



Technical Service Description

Network Operation Center as a Service

a.k.a. NOC as a Service or NOCaaS

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## NOC as a Service

### 1. Service Tiers

Lightstream’s NOCaaS consists of network management functions of infrastructure devices, such as routers, firewalls, switches. Lightstream offers two tiers of the service: (1) Carrier Management and (2) Device Management.

#### 1.1. Carrier Management Overview

Lightstream’s Carrier Management Services includes real-time monitoring of managed infrastructure devices, along with triage and resolution of carrier outages for circuits connected to monitored infrastructure devices.

#### 1.2. Device Management Overview

Lightstream’s Device Management Service offering includes management of network infrastructure devices, including incident management of connected network elements, as well as configuration management, change management, and break/fix of the managed device. Here are the service capabilities in table form:

#### 1.3. Service Tier Comparison

Description	Carrier Management	Device Management
Proactive Monitoring of Carrier Services (ISP), Network Devices	✓	✓
Automated Event Correlation and Alert Management	✓	✓
Triage/isolation of System Failure Events	✓	✓
Opening of tickets for Network Failure, escalation, and drive to resolution	✓	✓
Machine learning and AI for Predictive Analytics and anomaly detection	✓	✓
Event correlation to identify and remediate chronic carrier issues	✓	✓
Monthly Reporting and Reviews	✓	✓
Industry Leading SLAs	✓	✓
Management of Network Infrastructure Devices		✓
Incident Management of Connected Network Elements for all issues beyond carrier management		✓
Configuration Management & Change Management		✓
Break/Fix Support on Managed Device(s)		✓

Description	Carrier Management	Device Management
Troubleshooting and full remediation		✓

## 2. Service Elements

### 2.1. Overview

The following Service Elements apply to all Service Tiers unless otherwise specified.

### 2.2. 24x7 Up/Down, SNMP and API Monitoring and Alerting

Lightstream NOCaaS provides 24x7x365 up/down monitoring and alerting via ICMP, SNMP, or API (if applicable) on managed network devices, as outlined in a Service Order (SO) or Statement of Work (SOW). This monitoring and alerting provides proactive up/down notification of the supported device and associated connectivity service and supports capture of SNMP and API (if applicable) data to assist in trouble isolation and resolution. The Lightstream Managed Services includes support of the following key capabilities (as applicable to the device, all capabilities may not exist on all devices):

#### **Alerting/Alarm based on observed failure:**

- Device Availability: up/down (alert/alarm on observed failure)

#### **Data Capture to support problem isolation and resolution**

- Device Health: power
- Interface Status: up/down
- Interface Performance: - utilization, in/out traffic rate
- Interface Errors: error and discard rate, CRC, and collision errors
- Buffer Usage: - small, medium, large and huger buffer utilization and failures
- VPN: - IKE and IPsec tunnel availability
- Hardware Monitoring: disk, memory module, chassis temperature, fan, power, voltage

Lightstream can only monitor via SNMP or API what is made available by the hardware manufacturer. If information is not made available via SNMP or API by the hardware vendor, it is a technical limitation and Lightstream may not be able to capture all key monitoring parameters.

### 2.3. Incident Management

Lightstream will provide 24x7 incident management support for an event which is not part of the standard operation of a covered device, and which causes, or may cause, an interruption to, or a reduction in the quality of that service.

An incident may be raised via the Lightstream monitoring platform, via a ticket opened directly with the Lightstream service desk using the Customer accessible portal, via phone, or via email. A bi-directional automated ticket exchange between the Customer service desk and the Lightstream incident management platform may be available for an additional fee and based on compatibility. (Details of this process would be on an individual case basis and identified in a separate Statement of Work.)

As part of the incident management process Lightstream will follow standard procedures as outlined in the section labeled [Standard Operating Procedures](#) of this Service Description. Initial action will be to validate the issue as a qualifying service event and to restore normal operation as quickly as possible with the least possible impact on either the business or the user experiencing the identified incident.

## 2.4. Problem Management

Lightstream will provide problem management for any incident that is validated as a qualifying service event via the standard procedures as outlined in the section labeled [Standard Operating Procedures](#) of this Service Description. Problem management will include incident triage and troubleshooting to determine appropriate steps required to provide remediation of the observed incident and to fulfill the obligations identified in this Service Description.

