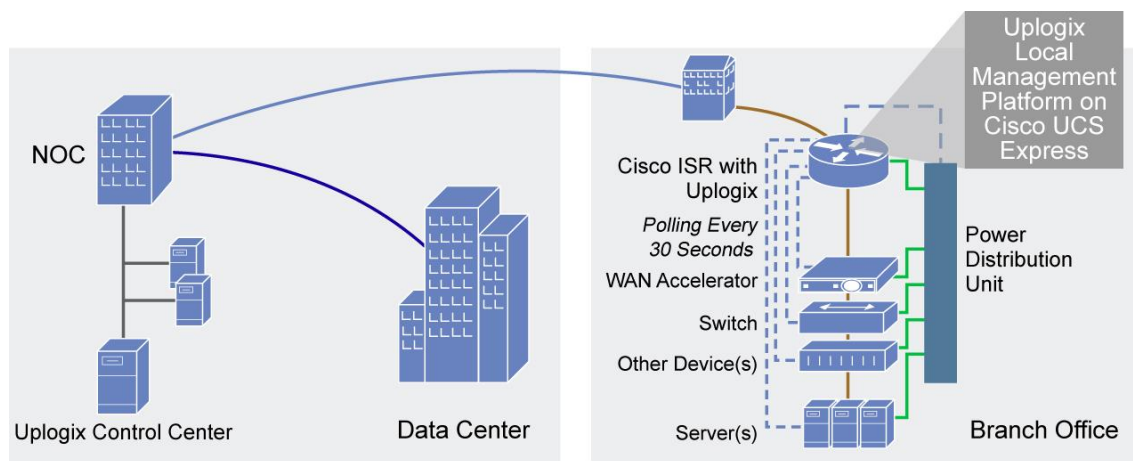# Uplogix Local Management Platform on Cisco Unified Computing System Express

Uplogix Local Management Platform on Cisco Unified Computing System™ Express (Cisco UCS Express) is a remote-management platform located with and directly connected to branch-office devices; the solution helps enterprise IT departments:

- Lower operating expenses associated with remote infrastructure

- Improve remote infrastructure performance and availability

- Address security and regulatory compliance vulnerabilities

Figure 1: Uplogix Local Management Platform on Cisco UCS Express Under Normal Conditions

Under normal conditions shown in Figure 1, Uplogix Local Management Platform on Cisco UCS Express provides an array of localized management services that augment centralized management:

Configuration Management

- Reliable and automated software upgrades and configuration changes for network devices

- Detailed logging of configuration changes for network devices and connected servers

- Centralized, enterprise-wide reporting based on configurable parameters and actions

Security and Compliance

- Fine-grained, role-based access control with flexible password rules, multifactor authentication, and TACACS and RADIUS integration

- Complete activity logging, including system prompts and responses

- Serial port session management, including rule-based closing of ports

Performance and Availability

- Rapid detection of problems without performance degradation through frequent off-network sampling

- Detailed monitoring and logging for trend analysis and improved visibility

- Explicit service-level verification of user-experienced Internet, WAN, and voice-over-IP (VoIP) performance

- Integration with centralized management consoles

Figure 2: Uplogix Local Management Platform on Cisco UCS Express Under WAN Outage Scenario
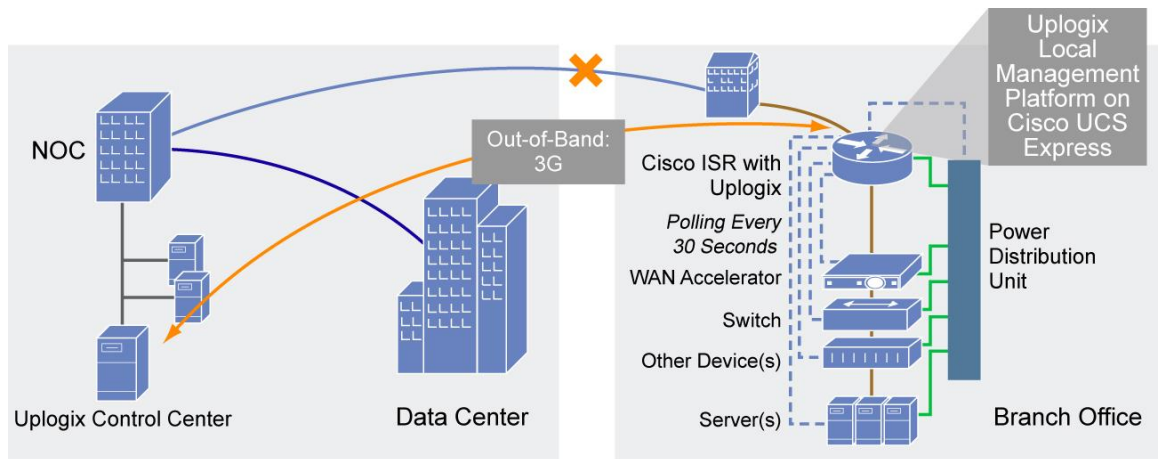
When problems arise as shown in Figure 2, Uplogix Local Management Platform on Cisco UCS Express provides localized management services that expedite rapid resolution of problems and maintain security whether or not the network is available:

