



**ProWatch for LANs
Service Description
January 2004**

SERVICE DESCRIPTION

Service Description NetSolve's ProWatch for LANs is a service for the remote management of LAN network devices defined as switches, routers or router switch modules, and their associated ports. The components of the service are described in the **NetSolve Responsibilities** section of this Service Description.

Definitions

Managed Components: Managed Components consist of the elements listed below. To be included as a Managed Component, a device must be SNMP-compliant and be on the list of NetSolve-supported equipment at the order date.

Managed Devices:

LAN Core Device is a LAN switch, router, or router switch module that can be reached via the management channel through at least two diverse connectivity paths.

LAN Edge Device is a LAN switch, router, or router switch module that can only be reached via the management channel through a single connectivity path.

Managed Interfaces:

LAN Link Interface is any interface on a LAN Core Device or LAN Edge Device that is connected to an interface on another Managed Device under any ProWatch Service offering. All other interfaces will be defined as Non-Managed Interfaces, unless specifically identified as a Managed LAN Port Interface as described below.

LAN Port Interface is any interface on a LAN Core Device or LAN Edge Device that is connected to a Non-Managed Device such as a server, hub, or printer. LAN Core Device or LAN Edge Device interfaces that connect to servers are defined as Managed LAN Port Interfaces. A Customer may designate other additional Managed LAN Port Interfaces with NetSolve approval. There are additional charges for these customer-designated Managed LAN Port Interfaces.

Non-Managed Components: Includes all components not specified as Managed Components, including, but not limited to, Customer premise wiring, cabling, and intermediate distribution frames (IDF).

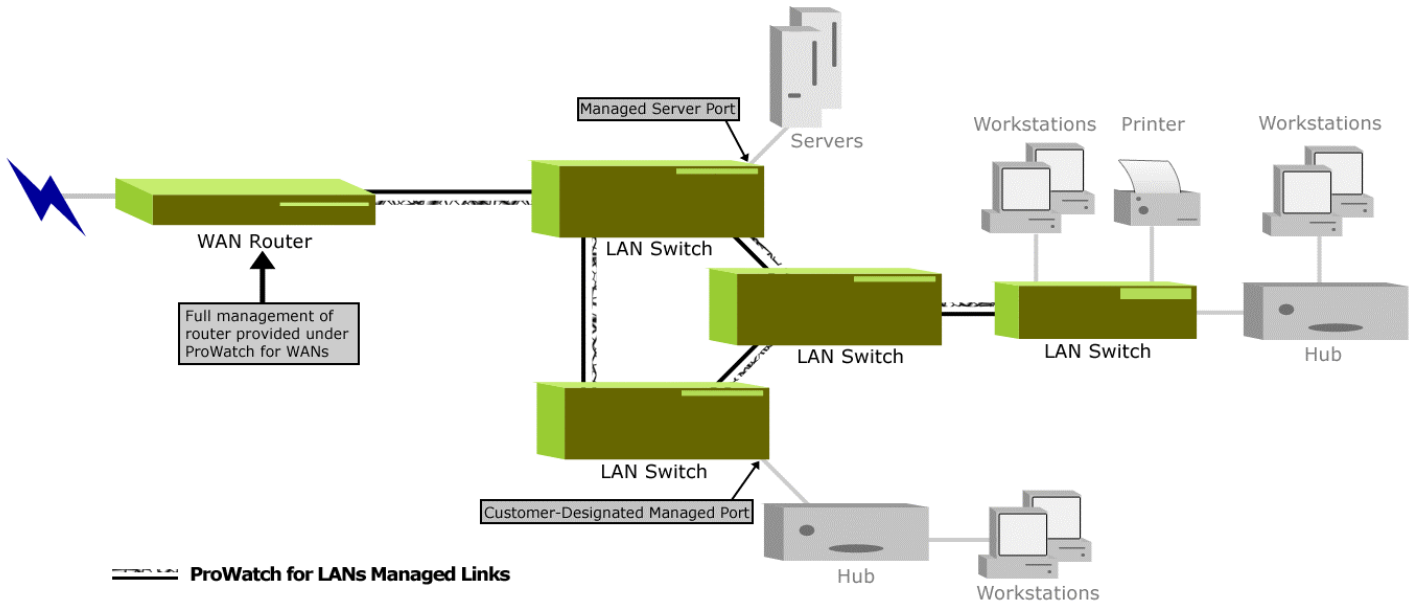
Non-Managed LAN Interfaces: Any other interface on a LAN Core Device or a LAN Edge Device that is not a Managed LAN Link Interface or a Managed LAN Port Interface.

