

# CS6465: Advanced Operating System Implementation

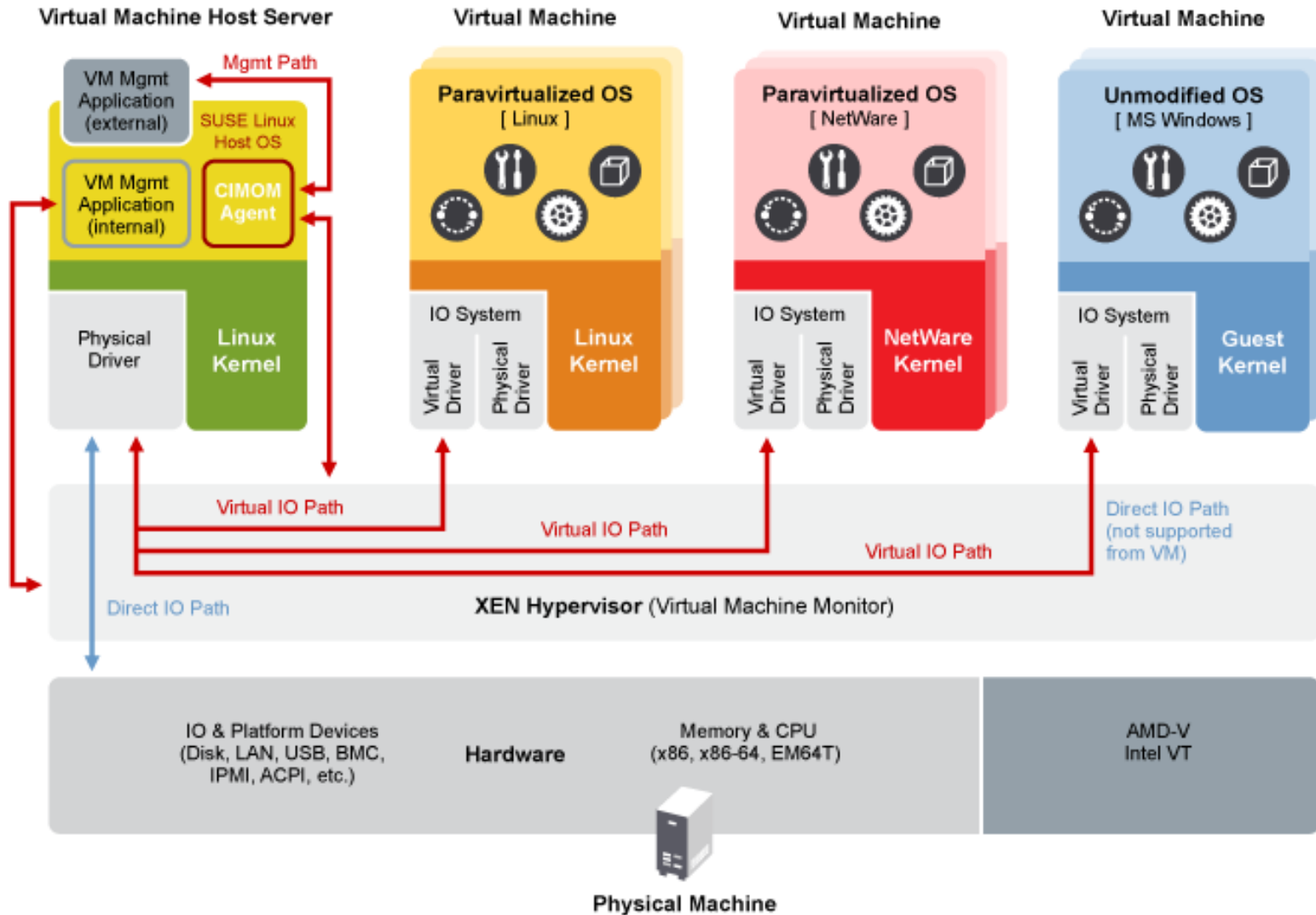
## Lecture 13 – Isolation in the Field

Anton Burtsev

