



## Challenges in Security and IBMS in Data Center

# Data Centre : Internal Requirement

1. Fire LV
2. Security (IPCCTV and Access Control System)
3. Integrated Building Management System (IBMS)

# Customer I – Typical Security and IBMS Network

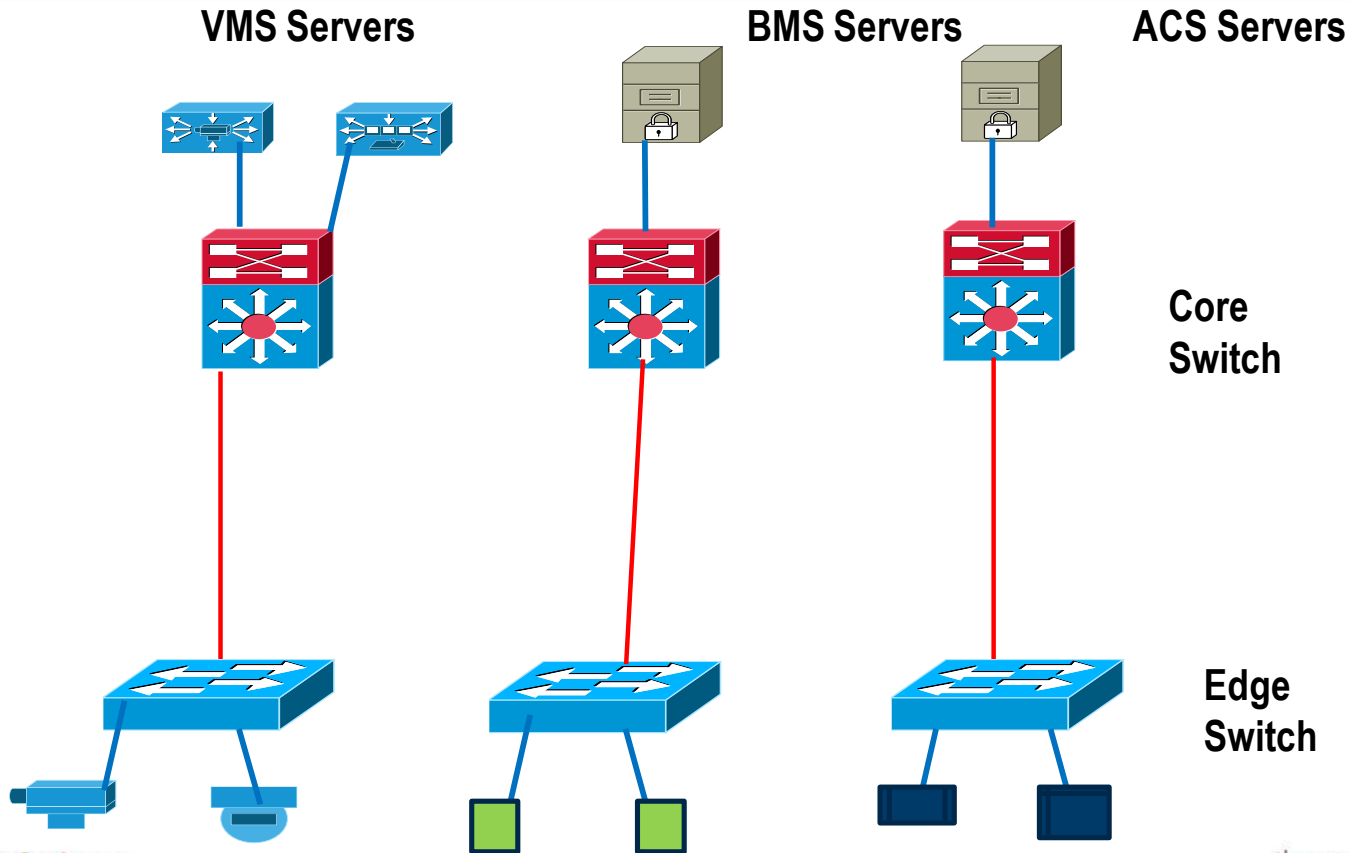
## Applications

- » Services Required
  - IP Video Surveillance
  - Access Control
  - IBMS

## Solution

- » Network Preferred :
  - Separate Network for IPCCTV
  - Separate Network for ACS
  - Separate Network for BMS
- » Network Implemented :
  - Separate Network for IPCCTV, ACS and BMS
  - Two Tier architecture for each network
  - Unmanaged network

# Customer I : Typical Network Architecture Implemented



# Non Redundant Separate Network Architecture

## Solution Disadvantages

- » Separate Network Architecture :
  - Not a redundant solution
  - Non Scalable design
  - Unmanaged network