As part of the problem management process Lightstream will remotely troubleshoot and fix observed issues. If the standard procedures fail to resolve the problem, the ticket will be updated and escalated as appropriate to fix the failure and restore the Customer environment to working order. Escalation may be directed towards higher level technical resources within Lightstream, Customer resources, or third-party vendor resources.

All ticket activities will be logged into a Customer accessible event management platform. Tickets will be updated consistent with any material activities or change of status on the service event. Updates will include a chronology of steps taken to remediate the incident.

## 2.5. Escalation Management

Lightstream will provide escalation management for incidents supported under the NOCaaS offering. Escalation will be based on standard procedures and may include escalation to higher level Lightstream technical resources, Customer resources, or third-party vendor resources.

As necessary to support escalation requirements, Customer is required to maintain valid support contracts with third-party vendors as applicable.

In order to provide escalation support Customer may be required to provide authorization for Lightstream to act on its behalf when troubleshooting issues or coordinating with respective vendor support organizations.

All escalations involving third-party resources will be managed to, and dependent on, identified Service Level Agreements established, and in place, between respective vendors and Customer.

## 2.6. Change Management (Device Management Service Tier Only)

Lightstream will provide change management support for components covered under Device Management Services. Lightstream change management support is designed to ensure that standardized methods and procedures are used for efficient and prompt handling of changes to IT infrastructure. Change requests may arise in response to identified issues/problems, from service requests, via externally imposed requirements (e.g., legislative changes), or to enable or reflect business initiatives, projects or service improvement requirements.

Changes to the end-customer's network and/or various elements will only be made when instructed by the Customer, deemed mandatory by Lightstream personnel to resolve issue(s), or otherwise approved by permissions determined during onboarding. If a non-mandatory network and/or element change is required that is outside of determined Lightstream permissions, a

change request will be submitted to the Customer detailing the changes required and reasons for said changes.

The Customer will notify Lightstream before making any changes to the network and/or elements that would otherwise trigger an alarm resulting in technical personnel being dispatched. Any changes that could result in technical personnel being dispatched should be sent to the support team as defined during the onboarding process.

### 2.6.1. Change Control Process and Service Affecting Notifications

In the event Customer desires to change the work identified in Agreement or Service Order, Customer shall submit a change or request (“Change Request”), on which Customer shall describe the exact nature of the changes requested. Within a reasonable (24 to 48 Hours) time thereafter, Lightstream will provide Customer with at least the following information in a written change order (“Change Order”): (i) LightStream’s proposal for implementing the requested change (ii) fee changes, if any, payable to Lightstream as a result of the proposed change order; and (iii) the impact, if any, on the delivery schedule arising from the proposed change order. Within five (5) business days after receiving Lightstream’s proposed Change Order, Customer shall accept or reject same by written notice to Lightstream: otherwise, the Change Order shall be deemed rejected. No Change Order shall be binding upon either party unless signed by both parties. Upon execution by both parties, a signed Change Order shall amend the original statement of services and become a part thereof.

Lightstream will provide Customer’s reasonable notification of Service-affecting activities that may occur in normal operation of its business. Such activities may include, but are not limited to, Equipment or facilities additions, removals or rearrangements and routine preventative maintenance. Lightstream will work cooperatively with Customer to determine the reasonable notification requirements.

Should Customer require revisions, modifications or changes to the Services, Customer will provide Lightstream with a change request form (“Change Request”)

Changes include, without limitation, additions or deletions to the Equipment or Services included in an applicable Quote, Statement of Work, or Service Order. Modifications and their impact on the schedule of charges, will be reviewed monthly

Lightstream understands there may be some fluctuation in change requests and will take this into consideration; however, excessive change requests may incur additional charges on a time & material basis. Emergency change requests requiring short turnaround and extensive resource may also result in additional charges on a time & materials basis.

Change management activity will be documented included in the monthly service review discussion with the Customer.

## 2.7. Support Team Structure

FOR TECHNICAL ISSUES:

Call the 24x7 NOC 1-888-698-9880

Lightstream provides 24x7 resource coverage to support the service elements outlined in this Technical Service Description. This support includes a variety of resource types including tier-1 support desk resources, tier-2 technical resources, tier-3 technical support and engineering resources, and associated management and escalation team resources depending on the service purchased.

Lightstream also provides a Customer Success Manager (CSM). This CSM will be the main technical point of contact for the Customer for service events related to this Agreement during business hours. The CSM will be responsible for the Customer support experience and will focus on managing expectations, providing escalation support, generating and reviewing metrics and reporting, and conducting checkpoint meetings throughout the term of the agreement.

