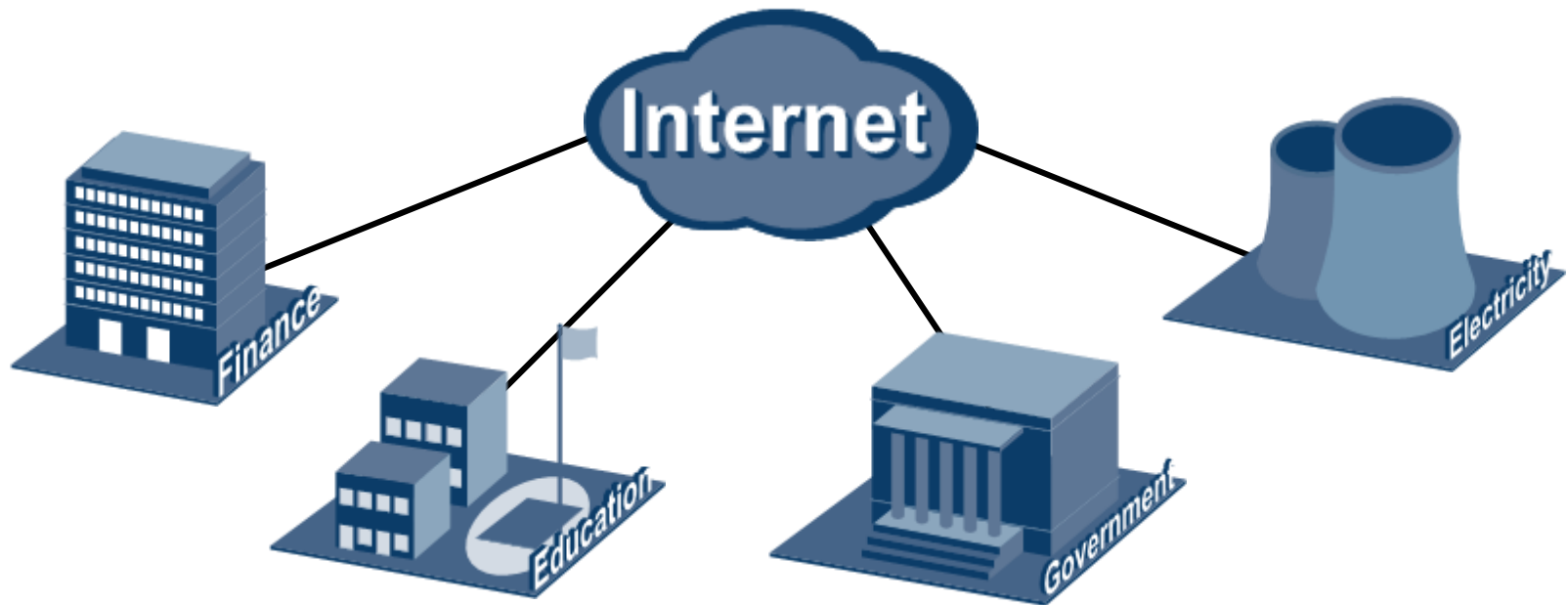


(3 Centri Intercontinentali)
(5 Centri Internazionali)
2 CN
21 Centri Compartimentali
232 Centri Distretto
1.399 Centri Settore
1.794 Reti Urbane
10.400 circa Centrali Urbane