Referenced Documents

The following NetSolve documents are referenced in, and are considered part of, this Service Description:

DOCUMENT TITLE	REVISION DATE
NetSolve - Moves, Adds and Changes	August 2003

Overview The following diagram illustrates the Managed Components for ProWatch for LANs:



The following table provides an overview of the service elements that NetSolve will provide for each Managed Component:

Service Elements	Managed Components			
	LAN Core Device	LAN Edge Device	All Managed Interfaces	Non-Managed Interfaces
Network Design/Verification	X	X	X	X
Project Implementation Management	X	X	X	X
Staging and Integration ⁽¹⁾	X	X	X	X
Information Management	X	X	X	X
Configuration Management	X	X	X	X
24/7/365 Proactive Monitoring and Notification	X	X	X	
Managed Component Fault Resolution ⁽²⁾	X	X	X	
Managed Component Performance Reports	X	X	X	X

(1) Optional service.

(2) Fault resolution for Managed LAN Port Interfaces can only be performed at the port.

NetSolve Responsibilities

1. Network Design/Verification

NetSolve will either approve an existing LAN network design or make recommendations for the design of a new LAN network prior to implementation. At Customer's request, NetSolve will design the network. All networks must be approved for manageability and must have a NetSolve-approved IP addressing scheme. Acceptance of a Customer Service Order (CSO) is contingent on either acceptance/approval of the existing network or verification by NetSolve that the Customer has made the required changes specified by NetSolve.

2. Project Implementation Management

The Project Implementation Management fee is not optional. Each Managed Device is classified as a new device or an existing device for implementation purposes and priced accordingly. Staging & Integration Service and On-site Installation Service are optional services priced and sold separately and are not part of Project Implementation.

NetSolve will perform the following Project Implementation Management functions for existing devices:

- Work with Customer to develop an implementation schedule for each Managed Component.
- Manage the entry of the Customer's Managed Component information in the applicable NetSolve databases.
- Establish device management access for each Managed Component through the Customer-provided site management channel.
- Review and verify the configuration of all Managed Components.
- Test and accept each Managed Component for ongoing Full Life Cycle Management coverage.

NetSolve will perform the following additional Project Implementation Management functions for new devices and provide installation-tracking information through ProWatch[®] Exchange.

- Work with Customer to develop an installation schedule for each new Managed Device.
- Schedule, coordinate, and sequence equipment and network vendors to install the Managed Device and any related services.
- Coordinate testing with equipment vendors and Customer to ensure operation of all Managed Components as each completes its portion of the install and then proceed with the existing device procedure above.
- Track the status of each device installation to the schedule and follow up with equipment vendors, equipment installers, carriers (when applicable), and Customer to reschedule if dates are missed. Notwithstanding NetSolve's installation coordination role, Customer at all times retains responsibility for the performance of its vendors to the Project Implementation schedule and informing such vendors of their responsibilities. In the event of rescheduling requested or necessitated by Customer or Customer's vendors, Customer agrees to pay NetSolve its standard rescheduling fees for each device that requires rescheduling with less than seven (7) days advance notice. On-site installations rescheduled with 48 hours or less notification will result in cost plus fees and are beyond the normal installation-rescheduling fee.

3. Information Management

NetSolve will maintain an information repository of data with respect to the Customer and the Managed Components as necessary for NetSolve to perform its responsibilities as stated in this Service Description.