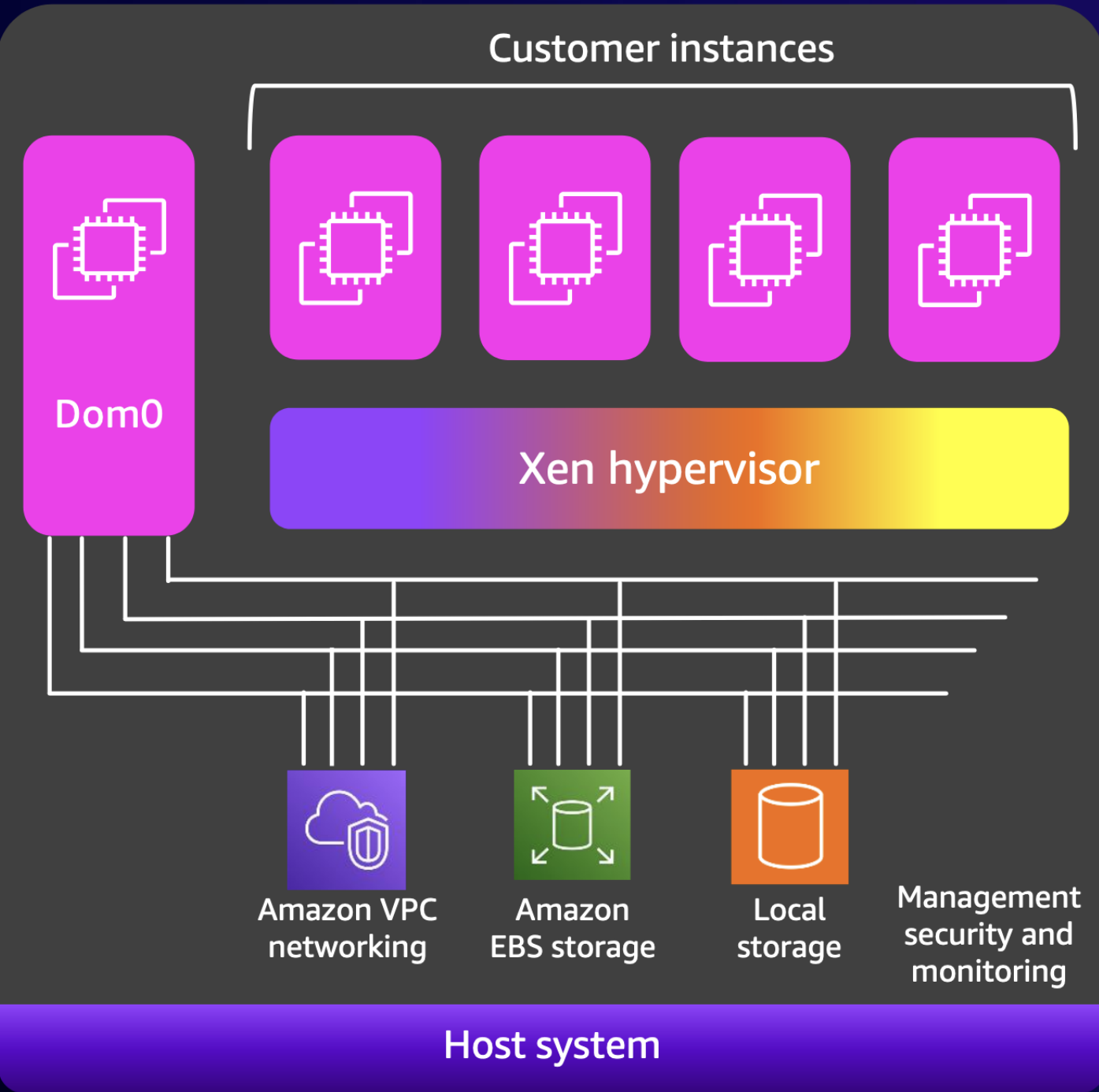
November 2024

Amazon Nitro

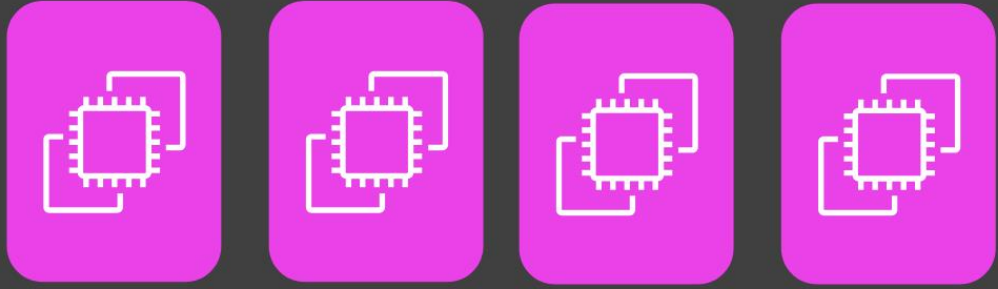