# Customer I – Security Network Requirement

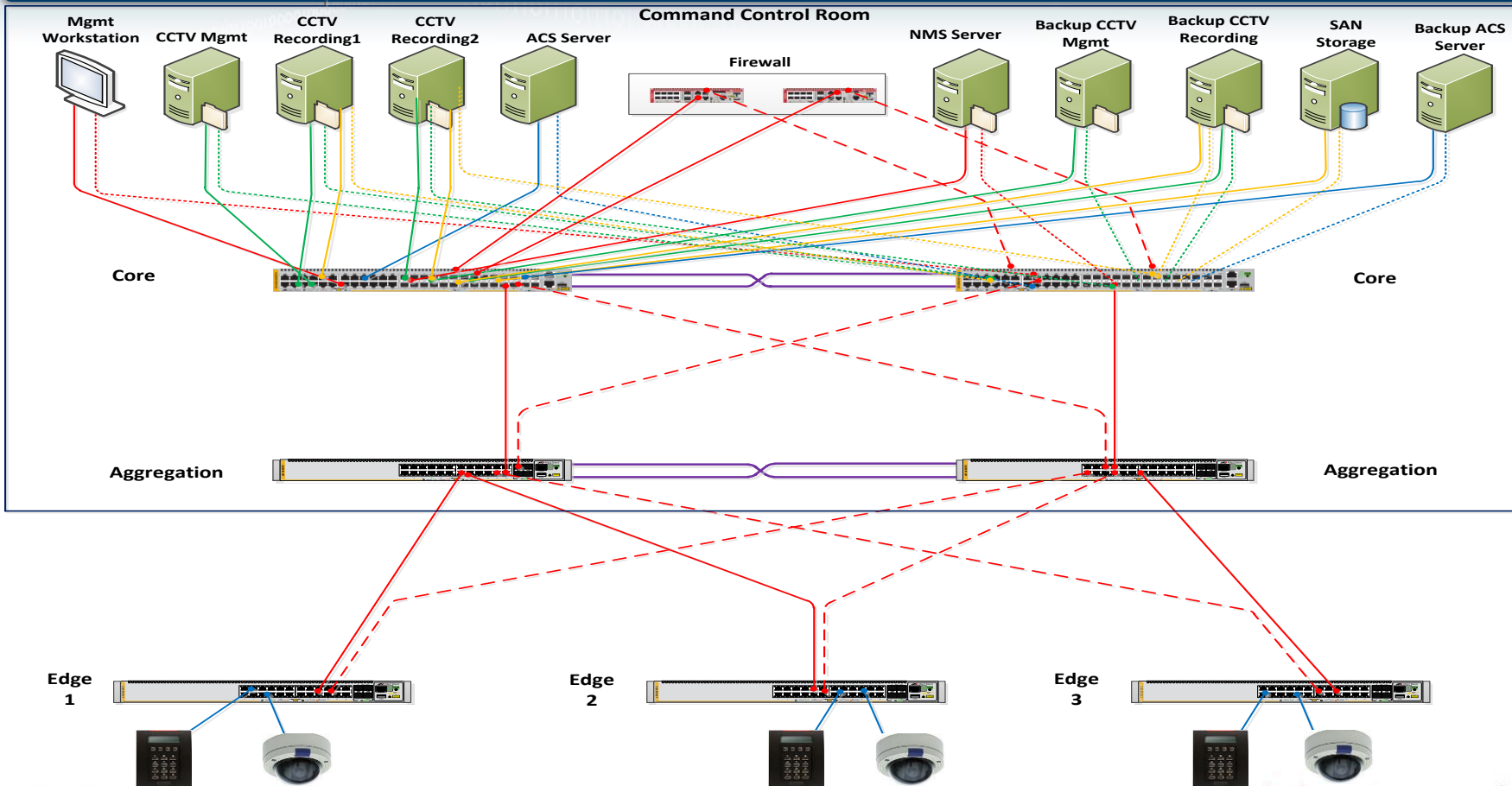
## Applications

- » Services Required
  - IP Video Surveillance
  - VMS
  - Analytics
  - Access Control

## Solution

- » End-to-End IP based network solution
- » Cost effective solution based
  - Star Topology
  - Scalable design
  - Managed Network
  - Link Resiliency LAG at Layer 2
- » Virtual Chassis Stacking
  - Resilient Core solution
  - Resilient Aggregation

# Three Tier Architecture – Converged IPCCTV and Access Control



# Central Redundant Core Network Architecture

## Solution Benefits

- » Central Core Architecture :
  - High Available redundant solution
  - Scalable design
  - **No Control Room Site to Site redundancy**
- » Future Ready
  - Scalable design for future requirements of additional IPCCTV and Access control
  - SDN ready network infrastructure



