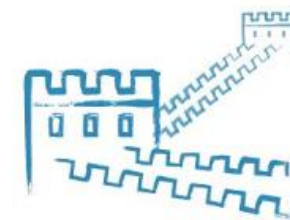




# Virtualized Control System Infrastructure at LINAC Project PINSTECH

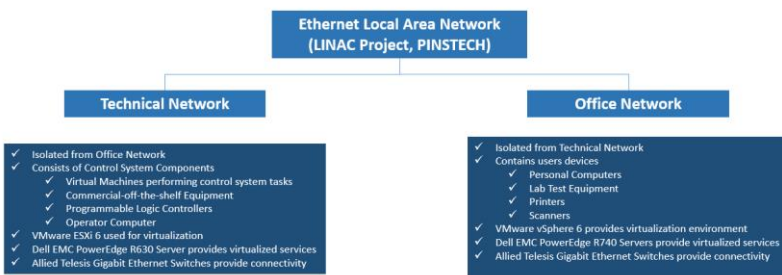
Authors: N. U. Saqib, F. Sher  
(LINAC Project, PINSTECH, Islamabad)



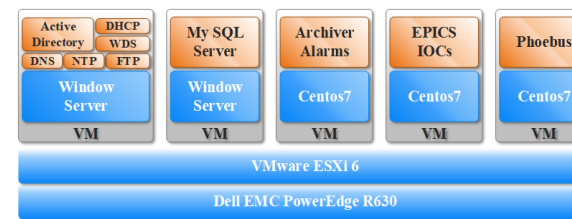
ICALEPCS 2021

## Introduction

IT infrastructure is backbone of modern big science accelerator control systems. Accelerator Controls and Electronics (ACE) Group is responsible for controls, electronics and IT infrastructure for Medical and Industrial NDT (Non-Destructive Testing) linear accelerator prototypes at LINAC Project, PINSTECH. All of the control system components such as EPICS IOCs, Operator Interfaces, Databases and various servers are virtualized using VMware vSphere and VMware Horizon technologies. This paper describes the current IT design and development structure that is supporting the control systems of the linear accelerators efficiently and effectively.



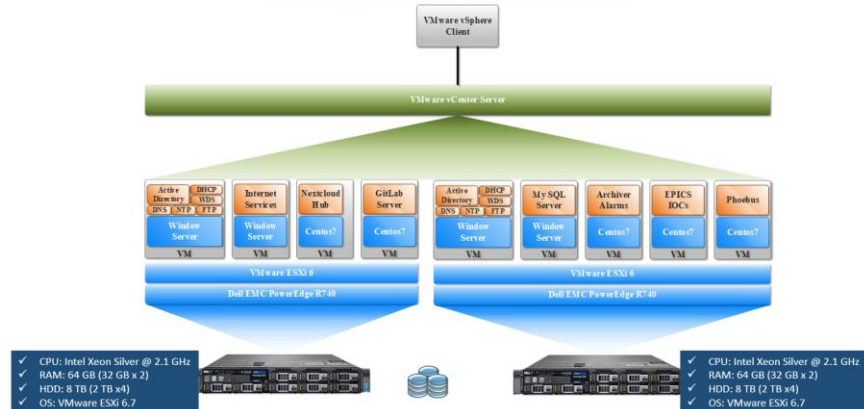
## Technical Network Virtualization



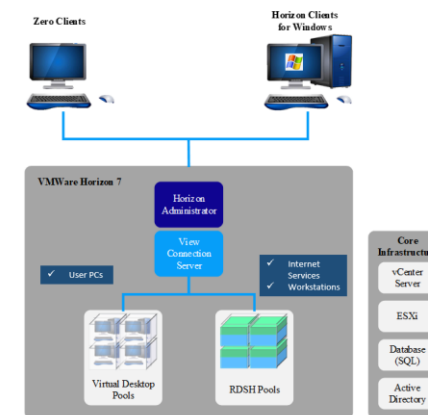
- ✓ CPU: Intel Xeon Silver @ 2.1 GHz
- ✓ RAM: 32 GB (16 GB x 2)
- ✓ HDD: 6 TB (2 TB x3)
- ✓ OS: VMware ESXi 6.7