# Xen architecture



# Before Nitro



Customer instances



Nitro Hypervisor

Host system



Amazon VPC  
networking



Amazon  
EBS storage



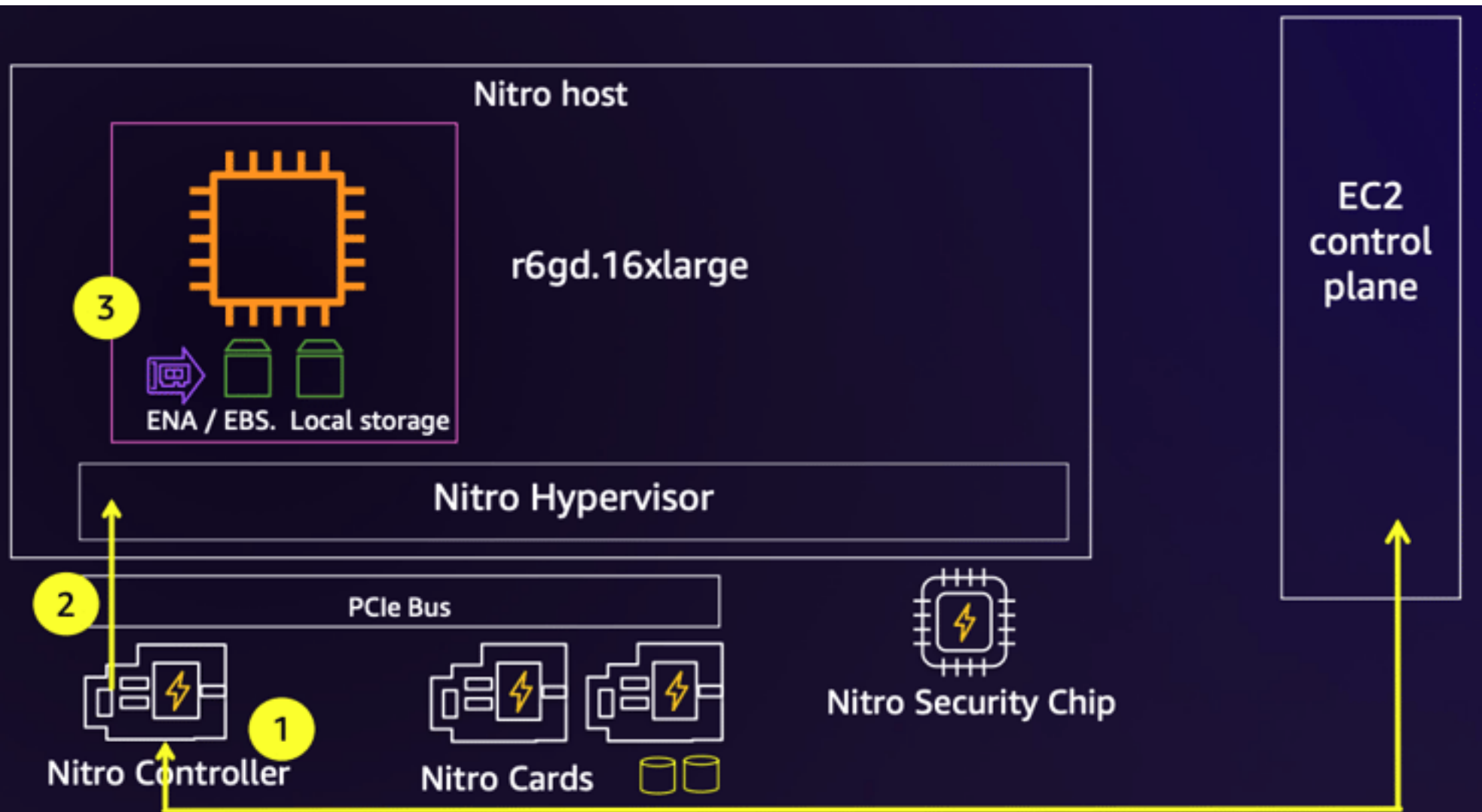
Local  
storage

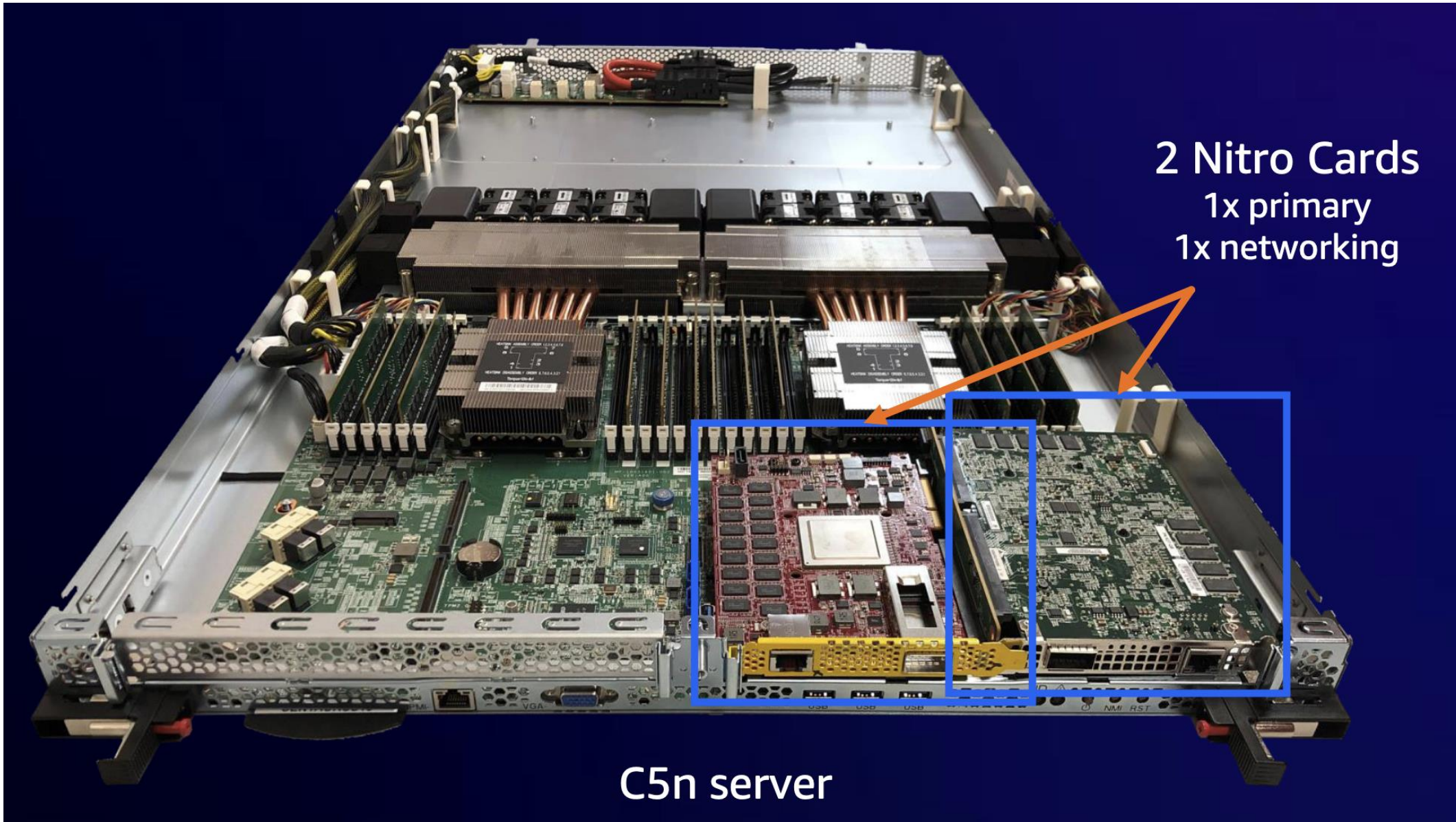


Management  
security and  
monitoring

Nitro Card(s)