The following information is the minimum data retained by NetSolve:

Customer Site Information

- Site physical address (street address, city, state, zip code)
- Site contact information (phone, pager, e-mail)
- Escalation notification procedure

Managed Device Information

- Vendor name, model number, serial number, and internal software version provided by the Customer in a format specified by NetSolve.
- Device-specific configuration settings
- Archiving configurations for each device (for devices with downloadable configuration files only; some devices, such as Cisco 1900 & 2800 LAN switches, do not support downloadable configuration files)
- Passwords and authentication settings

- Equipment maintenance information

Managed Interface Information

- LAN Link Interface information
- LAN Port Interface information and Customer's Managed LAN Port Interface designations

Network Management Information

- IP Address(es) and Network/Subnet Mask
- SNMP Community String(s)

4. Configuration Management

NetSolve will maintain Managed Component configurations and make changes to repair outages or improve performance. Customer-requested configuration changes are subject to NetSolve's reasonable approval.

In order to provide for the optimum performance and reliability of the LAN, software upgrades may be periodically required. NetSolve will track the defect lists, release notes, and feature lists associated with each vendor's product and make upgrade recommendations. NetSolve will recommend to the Customer when to upgrade to newer releases of software and firmware, and remotely install software upgrades which Customer is entitled to under applicable maintenance agreements or which is provided by the manufacturer to correct defects. Recommended upgrades requiring additional software/firmware, additional or upgraded hardware, or on-site installation as approved for purchase by the Customer, will be at Customer's expense.

Additionally, NetSolve will perform and or manage the moves, adds and changes of the Managed Components for the Customer. Please refer to **NetSolve's - Moves, Adds and Changes** for definitions and charges for moves, adds and changes.

5. 24/7/365 Monitoring and Notification

NetSolve will monitor the up/down status of all Managed Components from the NetSolve network management center ("NMC") 24 hours per day, 7 days per week.

Upon receipt of an alarm at the NMC from a Managed Component, or a call from Customer indicating a network outage or performance issue, a Trouble Ticket will be opened and an NMC technician will initiate fault isolation procedures. NetSolve will use all reasonable efforts to restore service expeditiously, electronically notify the Customer's designated contact(s) of the outage, and provide the Customer access to ProWatch Exchange for periodic status updates. Notification will be through e-mail, pager or both. The Customer can view Trouble Ticket status through ProWatch Exchange described below. If additional information is required, the Customer can call the NMC.