Lightstream will provide a Customer-specific escalation matrix upon execution of a SOW for Managed Services.

## 2.8. Standard Operating Procedures (SOPs)

### 2.8.1. Event Management and Remediation – Standard Operating Procedure

- Lightstream will monitor supported devices on a 24x7x365 basis using Lightstream NOCaaS tools and platforms.
- Upon observed failure, Lightstream support platform will create an alert for observed issues.
- Incoming alerts will be initially validated to identify false alerts, or alerts where no action is required.
- Actionable alerts will be prioritized using the prioritization matrix outlined in the [Service Level Agreement and Event Prioritization](#) section.
- Upon prioritization the actionable alert will be ticketed in the Lightstream event management platform by the appropriate Lightstream personnel and routed to the appropriate resource group to begin initial troubleshooting efforts.
- Lightstream resources will then triage the issue to isolate the problem observed. Triage may include a wide range of standard troubleshooting activities based on the nature of the observed problem, Customer technology infrastructure topology, device access, and a variety of other factors.
- Upon identification of the suspected root cause, appropriate steps will be taken to remedy the identified issue based on the nature of the issue and appropriate operating procedure required to remedy the issue.
- If the standard procedures fail to resolve the problem, the ticket will then be updated and immediately escalated for further troubleshooting and remediation as appropriate. Escalation may include engagement of additional higher level Lightstream resource, identified third-party vendor resource, or Customer resource based on the nature of the issue and approved Customer escalation process.



- Information, actions taken, and information pertaining to ticketed events will be tracked in Lightstream event management platform.
- Upon resolution of the identified issue Lightstream will notify Customer of remediation of outage event.
- Lightstream will conduct Root Cause Analysis (RCA) of chronic PI incidents to identify the underlying problem when applicable.
- Ticket activities will be logged into a Customer accessible event management platform, and tickets will be updated with chronology and steps taken to remediate the incident.

### 2.8.2. Carrier Management – Standard Operating Procedure

Lightstream supports telecommunications or Internet service provider vendor escalations for internet, leased lines, LTE (3G, 4G, & 5G), MPLS, and other carrier connectivity options in the event of an outage condition.

Lightstream will create tickets with the telecommunications or Internet service provider and escalate the issue to the provider following the respective provider service level agreement structure in place between Customer and provider.

- Lightstream monitors WAN connectivity using the Lightstream Managed Services platform.
- In the event of an observed connectivity outage, Lightstream will contact the connectivity provider, via phone or via the carrier online ticketing portal, and open a trouble ticket for the observed connectivity failure or issue.
- Lightstream will work with the carrier provider to assist in troubleshooting, testing, and problem resolution when applicable.
- Lightstream will escalate the issue to carrier provider as per a standard escalation process in place between Customer and provider to facilitate problem resolution.
- Lightstream will track carrier ticket information and relevant resolution notes in the Lightstream event management platform.
- It is required that Customer provide a valid letter of authorization allowing Lightstream to act on their behalf during service outage events (Letter of Agency or Authorization) with each respective carrier service provider.
- Customer is responsible for maintaining valid support contacts with any carrier/connectivity providers covered under the Carrier Management Services.

### 2.8.3. Device Management – Standard Operating Procedure

Lightstream will provide device management to remedy an outage caused by a failed hardware component for devices covered under Device Management Services. Lightstream will assess outage condition to determine if a hardware failure has occurred in an effort to remedy an outage caused by a failed hardware component for devices covered under this service.

- Lightstream will monitor hardware components of managed devices using the Lightstream Managed Services platform.

- In the event of an observed hardware failure, Lightstream will contact the identified hardware vendor if required to remedy the observed issue. If required by the hardware vendor, Lightstream will open a case number, trouble ticket, or other issue request with the vendor.
- Lightstream will work with the hardware provider to assist in troubleshooting, testing, and problem resolution when applicable.
- Lightstream will work with hardware vendor to facilitate replacement of the failed device when applicable.
- Customer is responsible to ensure hardware replacement component is available (via purchase or via hardware maintenance contract) if necessary to remedy device failure.
- Customer is responsible for hardware replacement in the event of failure. Lightstream can support this effort by providing on-site technician services on a time-and-materials basis (or per existing contract if applicable) as requested by Customer.
- Upon hardware replacement/restoral, the Lightstream Network Operations Center will work with Customer/on-site resource to verify device is operating and accessible via the Lightstream monitoring platform and that the site has been restored to working order.
- Lightstream will track hardware provider ticket information and relevant resolution notes in the Lightstream event management platform.
- It is required that Customer provide a valid letter of authorization, if required, allowing Lightstream to act on their behalf regarding device failure or service events (Letter of Agency or Authorization) with each respective hardware provider for devices covered under Device Management Services.
- Customer is responsible for maintaining valid support contracts with any hardware component covered under Managed Services.
- Support functions are based on SLA's provided in hardware support contract.