# Nitro

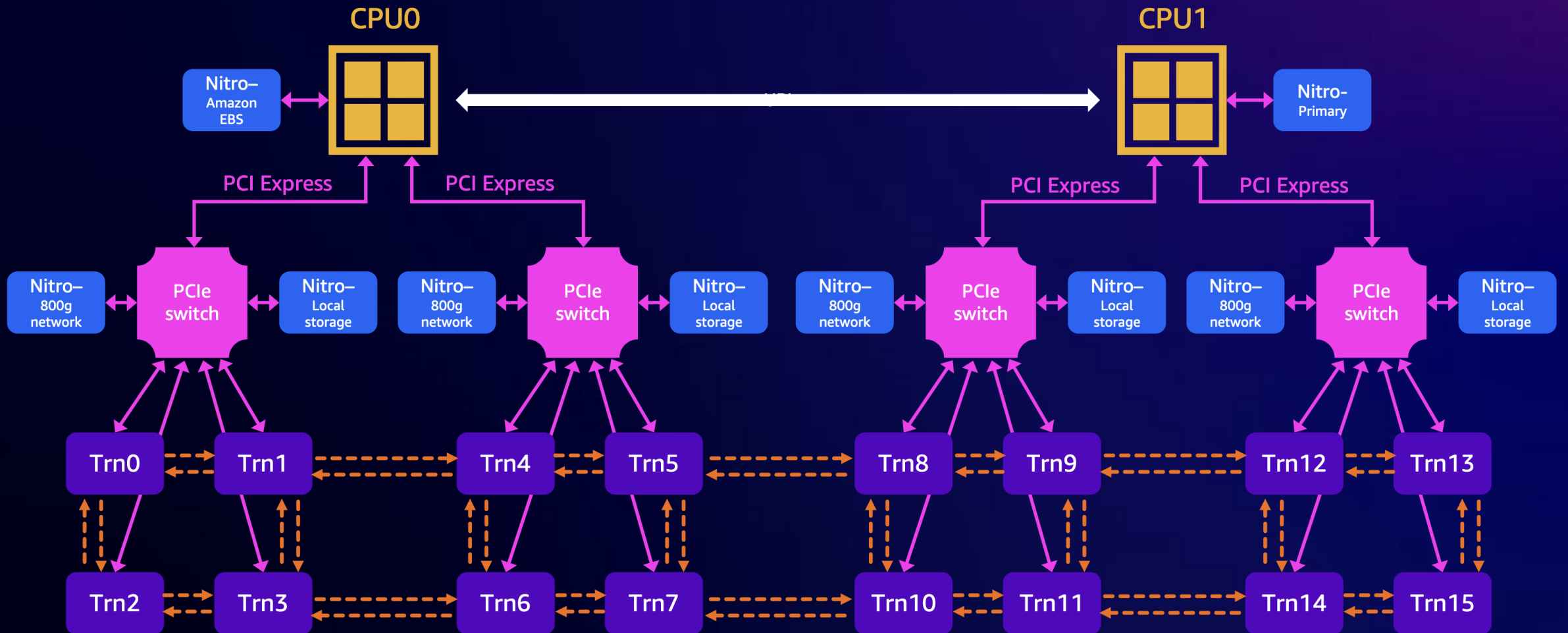


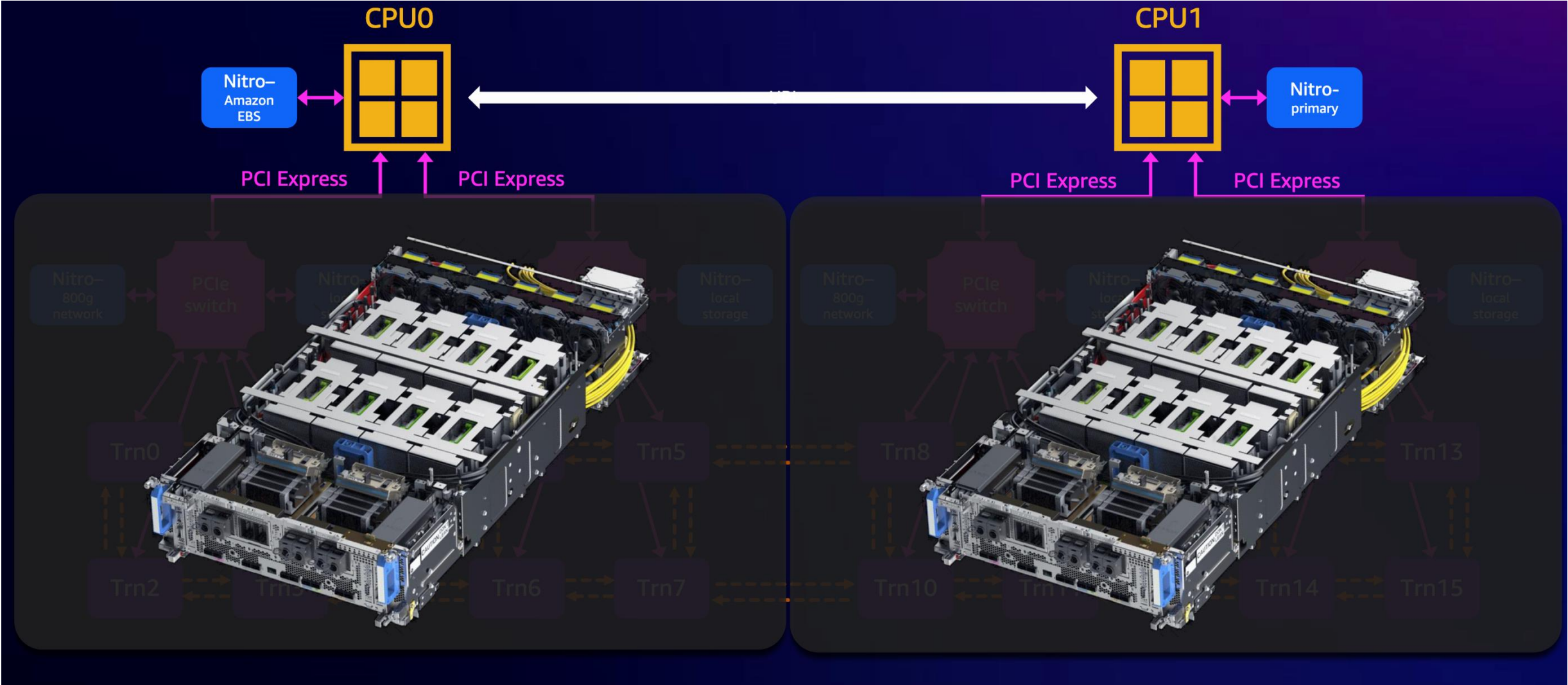