Topologia della rete ottica Telecom

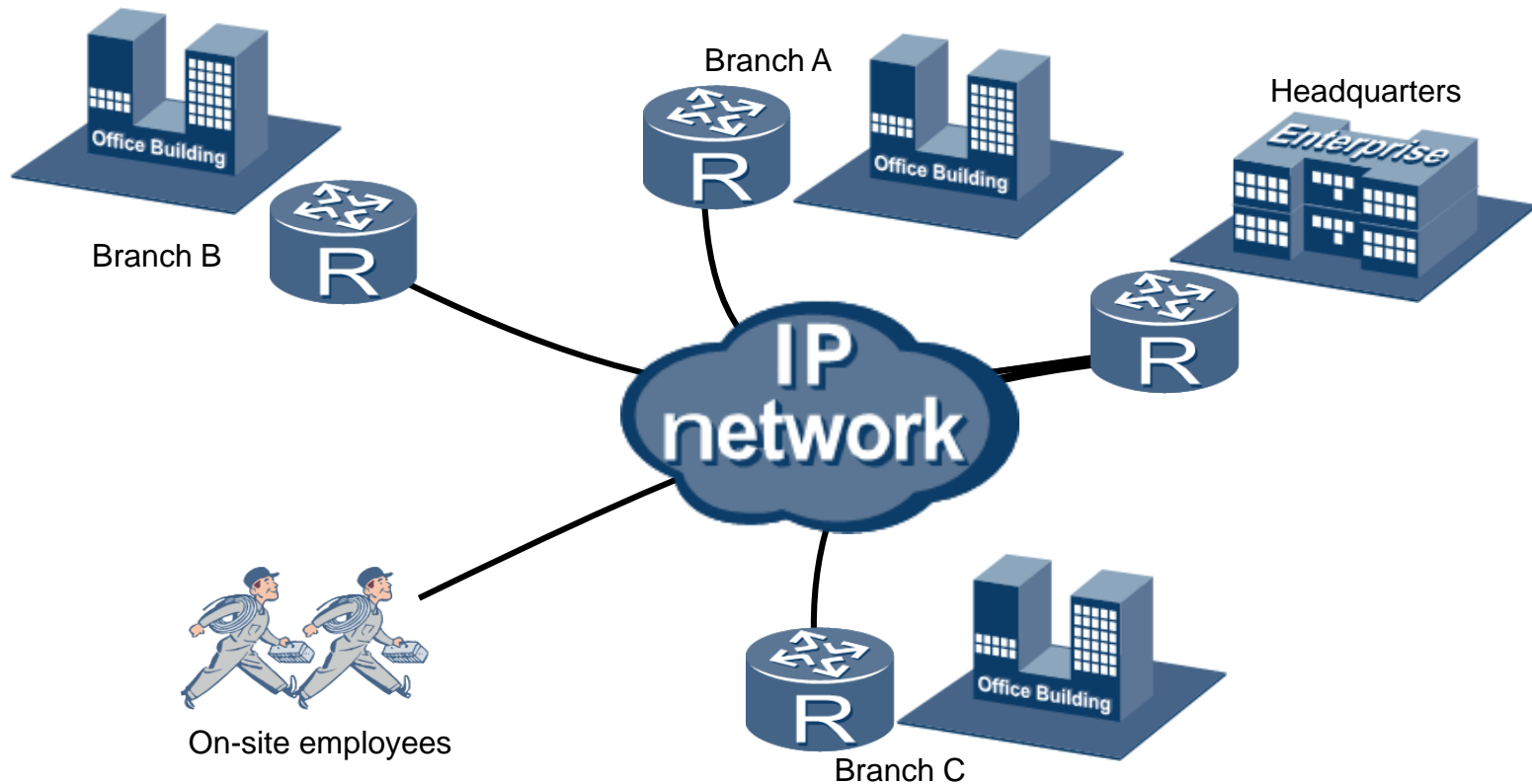


Real World Enterprise Networks



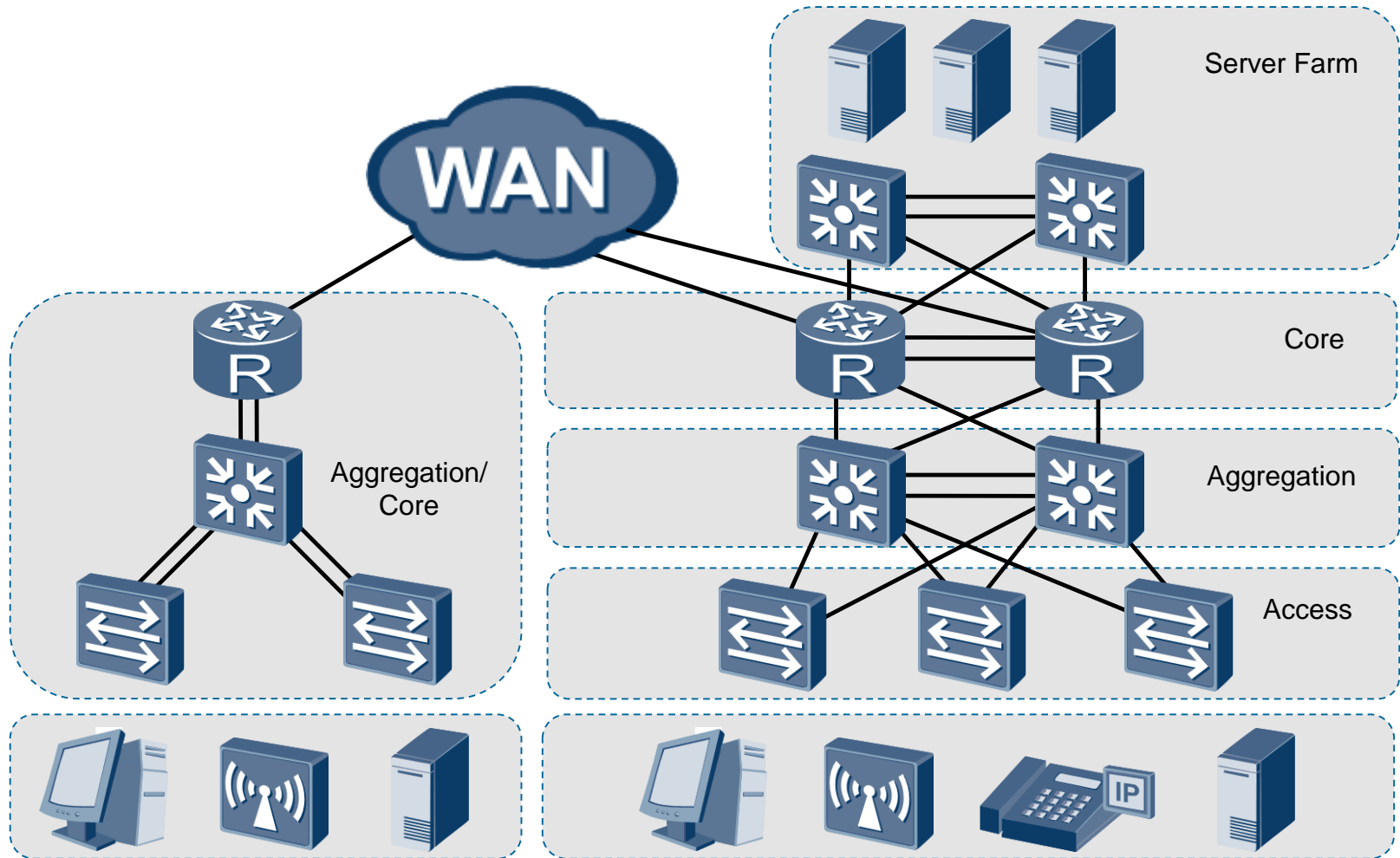
- Enterprise networks exist in many well-known industries.
- Networks range from offices to large industrial platforms.

Enterprise Remote Networks



- Enterprise networks may span over large geographical distances.

Enterprise Network Basic Architecture





Enterprise Network Basic Architecture

Small Enterprise

- ❑ Flat design;
- ❑ Non distributed;
- ❑ Few user – low scalability;
- ❑ No redundancy.

Large Enterprise

- ❑ Minimal failure;
- ❑ Controlled access;
- ❑ Multi layer design
- ❑ Modularity , high scalability



Summary

- What are some of the general differences found between small and medium-sized enterprise networks?
- What are some of the basic design considerations that need to be taken into account for small and medium-sized enterprise networks?



Thank you
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