ABB CYBER SECURITY

ICS Cyber Security Reference Architecture

Drawings

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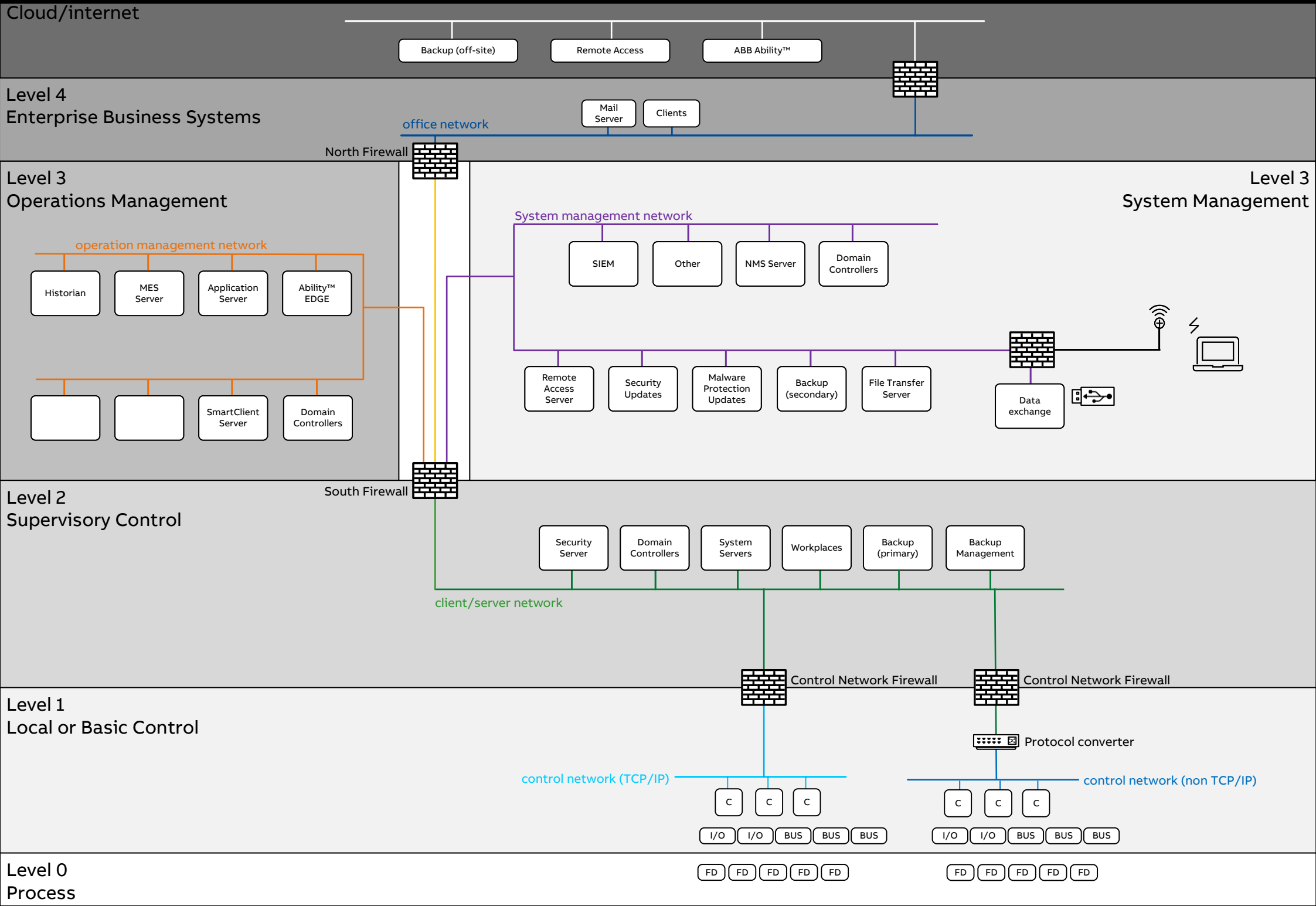
1. Purpose and basic description

To help our customers apply the concepts of the Reference Architecture, the team has developed a set of drawings to help illustrate how specific setups and functions can be used.

