



Cisco UCS E-Series: Data Center-Class Servers for Your Branch Office

- Are you still managing a rack full of appliances at the branch?
- Does slow application response frustrate your customers?
- Is network uptime critical to your business?

Many organizations with centralized networks face these issues. Centralization helps you enforce policies and manage data consistently networkwide. But centralization requires traffic to be backhauled for server access, which increases response times for customers and remote users.

Cisco UCS® E-Series blade servers solve this problem by giving you the best of both worlds. They run in the modular Cisco 4000 Series Integrated Service Routers. You can use them to host and virtualize applications and network services in each branch while controlling and managing them centrally.

Five key benefits

The Cisco UCS E-Series delivers benefits not available with rack servers:

- The power of virtualization for consolidating aging servers
- Less hardware, which means real estate savings that lead to lower CapEx
- Recurrent OpEx savings because of lower power consumption
- Consistent management and services across all Cisco servers from branch to data center
- Single support contract for ISR includes support for Cisco UCS E-Series

Using the Cisco UCS E-Series you can do following and much more:

1. Provide distributed access to your business apps for better response times
2. Easily deploy applications and policies locally as needed
3. Use our large palette of apps to secure and optimize the WAN while prioritizing and managing traffic

Cisco UCS E-Series blade servers come in two form factors:

- **Service Module (SM):** x86 64-bit modules that function as full-blown, data center-class servers
- **Network Interface Module (NIM):** Price-optimized to host lighter-weight applications and network services

Cisco UCS E-Series models and specifications

	NIM	Single Wide			Double Wide			
	EN-140N-M2	EN-120S-M2	140S-M2	160S-M3	160D-M2	180D-M2	180D-M3	1120D-M3
Cores	4	2	4	6	6	8	8	12
CPU (GHz)	Atom 1.7	Pentium 2	Ivy Bridge 1.8	Broadwell 1.9	Ivy Bridge 2	Ivy Bridge 1.8	Broadwell 2	Broadwell 1.5
DRAM (GB) min/max	8/8	4/16	8/16	8/32	8/96		16/128	
DRAM slot #	1	2			3		4	
Disk capacity per slot min/max	50-200G	900G-1T	480G-2T	480G-4T	480G-4T			
Disk #	1	2			3		4	
RAID options	NA	0/1			0/1/5		0/1/5/10	
Interfaces	2 Int 1G 1 Ext 1G	2 Int 1G 2 Ext 10G			2 Int 1G 2 Ext 1G		2 Int 1G 2 Ext 10G	
Flash memory for OS/hypervisor*	NA	8 GB SD Card		8 GB eMMC	8 GB SD Card		8 GB eMMC	
ISR compatibility	4000 Series	4331/4351/4451		4331/4351/4451	4351/4451		4351/4451	

* Recommended for file storage and not for installation.

Infrastructure Apps for the Cisco UCS E-Series

Use Case	Description
Unified communications	<ul style="list-style-type: none">• Cisco Unified Communications Manager Call control platform that integrates IP communications services such as voice, messaging, conferencing, video, mobility, and session management.• Cisco Unity® Connection Unified messaging and voicemail solution.• Cisco MediaSense Network platform that supports recording, playback, live streaming, and storage of voice, video, and other media. Delivers rich recording metadata for business intelligence.• Cisco Prime® Collaboration Unified management for voice and video collaboration networks with automated provisioning, simplified monitoring and troubleshooting, and long-term trending and analytics.• Cisco Paging Server Virtual appliance that runs with Unified Communications Manager to deliver essential paging and emergency notification capabilities.
Security	<ul style="list-style-type: none">• Cisco Adaptive Security Virtual Appliance (ASAv) Virtualized firewall that supports traditional, Software-Defined Networking (SDN), and Cisco Application Centric Infrastructure (Cisco ACI™) environments.• Cisco Firepower® IDS/IPS High-performance threat-detection solution.• Cisco Web Security Virtual Appliance (WSAv) Powerful, all-in-one virtualized network security for controlling web traffic.• Cisco Email Virtual Security Appliance (ESAv) Defense for mission-critical email systems that can be activated wherever and whenever needed.• Cisco Stealthwatch® Learning Network License Turns the Cisco Integrated Services Router into a security sensor to monitor branch-office network traffic.

