

Why Should I Care About Integrating Switching and Routing Technology?

Managing network complexity and costs has become more difficult with the number of disparate solutions offered for each network challenge. Complex networks can become increasingly unreliable, resulting in losses of potential revenue, poor customer experiences, and potential damaging public relations. The ability to integrate network functionality by connecting devices like routers and switches and have them function as one device can decrease network complexity, increase network uptime, and maximize your current network investment.

What Problems Need to Be Solved?

- Increasing complexity within the network
- Additional demands for network and data access
- Escalating cost of network downtime
- Increasing company operating costs
- Decreasing support resources for branch locations
- Disparate redundant power systems for backup
- Consolidation of location of network services for disaster relief

Integrated Switching and Routing Solution

Cisco® Catalyst® stackable switches and a Cisco Integrated Services Router (ISR) can be stacked together using a Cisco EtherSwitch® service module with Cisco StackWise® technology to provide increased network manageability, greater overall investment protection, and heightened network performance. In addition, the Cisco Redundant Power System 2300 (Cisco RPS 2300) provides redundant power to both the stackable switches and a Cisco ISR for increased reliability.

The EtherSwitch Service Module (NME-XD-24-1S-P) for the Cisco 2800 and 3800 Series Integrated Services

Routers provides 24 ports of 10/100 Ethernet and 2 StackWise ports. The StackWise ports are a 32-Gbps connection for stacking Cisco Catalyst 3750 Series Switches with other 3750 switches and integrated service routers. This connection between the Cisco Catalyst 3750 and ISR provides a resilient high-speed connection between devices.

The Cisco RPS 2300 provides redundant power for Cisco Catalyst fixed switches as well as Cisco 2800 and 3800 Series ISRs. This power system can be connected to six Cisco Catalyst 3750s or ISRs and can provide redundant power for two devices simultaneously. Together this integration of high-speed connections and redundant power can help decrease network complexity and increase network responsiveness and reliability.

Figure 1 Integrated Services Router 3800 stacked with Catalyst 3750Es and RPS 2300



What Are the Benefits of Integrating Switching and Routing Technologies?

- Scale your branch network as your business grows: The ability to stack a Cisco ISR with Cisco Catalyst switches allows customers to increase the density of LAN access ports in the combined solution with only incremental costs.
- Increase and accelerate access to information throughout your company: Network uptime can increase with the use of a single redundant power

system, a Cisco RPS 2300, for both switches and routers. A single redundant power system for a stack of switches and a router results in fewer backup devices to manage. In addition, the ability to group uplink ports using Cisco EtherChannel® technology or 802.3ad increases link resiliency.

- Reduce complexity for IT systems in your branch office: By stacking Cisco Catalyst switches with a Cisco ISR, network managers can manage multiple types of devices as one logical device. In addition, the use of one redundant power system, a Cisco RPS 2300, for both the switches and the router simplifies power resiliency.

Why Cisco?

- Systems approach: Cisco differentiates itself from most other vendors by adopting a systems-level approach that integrates services throughout the infrastructure. Cisco Catalyst switching solutions with StackWise technology are primary building blocks for the Cisco Service-Oriented Network Architecture.
- Cisco technology integration: Cisco delivers technology integration of StackWise for the Cisco Catalyst switching portfolio with the Cisco ISRs.
- Cisco channel partners: Cisco and its specialized partners can help by performing a “discovery” audit of the network and making design recommendations for the wiring closet or access services throughout the campus network.
- Cisco Services: Cisco and its specialized partners have successfully provided comprehensive network design and award-winning network support through CCIE® professionals and the Cisco Technical Assistance Center (TAC), both of which are recognized as among the best in the industry.