ICS Cyber Security Reference Architecture

Generic 4:3



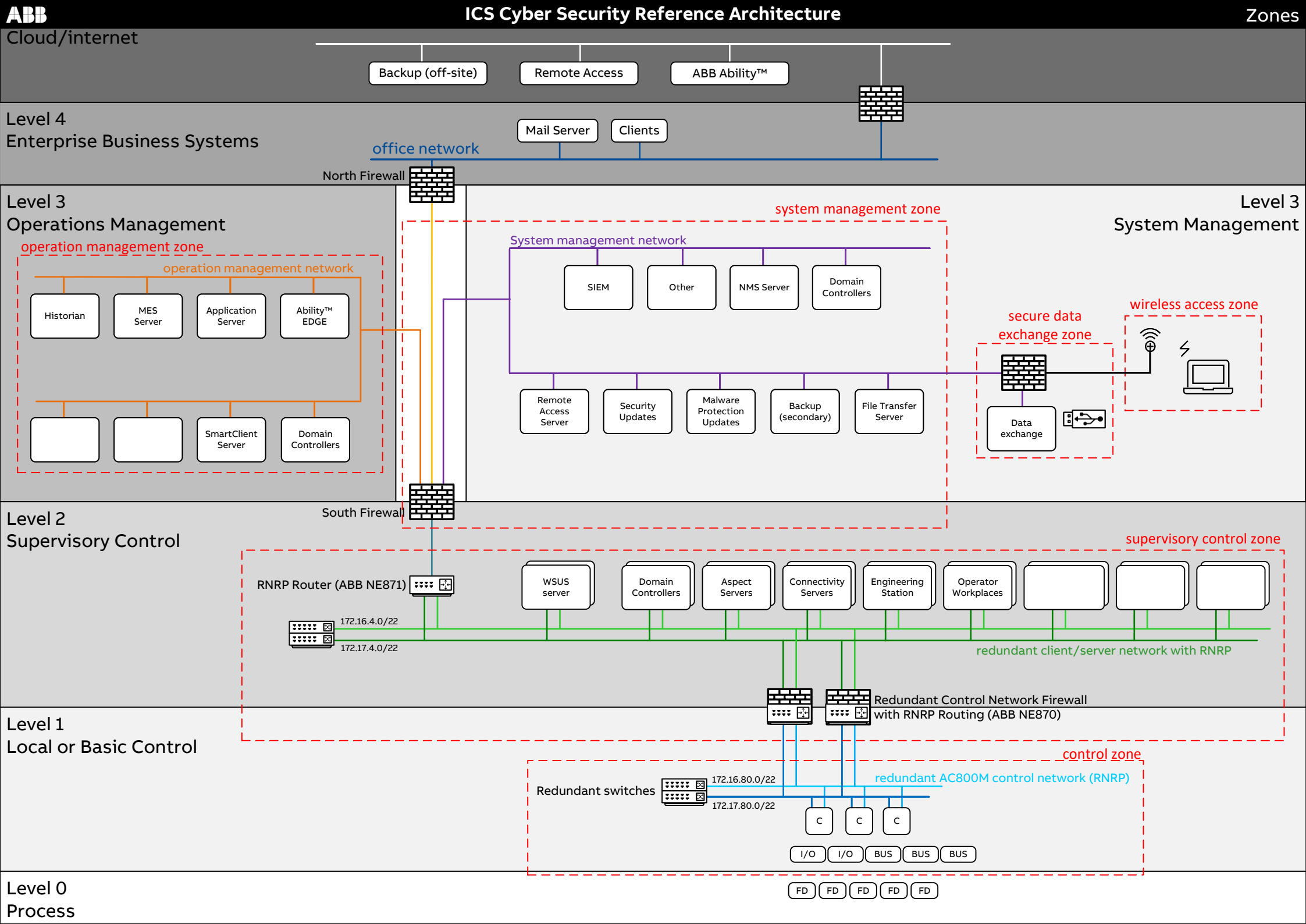
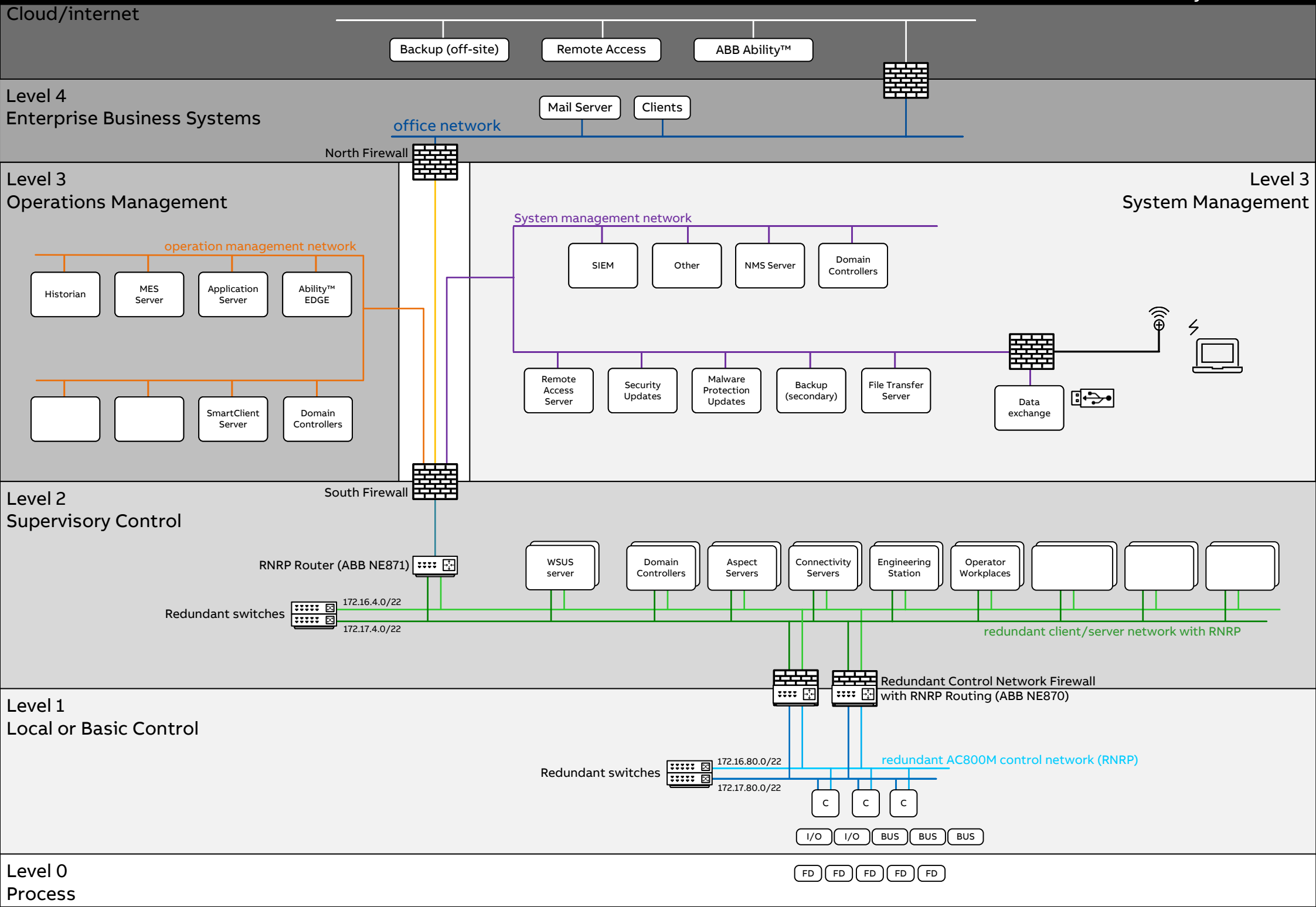