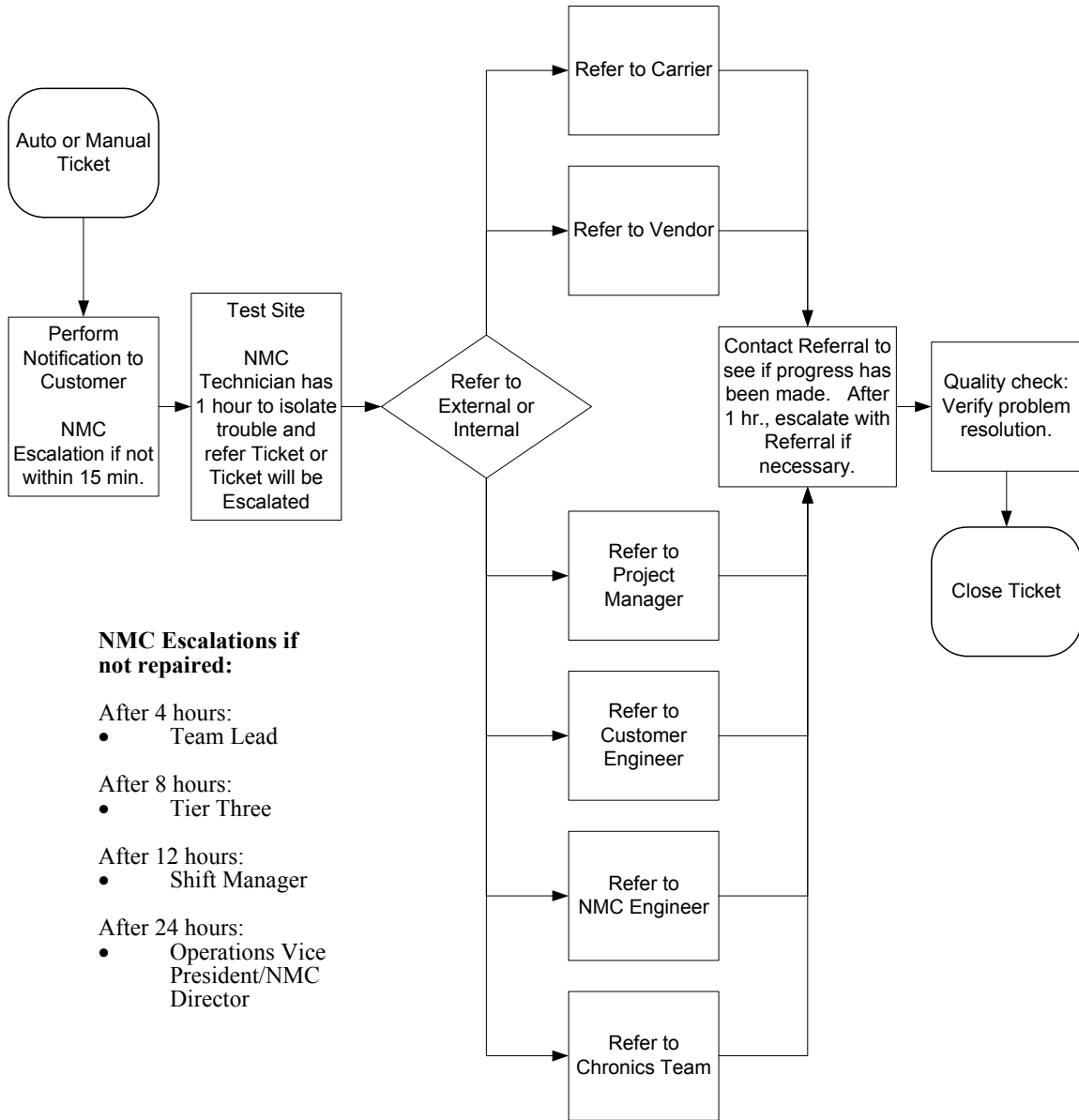
6. Fault Isolation and Resolution

NetSolve will escalate trouble tickets on a standard schedule based upon target fault isolation and repair times. While the escalation is automatic, Customer may request escalation within NetSolve at any time. Upon isolation of the fault, NetSolve will dispatch the appropriate service entity (Customer's contact or equipment maintenance provider).

When fault isolation procedures indicate a problem with Non-Managed Components or Non-Managed Interfaces, NetSolve will provide the Customer with information gathered during the fault isolation process in an effort to aid Customer in restoring service.

The following diagram is an illustration of the ticket management process in the Network Management Center:

Network Management
Center
Ticket Management



NMC Escalations if not repaired:

- After 4 hours:
 - Team Lead
- After 8 hours:
 - Tier Three
- After 12 hours:
 - Shift Manager
- After 24 hours:
 - Operations Vice President/NMC Director

7. Managed Component Reporting

The Customer may access ProWatch Exchange for the following information on all Managed Components:

Managed Component Status Reports

- Implementation Status Reports
- Trouble Ticket Reports, during and after fault resolution on Managed Devices and Interfaces
- Managed Device Inventory

Managed Component Performance Reports:

- On-demand Performance Reports
 - LAN Interface Utilization Plots
 - LAN Interface Errors Plots
 - LAN Interface Non-Unicast Plots
- Exception Reports
 - LAN Interface High Utilization
 - LAN Interface Error Exception

8. Performance/Engineering Analysis

NetSolve will provide network recommendations based on analysis of the Managed Components' utilization and error exception reports provided monthly. These recommendations will be focused on maintaining availability and optimal ongoing performance of the Managed Components. Performance recommendations and analysis can be accessed by the Customer through ProWatch Exchange.

Performance/engineering analysis for Non-Managed Interfaces is available at professional services rates, contingent on availability of a Customer Engineer. Customers may upgrade any Non-Managed Interface to a Managed Interface on any Managed Device at any time by contacting NetSolve to place an order.