#### 2.8.4. Third-Party Vendor Management – Standard Operating Procedure

Lightstream will provide vendor management and vendor coordination for the purpose of resolving issues.

- Vendor management and vendor coordination will be limited to support required to remedy service issues covered under Device Management Services.
- Lightstream will document relevant information and resolution notes regarding third-party vendor management and coordination in the Lightstream event management platform.
- Any third-party vendor information would need to be provided by Customer. This would include all required contact information, account information, authorizations or other data necessary to provide support for Managed Services.
- It is required that Customer provide a valid letter of authorization, if required, allowing Lightstream to act on their behalf regarding contact with any third-party vendors.

- Customer is responsible for maintaining valid support contracts with any third-party vendor included in this process.
- Support functions are based on SLA's provided by third-party vendor.

#### 2.8.5. Customer Escalation/Communication – Standard Operating Procedure

Lightstream will manage Customer communication and escalation as part of the Lightstream NOCaaS offering.

- Lightstream will provide portal access to the Lightstream event management platform for any identified, authorized Customer contact. This platform will provide real-time access to ticketed events and troubleshooting activities.
- Lightstream will notify Customer contact of any ticketed service event via an automated notification from the Lightstream ticketing platform.
- Lightstream will notify authorized Customer contacts upon resolution of ticketed event.
- Lightstream will provide a Customer specific escalation matrix outlining Lightstream escalation process and contacts.
- Lightstream reserves the right to escalate issues to authorized Customer contacts for events requiring Customer activity or assistance, higher level access, or additional levels of support.
- Lightstream will escalate issues or events that are deemed to be outside of the scope of the Managed Services to identified Customer contacts.
- Lightstream will track relevant Customer escalation and communication information in the Lightstream event management platform.

### 2.9. Service Level Agreement (SLA) and Event Prioritization Criteria

Lightstream Managed Services will have two key performance indicators (KPIs) used to measure and track expected service level on validated service events. These two KPIs are **Average Response Time** and **Average Resolution Time**.

#### 2.9.1. Service Level Agreement (SLA)

Lightstream will perform the activities in this TSD within an SLA based service delivery model. However, the environment to be covered is a part of a larger physical environment that is subject to change without notice to Lightstream. Therefore, important onsite operational requirements such as availability, capacity, and environmental (e.g. power) outages will be the responsibility of the Customer. Customer should inform the Lightstream NOC of any device addition/deletion or changes to the network devices and environment that has the potential to affect stability or performance of covered equipment/connection, regardless of if the change is to a covered device or network segment.

#### 2.9.2. Remote Incident Support Response SLA

The following table describes the priority levels and response times associated with incidents. The sources of alerts are either from the monitoring system or from user requests entered via

email to [NOC@connect.lightstream.io](mailto:NOC@connect.lightstream.io) with Priority Level, end-customer's name, site location, and ISP in subject line.

SLA Metric	Priority 1	Priority 2	Priority 3	Priority 4
Mean Time to Acceptance (MTTA)	20 min	75 min	4 Hrs.	8 Hrs.
Mean Time to Remediate (MTTR*)	4 Hrs.	8 Hrs.	24 Hrs.	48 Hrs.
Updates (UPD)	Hourly	4 Hrs.	24 Hrs.	48 Hrs.

Where an incident indicates a carrier outage, a ticket will be opened with the carrier immediately following MTTA.

\* **MTTR** is exclusive of the time dependent on Customer or third-party action.

To ensure that problems are reported in a standard format, the following problem priority definitions will be adhered to:

- Priority 1 (P1) - An existing network, element or service is “down” or there is a critical impact to business operations. Customer and Lightstream will commit all necessary resources around the clock to resolve the situation.
- Priority 2 (P2) - Operation of an existing network, element or service is severely degraded, or significant aspects of your business operations are negatively affected by inadequate performance of covered products. Customer and Lightstream commit full-time resources around the clock to resolve the situation.
- Priority 3 (P3) - Operational performance of the network, element or service is impaired while most business operations remain functional. Customer and Lightstream commit resources during normal business hours to restore service to satisfactory level.
- Priority 4 (P4) - Operational performance of the network, element or service is only minimally impaired while business operations remain functional. Customer and Lightstream commit resources during normal business hours to restore service to satisfactory levels.