ABB
ICS Cyber Security Reference Architecture
Zones
Cloud/internet
Backup (off-site)
Remote Access
ABB Ability™
Level 4
Enterprise Business Systems
Mail Server
Clients
office network
North Firewall
Level 3
Operations Management
operation management zone
operation management network
Historian
MES Server
Application Server
Ability™ EDGE
SmartClient Server
Domain Controllers
system management zone
System management network
SIEM
Other
NMS Server
Domain Controllers
Remote Access Server
Security Updates
Malware Protection Updates
Backup (secondary)
File Transfer Server
Level 3
System Management
secure data exchange zone
Data exchange
wireless access zone
South Firewall
Level 2
Supervisory Control
supervisory control zone
RNRP Router (ABB NE871)
172.16.4.0/22
172.17.4.0/22
WSUS server
Domain Controllers
Aspect Servers
Connectivity Servers
Engineering Station
Operator Workplaces
redundant client/server network with RNRP
Redundant Control Network Firewall
with RNRP Routing (ABB NE870)
Level 1
Local or Basic Control
control zone
Redundant switches
172.16.80.0/22
172.17.80.0/22
redundant AC800M control network (RNRP)
C
C
C
I/O
I/O
BUS
BUS
BUS
Level 0
Process
FD
FD
FD
FD
FD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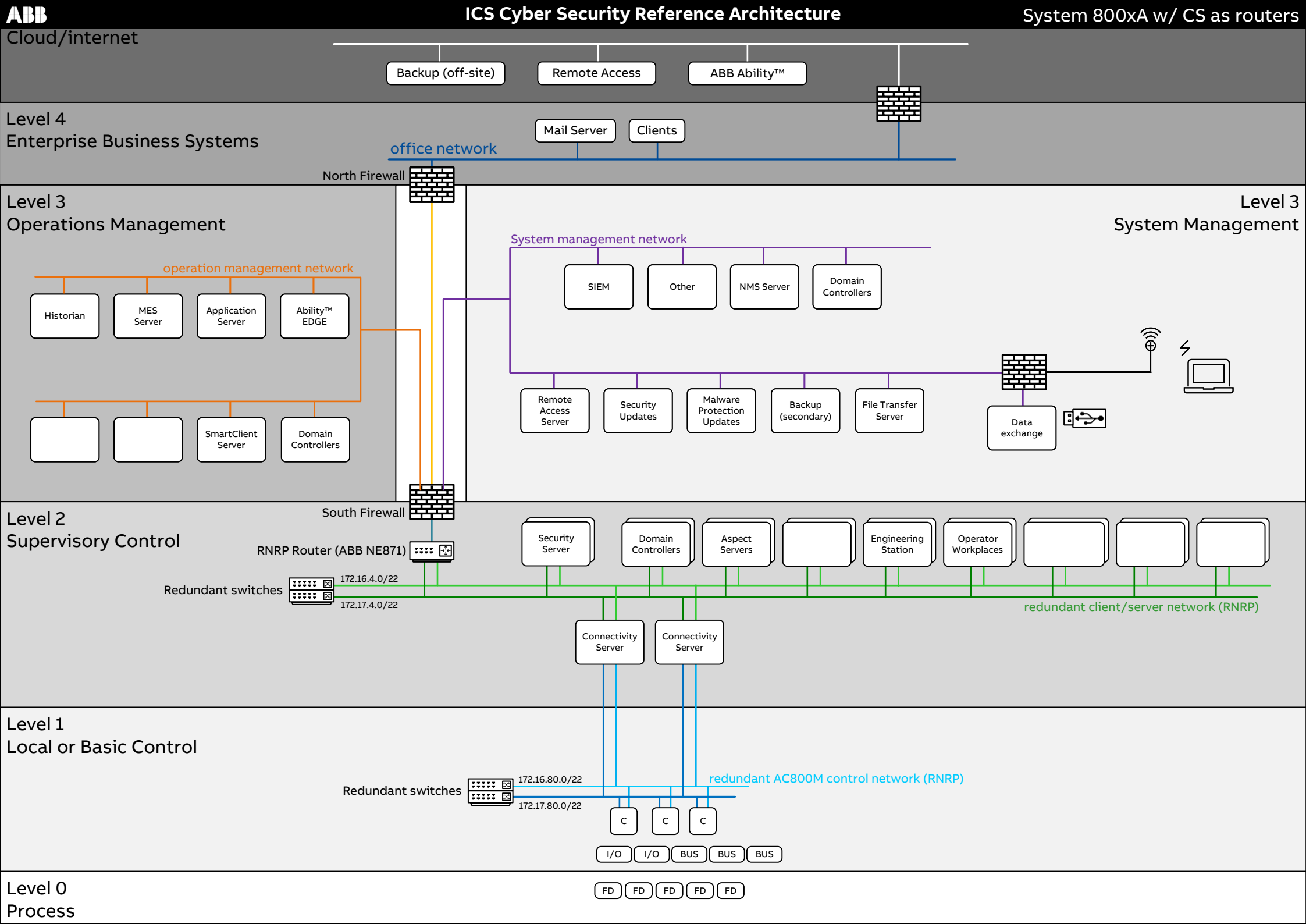
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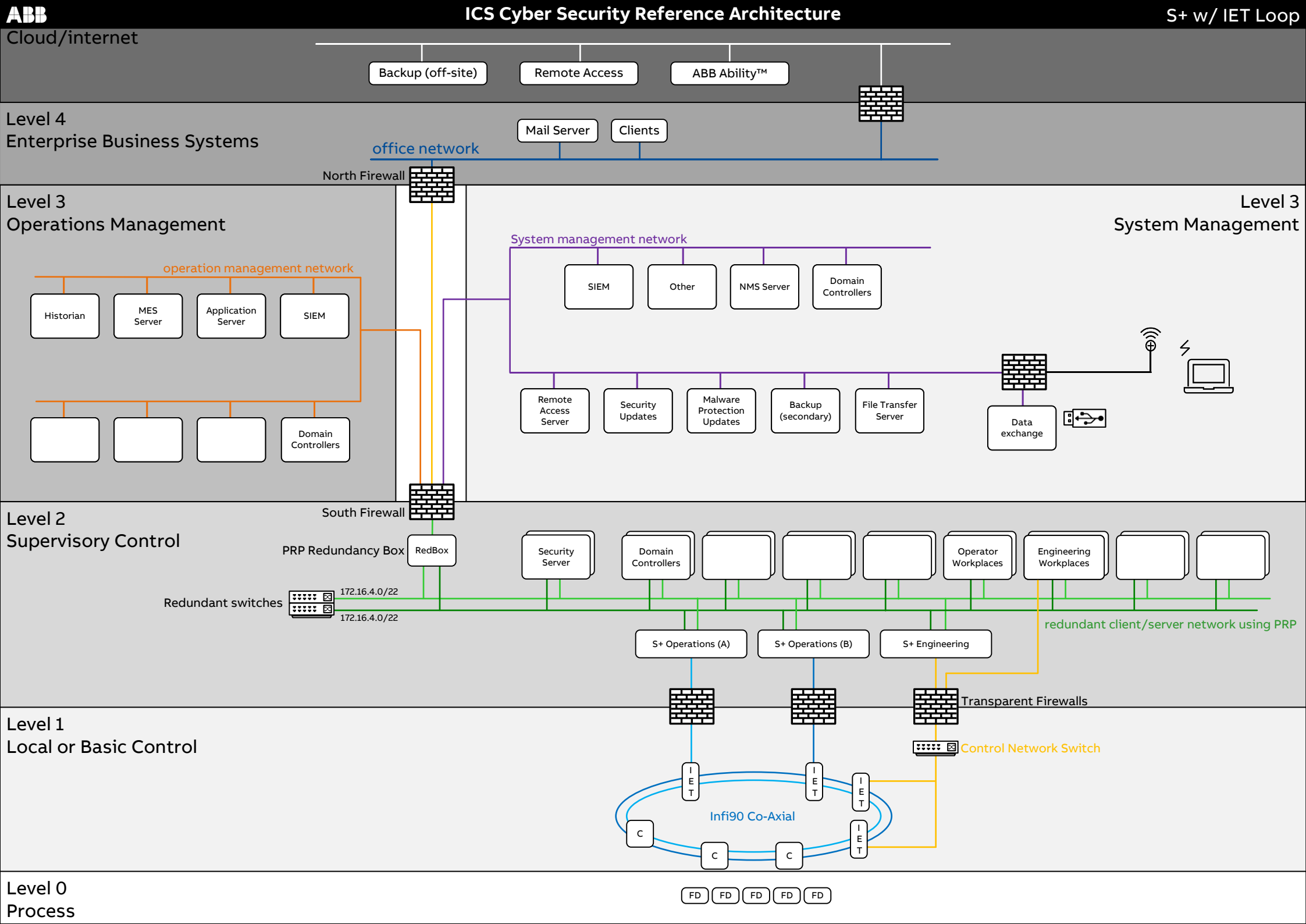
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PRP Redundancy Box
RedBox
Security Server
Domain Controllers
Operator Workplaces
Engineering Workplaces
Redundant switches
172.16.4.0/22
172.16.4.0/22
redundant client/server network using PRP
S+ Operations (A)
S+ Operations (B)
S+ Engineering
Transparent Firewalls
Level 1
Local or Basic Control
Control Network Switch
IET
IET
IET
IET
Infi90 Co-Axial
C
C
C
Level 0
Process
FD
FD
FD
FD
FD

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