## Office Network Virtualization

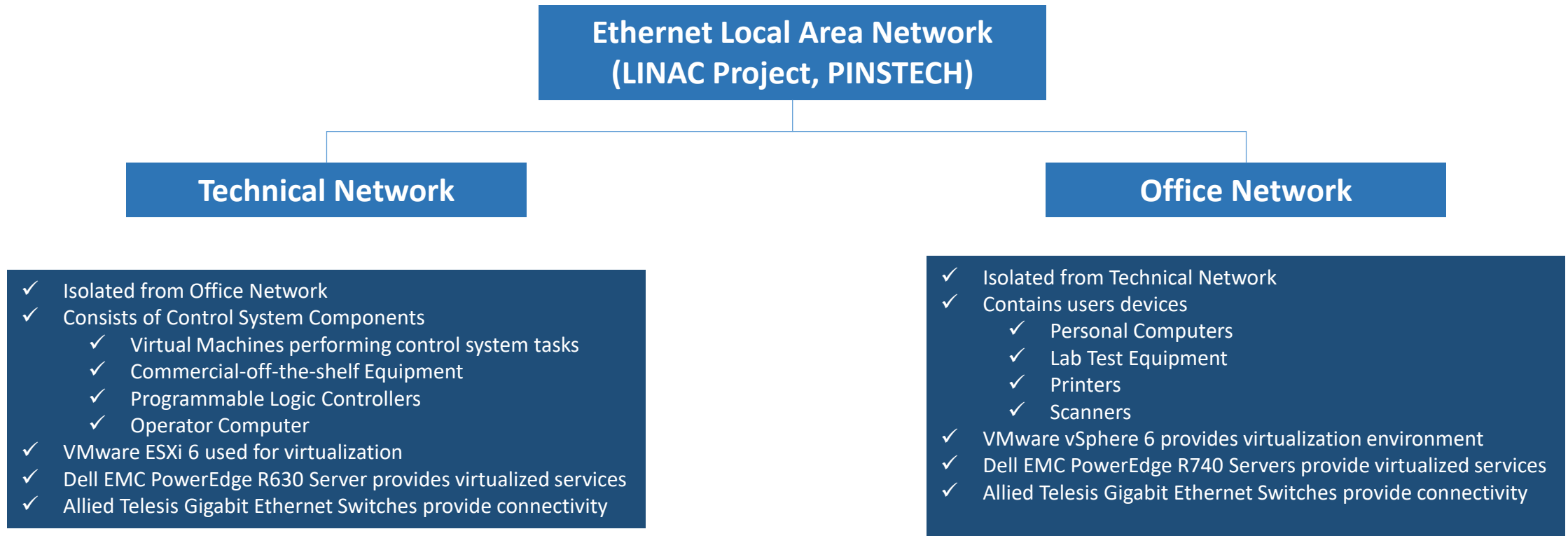


## Virtual Desktop Infrastructure

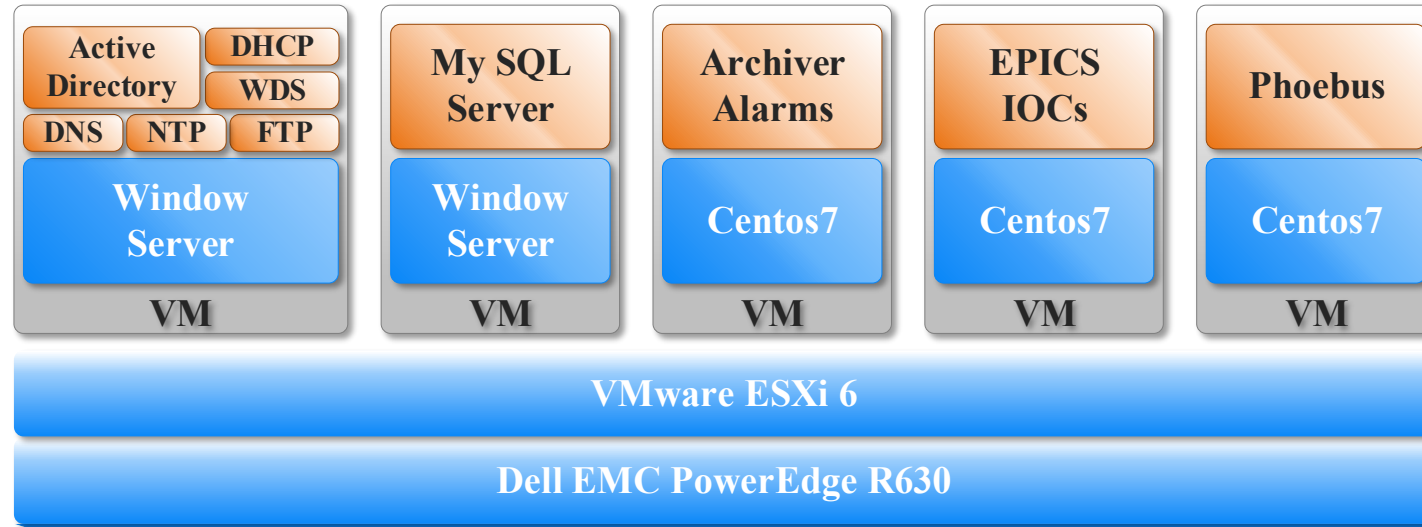


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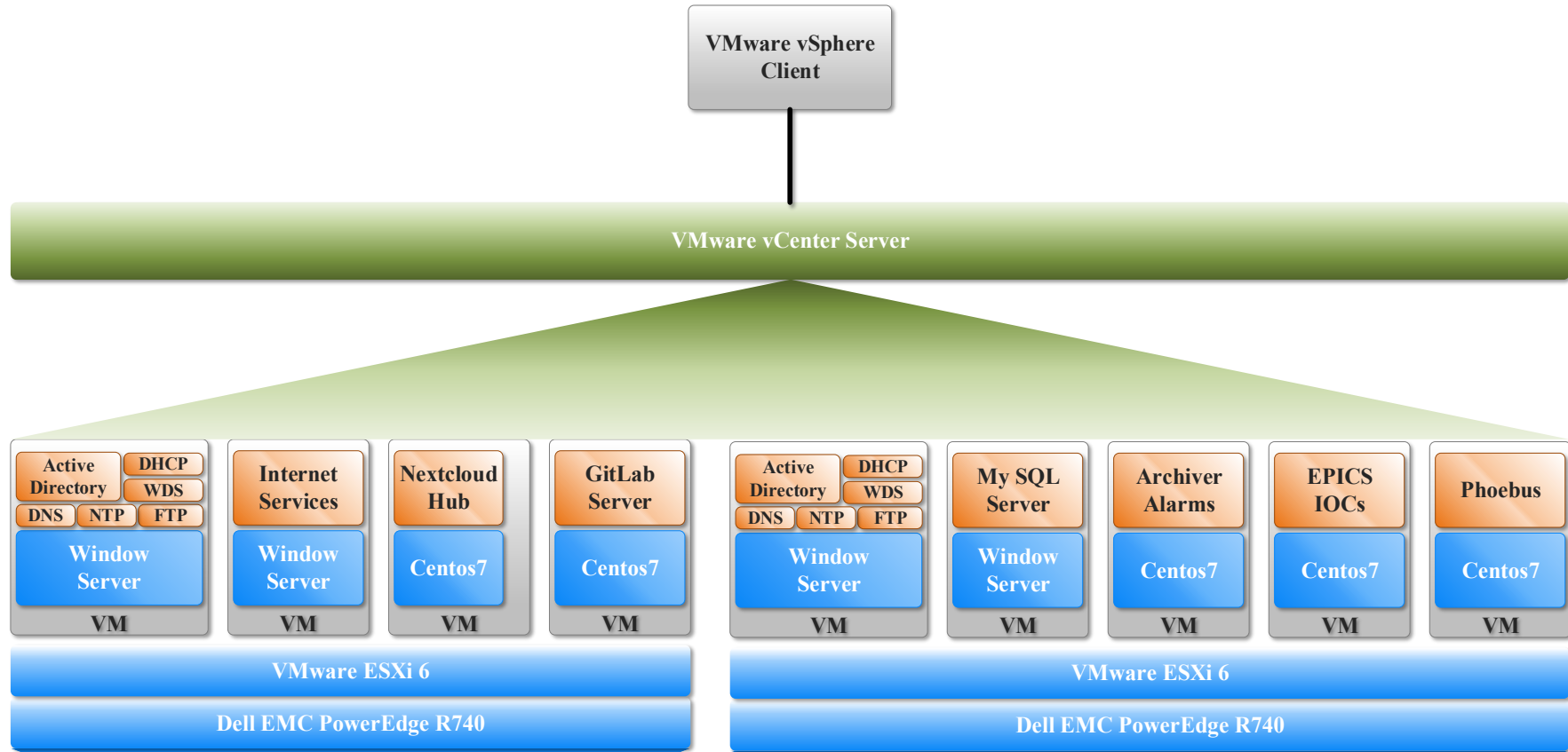
# Technical Network Virtualization



- ✓ CPU: Intel Xeon Silver @ 2.1 GHz
- ✓ RAM: 32 GB (16 GB x 2)
- ✓ HDD: 6 TB (2 TB x3)
- ✓ OS: VMware ESXi 6.7



# Office Network Virtualization



- ✓ CPU: Intel Xeon Silver @ 2.1 GHz
- ✓ RAM: 64 GB (32 GB x 2)
- ✓ HDD: 8 TB (2 TB x4)
- ✓ OS: VMware ESXi 6.7



- ✓ CPU: Intel Xeon Silver @ 2.1 GHz
- ✓ RAM: 64 GB (32 GB x 2)
- ✓ HDD: 8 TB (2 TB x4)
- ✓ OS: VMware ESXi 6.7

# Virtual Desktop Infrastructure

