Cisco Intelligent WAN powered by ISR 4000 Series

**Improved User Experience**
- Load balance traffic and lower costs with intelligent path selection using real-time analytics
- Visibility into 1000+ applications for capacity planning and prioritization
- Improve application performance and offload WAN with L4-7 optimization and intelligent caching

**Reduce Costs and Complexity**
- Pay-as-you-grow: buy what you need today and upgrade anytime without truck rolls
- Predictable OpEx spend, license portability, investment protection
- Automated provisioning for faster deployment
- Consistent IOS-XE operating system across branch, data center and cloud

**Advanced Security**
- Industry leading advanced threat defense
- Scale secure direct Internet access across branch sites with consistent policy enforcement
- High performance next-generation encryption for secure WAN

**Scale with High Performance**
- 4-10 times performance increase for the same price as the ISR G2
- Minimal performance impact as network services and throughput increases
- Local compute resources for applications, data back up and analytics

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**ISR 4000 Platform Comparison**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Cisco 4221</th>
<th>Cisco 4331</th>
<th>Cisco 4351</th>
<th>Cisco 4431</th>
<th>Cisco 4451</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form Factor</td>
<td>1 RU Desktop</td>
<td>1 RU</td>
<td>2 RU</td>
<td>2 RU</td>
<td>2 RU</td>
</tr>
<tr>
<td>Integrated WAN Ports</td>
<td>1 GE/SFP, 1 GE</td>
<td>1 GE/SFP, 1 GE, 1 SFP</td>
<td>2 GE/SFP, 1 GE/SFP (PoE optional)</td>
<td>2 GE/SFP, 2 GE/SFP (PoE optional)</td>
<td>2 GE/SFP, 2 GE/SFP (PoE optional)</td>
</tr>
<tr>
<td>Performance</td>
<td>50 Mbps upgradable to 100 Mbps</td>
<td>100 Mbps upgradable to 300 Mbps</td>
<td>200 Mbps upgradable to 400 Mbps</td>
<td>500 Mbps upgradable to 1 Gbps</td>
<td>1 Gbps upgradable to 2Gbps</td>
</tr>
<tr>
<td>Management Port</td>
<td>1 GE (Integrated Out of Band)</td>
<td>1 GE (Integrated Out of Band)</td>
<td>1 GE (Integrated Out of Band)</td>
<td>1 GE (Integrated Out of Band)</td>
<td>1 GE (Integrated Out of Band)</td>
</tr>
<tr>
<td>Network Interface Modules (NIM)</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Enhanced Service Modules ( Expanded Slots)</td>
<td>N/A</td>
<td>1 Single Wide</td>
<td>2 Single or 1 Double Wide</td>
<td>2 Single or 1 Double Wide</td>
<td>2 Single or 1 Double Wide</td>
</tr>
<tr>
<td>Integrated Services Card (ISC)</td>
<td>1 (PVDM 4)</td>
<td>1 (PVDM 4)</td>
<td>1 (PVDM 4)</td>
<td>1 (PVDM 4)</td>
<td>1 (PVDM 4)</td>
</tr>
<tr>
<td>USB Ports (Type A)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Flash Memory (Default/Max)</td>
<td>4 GB/16 GB</td>
<td>4 GB/16 GB</td>
<td>4 GB/16 GB</td>
<td>4 GB/16 GB</td>
<td>4 GB/16 GB</td>
</tr>
<tr>
<td>Data Plane Memory</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>1 GB/2 GB</td>
<td>2 GB/2 GB</td>
</tr>
<tr>
<td>(Default/Max)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Control/Services Plane Memory</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>4 GB/16 GB</td>
<td>4 GB/16 GB</td>
</tr>
<tr>
<td>(Default/Max)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Combined Control/Services/Data Plane Memory (Default/Max)</td>
<td>4 GB/16 GB</td>
<td>4 GB/16 GB</td>
<td>5 GB/16 GB</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply Type</td>
<td>External AC, PoE</td>
<td>Internal: AC, PoE</td>
<td>Internal: AC or DC (PoE optional)</td>
<td>Internal: AC or DC (PoE optional)</td>
<td>Internal: AC or DC (PoE optional)</td>
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<tr>
<td>Redundant Power Supply</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes (Internal)</td>
<td>Yes (Internal)</td>
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<tr>
<td>MGMT Offline Insertion and Removable (ODB)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Server Virtualization (ISR E-Serie)</td>
<td>N/A</td>
<td>2 or 4 core single-wide</td>
<td>2 or 4 core single-wide</td>
<td>2 or 4 core single-wide</td>
<td>2 or 4 core single-wide</td>
</tr>
</tbody>
</table>

**Migration Path**
- Migrate from ISR G1
  - ISR 1841, ISR 1851, ISR 2801
  - ISR 2851, ISR 2841, ISR 2821, ISR 2851
  - ISR 3821, ISR 3845
  - IRS 3825, IRS 3845
- Migrate from ISR G2
  - ISR 1941, ISR 1941, ISR 2821, ISR 2851
  - ISR 2921, ISR 2921, ISR 3921, ISR 3945
  - ISR 3925, ISR 3945
  - IRS 3925E, ISR 3945E

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**ISR 4000 Software Purchasing Options**

1. **Cisco ONE for WAN**
   - Threat Defense for WAN: Web Filtering, Malware Protection with Visibility and Control
   - WAN Collaboration: Voice Gateways and Voice Services
   - Foundation for WAN: Secure Connectivity and Firewall
   - Advanced Security: Advanced Security including Firewall, VPN and IPS
   - Application Experience (AX): Advanced Networking, Application Services and Hybrid Cloud Connectivity
   - Secure Connectivity and Firewall
   - Basic Security, Networking and Management

2. **ISR Software Bundles**
   - Advanced Threat Defense: Cloud Web Security, Advanced Malware Protection
   - Voice (V): Unified Communications Services including TDM Gateway, CUBE, CME, SRST
   - Application Experience (AX): Advanced Networking, Application Services and Hybrid Cloud Connectivity
   - Security (SEC): Advanced Security including Firewall, VPN and IPS
   - IP Base: Basic Security, Networking and Management

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Learn more at www.cisco.com/go/isr4000