Configuration Management

- Uplogix SurgicalRollback™ automatically rolls back production configuration changes to a prior or golden configuration if not explicitly committed in response to a management-system query (for example, if a technician loses connectivity as a result of a change), if initiated centrally, or if triggered automatically by a predefined rule

- Local storage of the OS and configuration files provides access to 20 previous valid settings with change differencing and a built-in Trivial File Transfer Protocol (TFTP)/FTP server

Security and Compliance

- The solution maintains role-based access control even when the network is unavailable

- The solution stores all interactions and keystrokes, including managed device system prompts and responses

Performance and Availability

- The rules engine takes automated actions to recover network or address device faults, securely performing complex task sequences that normally require an onsite technician

- The solution provides more detailed monitoring and logging. Maintenance of a rolling 2MB log of all console port traffic and frequent polling allows the viewing of trends prior to and immediately following the occurrence of a problem. The solution also detects, stores and forwards properly formatted syslog messages

- Secure out-of-band connection is automatically established to provide immediate centralized visibility and control. The solution uses a Secure Shell (SSHv2) Protocol Version 2 connection with cipher specification and IP filtering

Features and Benefits

The Uplogix Local Management Platform on Cisco UCS Express Reduces Operating Expenses

- Reliably automate network device software upgrades and changes with Uplogix's network-independent implementation and SurgicalRollback™ features

- Automate common maintenance activities, including configuration changes and password resets

- Eliminate manual effort with automated problem responses

- Reduce the frequency of expensive onsite visits with secure out-of-band access

- Dramatically lower the risk of regulatory compliance violations and reduce the need for costly audits with detailed activity and change logging

The Uplogix Local Management Platform on Cisco UCS Express Improves Service Levels

- Continuously monitor performance and availability without degrading network performance because Uplogix connects directly to managed devices. This setup provides faster problem detection and fine-grained trending for diagnosis

- Monitor the performance of critical network services and applications from an end-user's perspective with Uplogix Service Level Verification (SLV), including TCP/IP communications, web-based transactions, and VoIP telephony

- Quickly and automatically initiate the appropriate actions to resolve problems that affect service, including detailed diagnosis, setting changes, configuration updates or rollbacks, and even reboots and power cycles

- Gain immediate, highly secure, network-independent access to all managed devices when human intervention is required and connectivity to a site is lost

The Uplogix Local Management Platform on Cisco UCS Express Increases Security and Maintains Regulatory Compliance

- Apply administrative security standards to network management by extending role-based systems-management policies to network devices

- Eliminate critical vulnerabilities created by console port access for management by applying rule-based policies to help ensure sessions are properly closed, eliminating the likelihood of inappropriate access

- Maintain administrative security policies and audit when network connectivity is lost. Also eliminate the need for unaudited access to managed devices using "break glass" passwords with sweeping privileges. Audit extends to all actions, including warning dialogs and administrator responses

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Solution Components and System Requirements

Figure 3: Uplogix Local Management Platform on Cisco UCS Express Architecture
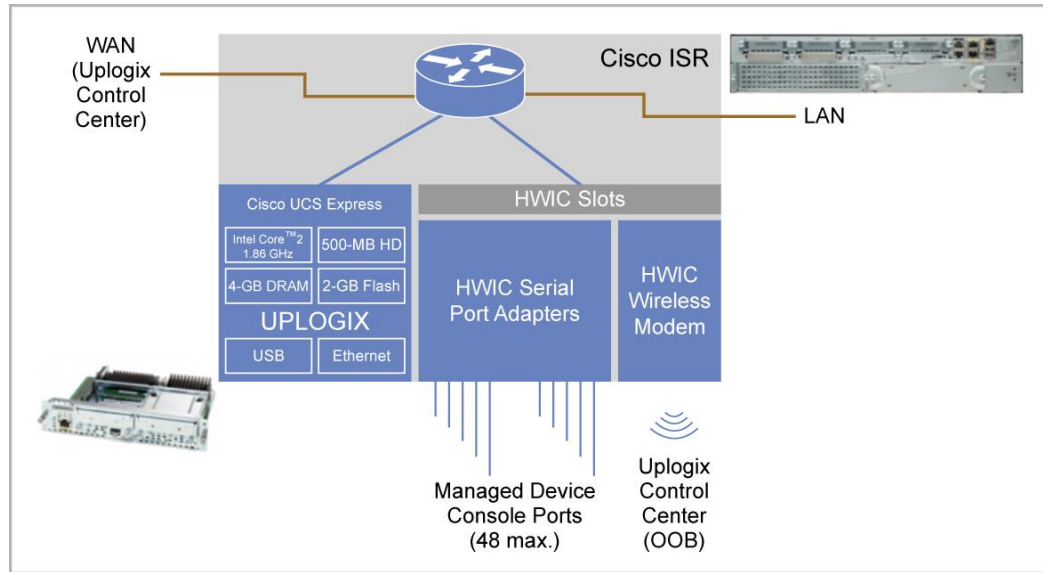
Uplogix Local Management Platform is hosted on a Cisco UCS Express module that is housed inside the Cisco 2900 and 3900 Series Integrated Services Routers (ISRs), part of the Cisco Integrated Services Routers Generation 2 (ISR G2) portfolio, as shown in Figure 3. Access to managed devices is provided through Cisco High-Speed WAN Interface Card (HWIC) serial port cards plugged into the ISR. The out-of-band access is provided through a Cisco HWIC wireless modem.