2 Nitro Cards  
1x primary  
1x networking

C5n server

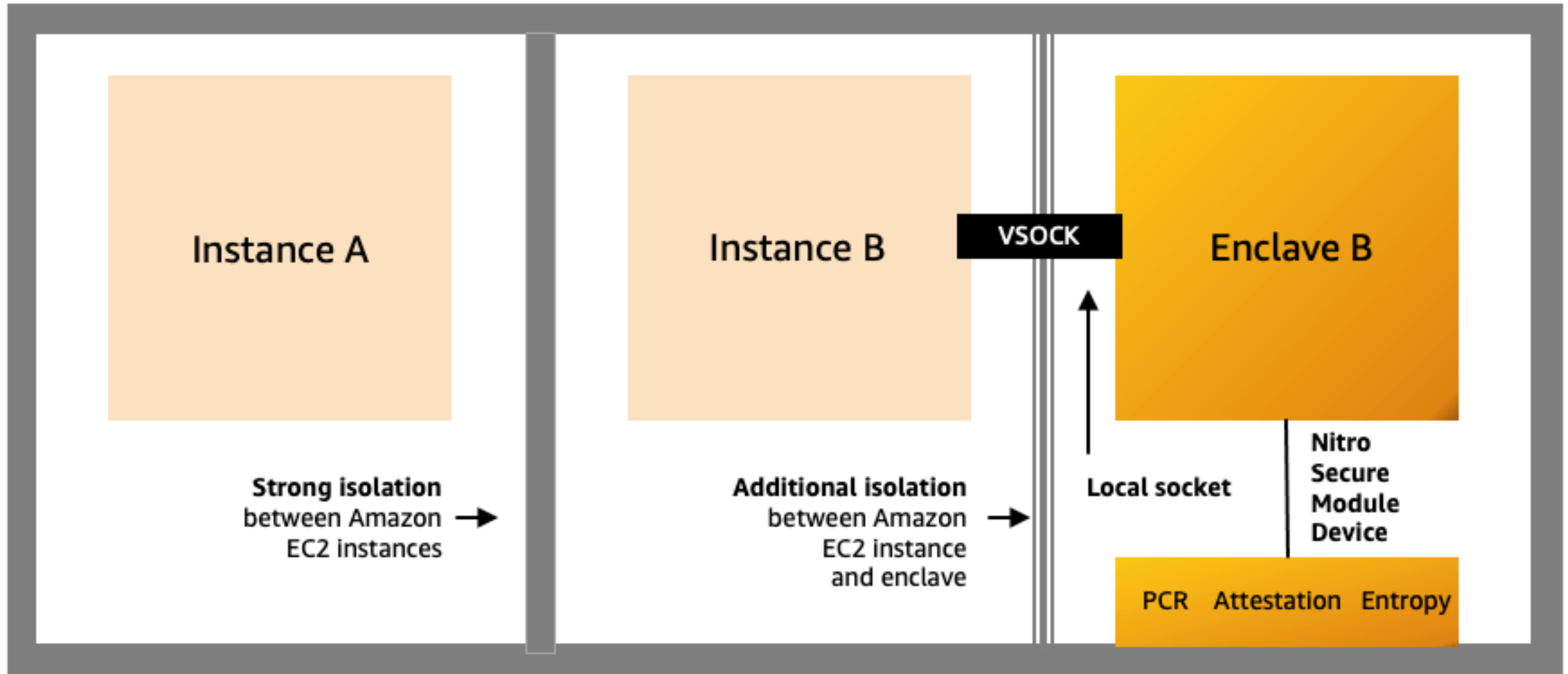
# Trn1 system architecture