Use Case	Description
Network optimization	<ul style="list-style-type: none"> ▪ Cisco Virtual Wide Area Application Services (vWAAS) with Akamai Connect Cloud-ready WAN optimization solution for accelerating app delivery across the WAN.
Wireless	<ul style="list-style-type: none"> ▪ Cisco Virtual Wireless Controller Centralized wireless network visibility and control for up to 200 branch locations.
Physical security	<ul style="list-style-type: none"> ▪ Cisco Video Surveillance Manager Combination of video, advanced analytics, and IoT sensor integration in one platform.
Network management	<ul style="list-style-type: none"> ▪ Cisco Prime Virtual Network Analysis Module (vNAM) Multifaceted visibility component of Cisco Prime network management that helps optimize resources and troubleshoot performance issues.
Energy management	<ul style="list-style-type: none"> ▪ Cisco Energy Management Suite Monitors, measures, and manages the energy consumption and utilization of each network-connected device to gauge energy use.

Applications deployed on Cisco UCS E-Series servers by industry

Retail	Financial	Healthcare
<ul style="list-style-type: none"> ▪ Domain controllers ▪ File and print services ▪ Point of sale ▪ Cisco Video Surveillance Manager ▪ WAN optimization ▪ Database servers ▪ Content delivery/training videos ▪ Custom applications ▪ Analytics 	<ul style="list-style-type: none"> ▪ Domain controllers ▪ File and print services ▪ Virtual desktops ▪ Virtual wireless LAN controller ▪ WAN optimization ▪ Custom banking and teller applications ▪ Cisco Prime network management 	<ul style="list-style-type: none"> ▪ Digital image storage ▪ Patient data storage ▪ Billing applications ▪ Virtual desktops ▪ Cisco Video Surveillance Manager ▪ Cisco Virtual Wide Area Application Services (vWAAS)

Sample deployment and benefits from Cisco UCS E-Series blade servers

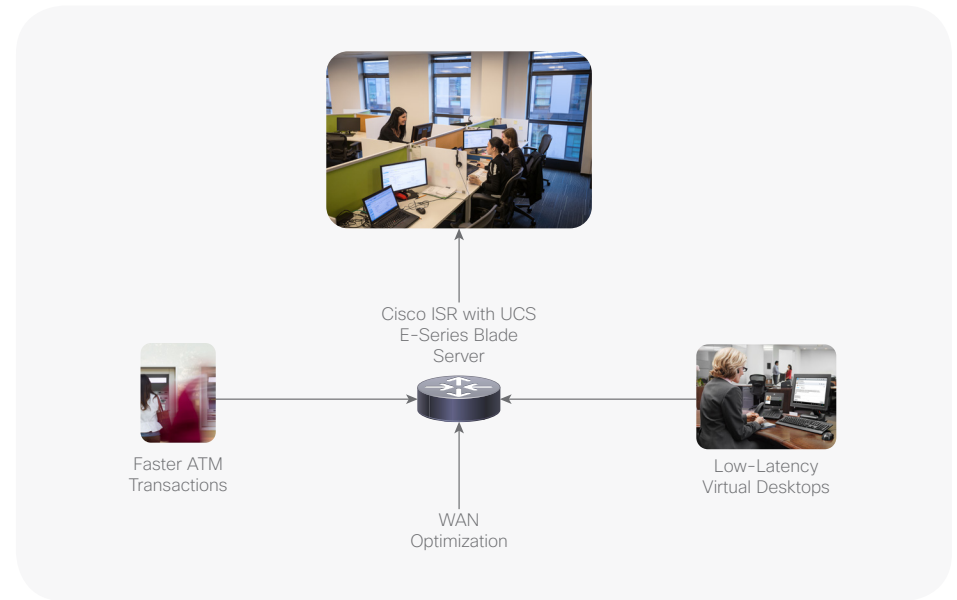
Retail

- Saves valuable floor space for merchandise display and customer service
- Point-of-sale, credit card payment, and other key services run locally for better performance
- No need for IT technicians to travel to stores to add applications or make configuration changes
- Refreshing store servers is as simple as sliding one blade out and inserting another



Financial services

- Speeds up the teller line at bank branches
- Improves performance of latency-sensitive equipment such as serial printers
- Virtual desktops accelerate access times and reduce costs
- Banks get the transaction performance they need with minimal outlay in capital and real estate



Healthcare

- Delivers quick access to stored patient data and images
- Lets clinics host virtual applications and desktops locally for fast performance
- Supports billing applications
- Captures and stores surveillance feeds