Table 1 shows Uplogix Local Management Platform support on Cisco UCS Express blades and Cisco ISR G2 routers. Table 2 shows Cisco HWIC serial port adapters, cables, and wireless modem options for Uplogix Local Management Platform on Cisco UCS Express.

Table 1. Cisco UCS Express and Cisco ISR G2 Support for Uplogix Local Management Platform

Part Number	Supported Cisco ISR Models						
	Cisco 2911	Cisco 2921	Cisco 2951	Cisco 3925	Cisco 3925E	Cisco 3945	Cisco 3945E
SM-SRE-700-K9	✓	✓	✓	✓	✓	✓	✓
SM-SRE-900-K9	✓	✓	✓	✓	✓	✓	✓

Table 2. Cisco Serial Port Adapters, Cables, and Wireless Modem Options for Uplogix Local Management Platform on Cisco UCS Express

Part Numbers	Description
HWIC-8A[*]	8 Port Async HWIC Card
HWIC-16A[*]	16 Port Async HWIC Card
CAB-HD8-ASYNC[**]	High Density 8 Port EIA-232 Async Cable
HWIC-3G-HSPA	3G HWIC (Non-US) HSPA/UMTS 850/1900/2100MHz; Quad-band 2G
HWIC-3G-CDMA-S	3G HWIC Sprint EVDO Rev A/0/1xRTT 800/1900MHz, IOS 15.0(1)M1
HWIC-3G-CDMA-V	3G HWIC Verizon EVDO Rev A/0/1xRTT 800/1900MHz, IOS 15.0(1)M

Part Numbers	Description
HWIC-3G-CDMA=	3G HWIC Generic EVDO Rev A/0/1xRTT-800/1900MHz, IOS15.0(1)M1
WIC-1AM-V2	V.92 Modem HWIC Card

* Minimum 1. A maximum of 48 serial ports are supported per Uplogix/ISR.

** One required per 8 serial ports.

Cisco UCS Express requires Cisco IOS® Software Release 15.1(4)M or later for Cisco 2911, 2921, 2951, 3925, 3925E, 3945, and 3945E ISRs.

Services and Support Information

Cisco UCS Express hardware and software service and support are covered by the Cisco SMARTnet® contract for the router in which the module will reside. The support for Cisco UCS Express is provided by the Cisco Technical Assistance Center (TAC). Cisco SMARTnet technical support is available on a one-time or annual contract basis. Support options range from help-desk assistance to proactive, onsite consultation.

All support contracts include:

- Major Cisco IOS Software updates in protocol, security, bandwidth, and feature improvements

- Full access rights to Cisco.com technical libraries for technical assistance, electronic commerce, and product information

- Access to the industry's largest dedicated technical support staff 24 hours a day

For more information about Cisco services, refer to Cisco Technical Support Services or Cisco Advanced Services.

Support for the Uplogix Local Management Platform is provided by Uplogix. For more information about Uplogix services, refer to http://www.uplogix.com/cisco/.

For More Information

For more information about the Cisco UCS Express, visit http://www.cisco.com/go/ucse/ or contact your local Cisco account representative.

For more information about Cisco products, contact:

- United States and Canada: 800 553-NETS (6387)

- Europe: 32 2 778 4242

- Australia: 612 9935 4107

- Other: 408 526-7209

For assistance in evaluating and ordering the Uplogix Local Management Platform, visit http://www.uplogix.com/cisco/ or contact an Uplogix representative:

- United States and Canada: (512) 857-7055

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