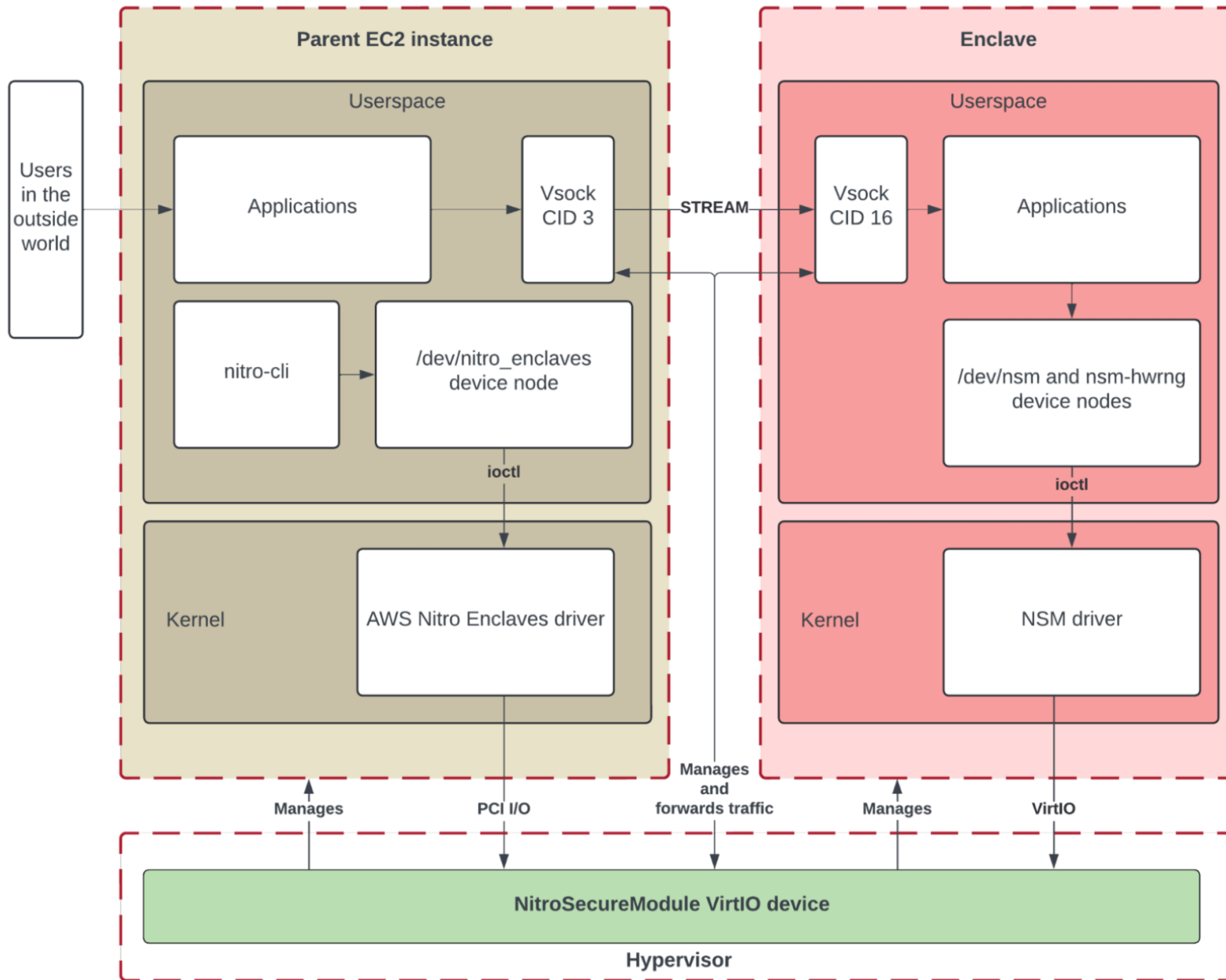




# Nitro Enclaves

# Enclaves





Thank you!