Optional Services

1. Staging and Integration

NetSolve will perform the following staging and integration services when purchased separately.

- Track and report systems integration status to Customer or reseller in a format selected by NetSolve and follow-up with the appropriate parties to reschedule if dates are missed or change through ProWatch Exchange.
- Configure hardware/software, user-configurable settings, IP addresses and perform self-test operability of the assembled equipment components.
- Ship completed units to requested location designated by the Customer or reseller.

2. Installation Service

NetSolve will provide, schedule and dispatch appropriate on-site installation personnel and execute on-site installations when specifically requested and purchased separately.

Customer Responsibilities

- Customer is responsible for providing NetSolve with data, as often as needed, in a format specified by NetSolve, with respect to Customer and Managed Components as necessary for NetSolve to perform its responsibilities as stated in this Service Description. This includes, but is not limited to, site contact (including any applicable

escalation lists and off-hours contacts), password access to all devices and technical information reasonably required by NetSolve to perform its responsibilities.

- Customer is responsible for server, workstation, application and physical plant management and for management of any other items that are not Managed Components. In the event that, in connection with its monitoring and fault management services, NetSolve isolates the problem to be beyond the Managed Components, a NetSolve network engineer will consult with Customer and obtain written authorization prior to performing additional work, which will be at NetSolve's standard rates for Professional Services. In the event such work is approved and the problem is finally determined to be with a Managed Component, no such additional charges will be incurred by Customer.
- Customer is responsible for the integrity and performance of LAN cabling. In the event that, in connection with its monitoring and fault management services, NetSolve isolates chronic problems related to the LAN's physical cable plant, NetSolve may recommend cable plant analysis and possible upgrade to eliminate the problems. If chronic problems are identified and left unresolved, NetSolve reserves the right to discontinue its service.
- Customer must install dedicated 1FB phone lines, or dedicated PBX extensions with DID capability, prior to the installation date at each site covered by ProWatch for LANs Services to allow dial-in access to at least one Core Managed Component per site by NMC personnel. These lines must be connected to a dedicated dial modem provided by Customer or purchased separately from NetSolve.
- Customer must provide a Frame Relay access circuit and Frame Relay PVC for a management channel as required by NetSolve to provide access to each Managed Component. This can be one channel to each Managed Device site or one channel to the headquarters site for LAN sites that are connected to a WAN.
- Customer is responsible for hardware and software maintenance coverage for all equipment included in Managed Components. Customer may obtain this maintenance from a third party or NetSolve, or may self-maintain.
- If Customer elects to have NetSolve dispatch Customer's equipment maintenance or other service providers in the event of a Managed Component failure, Customer must arrange with those providers to allow NetSolve to troubleshoot, diagnose, dispatch provider's technicians on Customer's behalf, and otherwise perform all of its responsibilities hereunder for any Managed Components not provided by NetSolve.
- Customer must provide NetSolve with notice of any changes which Customer intends to make to the Managed Components before such changes are made in accordance with an agreed upon Change Management process. See **NetSolve's - Moves, Adds and Changes** for more detailed information.
- Customer must obtain registered IP addresses for applicable Managed Components or agree to use unregistered IP addresses assigned by NetSolve. All addressing plans must be approved by NetSolve. NetSolve may also require a secondary addressing scheme if there are addressing conflicts.
- Customer must ship Managed Devices requiring configuration at NetSolve's Staging and Integration facility to NetSolve, freight pre-paid, unless such devices are purchased from NetSolve. NetSolve will invoice Customer for freight charges to ship equipment to Customer locations.
- Customer agrees to grant NetSolve the right to utilize statistics derived from historical performance and the right to publish these statistics, aggregated with other customers, as long as Customer or Customer's data is not identified or compromised.

Supported Equipment Classes and Protocols

The ProWatch for LANs service currently supports most LAN switches and LAN-attached routers from Cisco. This includes both Layer 2 and Layer 3 devices. The current list of specific device types is detailed in the **Supported Equipment** section of this document.

