

C-Bridge Fast Network Connection

What

When Cisco acquires a company, everyone wants the new employees to become connected and productive on the Cisco® corporate network as quickly as possible. However, meeting this goal takes more than simply reconfiguring routers to redirect links. Instead, fully integrating an acquired site typically involves a 10- to 12-month wait for a service provider to install new circuits for direct connections to the Cisco network. It also takes time to bring these sites into compliance with our standards for physical and network security.

In the meantime, the new employees need the ability to work with resources both on-site and on the Cisco network. But Cisco IT doesn't allow split-tunneling or network bridging on laptops for security reasons. To access Cisco resources, the employees use the Cisco AnyConnect® client on their Cisco laptops. The client routes all network traffic to Cisco for security reasons. Access to their former company's resources, such as local printers and file servers, would require disconnecting the AnyConnect client and switching back and forth between the Cisco and local networks throughout the workday. This frustrating user experience would be unacceptable if it lasted several months until the permanent networks were installed.

Figure 1. C-Bridge Cabinet



To provide the new employees with secure access to the Cisco network as quickly as possible after an acquisition's closing date, Cisco IT developed C-Bridge, a self-contained network connectivity unit that deploys quickly at an acquisition site. C-Bridge is intended to be an interim solution for network access, "bridging" the time until permanent circuits to the Cisco network are fully deployed. In addition to acquisitions, C-Bridge can support divestitures and alpha-stage projects that need rapidly available connectivity to the Cisco network.

The C-Bridge unit combines carefully selected site-to-site VPN hardware, security equipment, Cisco Unified Computing System™ (Cisco UCS®) servers, power supplies, racks, and cabling. All of these elements are installed in a portable, shippable enclosure that is sized to match the needs of the site. No country-specific versions of the C-Bridge unit are necessary, an important factor given that Cisco makes acquisitions worldwide.

The unit is preconfigured so it can be easily installed by on-site personnel, who will only need to connect the power and Ethernet cables. Access to the Cisco network will typically be available on the first day the acquired company begins operation as part of Cisco. Employees simply receive their Cisco usernames and network access instructions and can begin working securely with their Cisco colleagues.

C-Bridge is intended to provide access primarily for data applications. At most sites, a small number of Cisco Telepresence® endpoints are deployed via C-Bridge in order to support videoconferencing before the full Cisco network connection is ready.

The C-Bridge units are monitored, managed, and supported in the same way as any other element on the Cisco network. In addition to monitoring the security equipment installed in the unit, the Cisco Security Incident Response Team (CSIRT) can use C-Bridge to monitor the ISP circuits in the acquired company's network.

The cabinet has wheels for easy movement and internal fans for cooling, making it suitable for placement in many office environments. To maintain physical security of the equipment, the cabinet is lockable and the C-Bridge unit is typically installed in a locked equipment room or wiring closet.

As shown in Table 1, each C-Bridge unit contains the essential hardware needed to provide secure access to the Cisco network at an acquisition site. (Large acquisitions with multiple locations may require multiple C-Bridge units.) Each of these major hardware elements encompasses option cards, cabling, accessory items, installation parts, and other items not listed here. All Cisco products listed in the table are representative examples in use as of mid-2016.

Table 1. Key Cisco Products in a C-Bridge Unit

Element	Cisco Products
Routing and application services	Cisco ISR 4451 Integrated Services Router Cisco ASA 5545-X Adaptive Security Appliance Cisco NetFlow Generation Appliance 3340 Cisco Web Cache Communication Protocol (WCCP)
Switching	Cisco Catalyst® 3850 Switches
Security	Cisco FirePOWER™ 7150 Appliance with Advanced Malware Protection Cisco StealthWatch® Flow Collector for NetFlow Virtual Edition
Servers	Cisco UCS C-Series rack servers

Because Cisco maintains an active acquisition strategy, the C-Bridge units are designed for reuse at new sites as a cost-saving measure. When a C-Bridge unit is returned from one site it is refurbished for use at another site. Hardware elements in the unit may be updated or replaced at that time, especially as Cisco IT adopts virtual product versions.

The Perspective of an Acquired Company

IT staff in the acquired company also have concerns about the network transition. For example, when Cisco acquired Jasper in 2016, the transition raised many questions such as: How will we address IP address overlap? Will we need complicated routing or other changes? How do we ensure that we are adhering to Cisco’s security policies? How can we avoid impacting the critical, 24/7 work of the Jasper network operations center (NOC)?

“As these questions indicate, the network transition potentially could have been a very complex or disruptive endeavor,” says Kenan Keser, director of network engineering in the Cisco IoT Cloud Business Unit. “But with the C-Bridge solution in place, we have the breathing room necessary to work towards the full implementation of our Cisco network connection while enabling Jasper employees to be immediately productive within the Cisco environment.”

Why

Giving acquired employees rapid access to a broad range of Cisco applications and tools helps to maintain productivity throughout the technical integration. The network connection also helps us reduce the risk of intellectual property loss because engineers can begin making nightly uploads of software code to synchronize with Cisco’s central repositories.

Just as importantly, a positive user experience on the Cisco network helps with cultural integration and the overall business success of the acquisition. “Even something as simple as using telepresence so that senior leaders of the acquired company can begin videoconferencing with Cisco leaders drives an earlier and better cultural fit,” says John Kern, senior director for merger and acquisition integration, Cisco IT. “We’ve seen that if we can achieve a tight cultural integration, the acquisition has a much higher rate of success, including meeting our business objectives for return on investment and employee retention rates.”

For More Information

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Note

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