# Customer 2 – Security Network Requirement

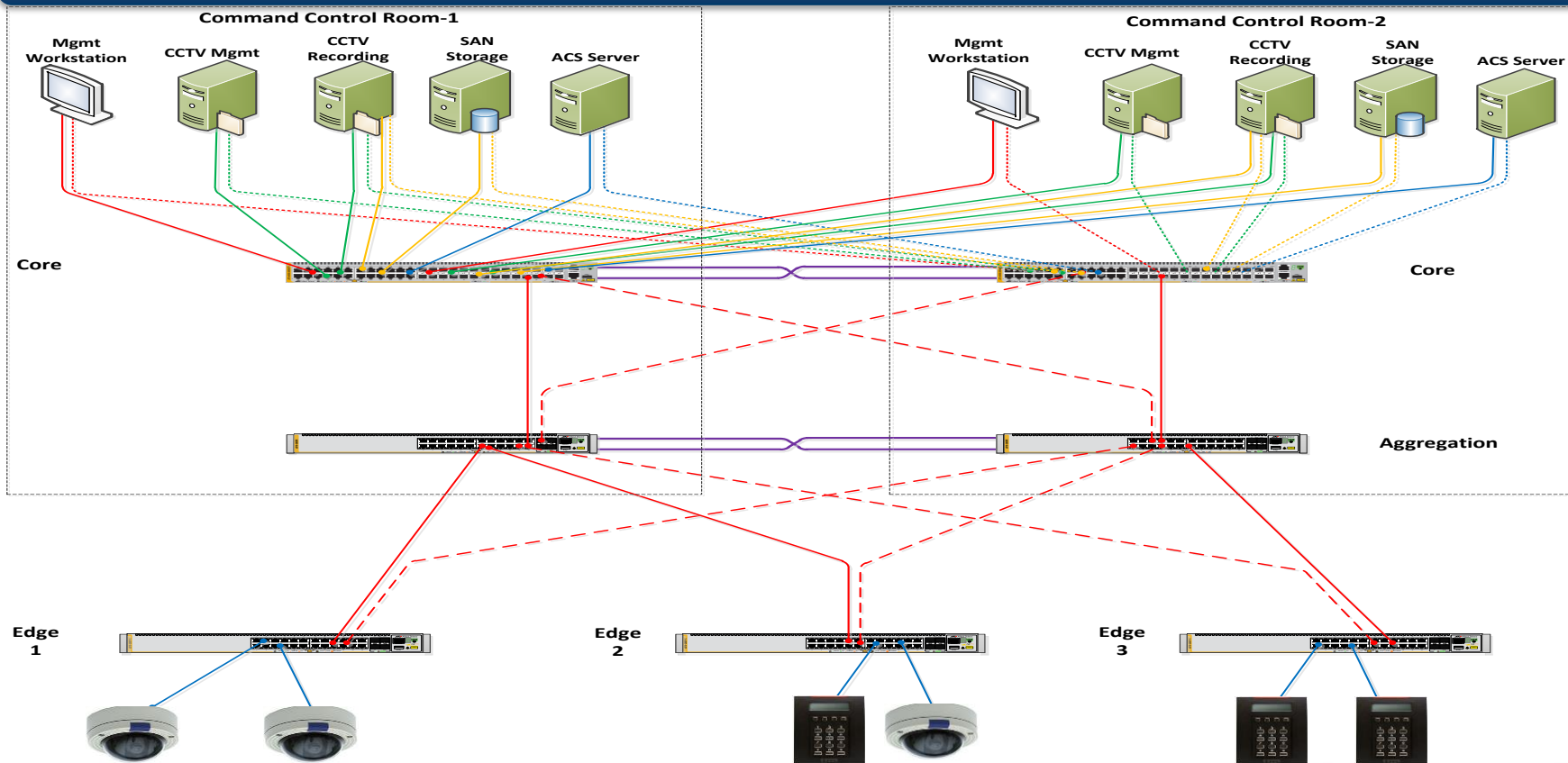
## Applications

- » Services Required
  - IP Video Surveillance
  - VMS
  - Analytics
  - Access Control
  - **Control Room Redundancy**

## Solution

- » End-to-End IP based network solution
- » Cost effective solution based
  - Star Topology
  - Scalable design
  - Managed Network
  - Link Resiliency LAG at Layer 2
- » **Long Distance Virtual Chassis Stacking**
  - Resilient Core solution – Distributed Core
  - Resilient Aggregation solution – Distributed Aggregation

# Three Tier Architecture – Converged IPCCTV and Access Control



# Distributed Redundant Core Network Architecture

## Solution Benefits

- » Distributed Core Architecture :
  - High Available redundant solution
  - Scalable design
  - Control Room Site to Site redundancy
- » Future Ready
  - Scalable design for future requirements of additional IPCCTV and Access control
  - SDN ready network infrastructure

# Thank You



the **solution** : the **network**

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