Each supported device is classified as Small, Large, or Very Large, and designated as Layer 2 or 3, for pricing purposes. This results in six classes of supported devices. Special protocol requirements for SNA and VPN are supported and involve additional monthly charges. For each supported device, the customer can designate any number of additional Managed LAN Port Interfaces, beyond the server interfaces, for detailed management (priced in groups of six).

The list of supported switches and routers will be updated from time to time to reflect current product from Cisco and other major vendors. Support of devices or protocols that are not listed may be obtained by going through the NetSolve ICB process for documented approval.

Warranty

WITH RESPECT TO SERVICES, NETSOLVE'S EXCLUSIVE WARRANTY IS THAT THE SERVICES SHALL BE PERFORMED IN A WORKMANLIKE FASHION. IN ANY MONTH IN WHICH CUSTOMER, IN CUSTOMER'S SOLE OPINION, BELIEVES NETSOLVE HAS BREACHED THIS WARRANTY, NETSOLVE WILL CREDIT CUSTOMER UP TO ONE-HUNDRED PERCENT (100%) OF THE SERVICE FEES FOR THAT MONTH FOR THE PRO WATCH FOR LAN SERVICES. IN ORDER TO RECEIVE THIS CREDIT, CUSTOMER MUST NOTIFY NETSOLVE IN WRITING WITHIN THIRTY (30) DAYS FOLLOWING THE END OF THE MONTH THE SERVICES WERE PROVIDED STATING (i) THE REASON CUSTOMER IS DISSATISFIED WITH THE SERVICES AND (ii) THE AMOUNT OF THE SERVICE FEES CUSTOMER REQUESTS TO BE CREDITED. UPON RECEIPT OF SUCH NOTICE, NETSOLVE WILL CREDIT CUSTOMER THE REQUESTED AMOUNT (UP TO THE LIMITS ABOVE) ON THE NEXT BILLING CYCLE. THIS CREDIT WILL CONSTITUTE CUSTOMER'S SOLE AND EXCLUSIVE REMEDY FOR BREACH OF WARRANTY. NETSOLVE SHALL NOT BE OBLIGATED TO CREDIT CUSTOMER AN AGGREGATE AMOUNT EXCEEDING TWO MONTH'S SERVICE FEES IN ANY TWELVE MONTH PERIOD, OR AN AGGREGATE AMOUNT EXCEEDING THREE MONTH'S SERVICE FEES IN ANY EIGHTEEN (18) MONTH PERIOD, BUT MAY ELECT TO DO SO BASED ON CUSTOMER'S REQUEST.

Supported Equipment ⁽¹⁾

	Layer 2 Devices	Layer 3 Devices
Small	Catalyst 19XX ⁽²⁾ Catalyst 2820 ⁽²⁾ Catalyst 29XX, Catalyst 35XX Catalyst 40XX	Catalyst 2948GL3 Catalyst 4908GL3 17XX Router ⁽³⁾ 25XX Router ⁽³⁾ 26XX Router ⁽³⁾ 3620 Router 3640 Router 3810 Router
Large	Catalyst 45XX without Supervisor Engine Catalyst 5XXX without RSM Catalyst 6XXX without MFC Lightstream 1010 without ARM ⁽³⁾	Catalyst 45XX with Supervisor Engine Catalyst 5XXX with RSM Catalyst 6XXX with MFC Catalyst 85XXX (ICB Required) Catalyst 4840G Lightstream 1010 with ARM ⁽³⁾ 3660 Router 71XX Router ⁽³⁾ 72XX Router ⁽³⁾ 75XX Router ⁽³⁾ 12000 GSR (ICB Required) 10000 GSR (ICB Required)
VLarge	MGX 82XX (ICB Required) MGX 88XX without RPM (ICB Required) IGX 84XX (ICB Required) BPX 86XX (ICB Required)	MGX 88XX with RPM (ICB Required) IGX 84XX LSR (ICB Required) BPX 86XX LSR (ICB Required)

⁽¹⁾ Subject to change without notice.

⁽²⁾ Catalyst 1900 and 2800 switches do not support the transfer of configuration files. Therefore archival of these devices is not included in this service offering.

⁽³⁾ Subject to prior approval by NetSolve.