### 2.9.3. Law of Small Numbers

For a given SLA, if a SLA failure is due to a single failure during such measurement period then there shall be no service level credit. For example, an SLA for a service level with a ninety percent (90%) SLA performance would require at least ten (10) events to be included in the monthly SLA measurements for service level credits ten (10) total events minus one (1) miss equals (9) successful events, and nine (9) events divided by ten (10) total events is ninety percent (90%).

### 2.9.4. Exceptions

- a. The Service Level credits shall only apply if the failure for meeting the critical service levels is solely attributed to Lightstream failure to carry out its responsibilities. If the cause of failure to achieve critical service levels was due to a factor outside the sole control of Lightstream or for which Lightstream is not responsible, the Service Level credits shall not apply. The following are exceptions: incidents resulting from non-supported components.
- b. Incident caused by actions or inactions of end user personnel of a third party for which Lightstream is not responsible.
- c. Changes to the environment by Customer or third parties which were not communicated in writing to Lightstream within five (5) business days of the change being enacted.
- d. Customer prioritization of necessary resources where agreed or not by Lightstream.
- e. Customer's failure to perform obligations set forth in the Agreement and/or Service Order to the extent such failure affects Lightstream's ability to perform the Services at the specified SLAs.
- f. The cause of the failure to achieve a Service Level was not caused by Lightstream and was a factor outside of the reasonable control of Lightstream for which Lightstream used commercially reasonable efforts to foresee and prevent. As such Lightstream would have achieved the SLA but for such factor.
- g. Time scheduled for maintenance in accordance with the Agreement and/or the Service Order, or as part of an approved change where downtime has been agreed by the Parties in writing.
- h. Authorized Users not identified by the Customer to Lightstream.
- i. Prioritization of ticket handling may be adjusted upon Customer request; however, if such reprioritization occurs and SLA's are missed, relief shall be granted for the period of time impacted by the reprioritization.
- j. IMAC request tickets affecting five (5) or more devices shall be considered a project and are excluded from the SLA calculation. Pricing for these tickets will be invoiced separately based on the workload anticipated.
- k. For each day that Lightstream experiences unexpected or unprecedented consumption volumes, or consumption parameters and/or assumptions, fluctuations, or dependencies due to Customer's device(s) failure or network outages, that contributes or exceeds the anticipated daily average tickets by ten percent (10%) or more, Lightstream will eliminate those days from the monthly SLA calculations. In addition, for each month the Lightstream experiences unexpected or unprecedented consumption volumes, or consumption parameters and/or assumptions, fluctuations, or dependencies due to Customer's device(s) failures or network outages that contributes or exceeds the anticipated monthly average of tickets by ten percent (10%) or more, Lightstream will be relieved

from meeting the SLA's of the affected Services for any such month and Lightstream will eliminate those months from the SLA calculations.

## 2.10. Reporting and Documentation

Lightstream will provide reporting and documentation in support of this service. Reporting information will contain up-to-date information related to open problems, incidents and service requests, SLA fulfillment, information regarding network appliances in production, performance statistics, and other data that is relevant to components covered in this service description.

The Lightstream CSM will conduct a regularly schedule status review with Customer. During this meeting, overall service performance, issues, and risks will be reviewed.

Lightstream provides standard report structures and report content. Customer specific reporting details and report frequency will be determined based on service components and must be mutual agreement between both parties. Custom reporting requirements may incur additional charges.

## 2.11. API Integration

Lightstream may work with Customer to establish appropriate API integration between Lightstream event management platforms and Customer event management platforms. Custom API requirements may incur additional charges. Details of this process would be on an individual case basis and identified in a separate Statement of Work.

## 2.12. Customer Onboarding

Lightstream will work with Customer to ensure timely and efficient onboarding for the specific services provided.

As part of the onboarding process Lightstream and Customer agree to finalize an onboarding timeline within 30 days of signature of any managed services agreement between the parties.

Following are the obligations for both Lightstream and Customer specific to onboarding.

### 2.12.1. Customer's Obligations

- Customer will provide lead onboarding contact and associated contact information to act as Customer's main point of contact during onboarding process. Additional Customer contact information for key stakeholders should also be provided as necessary.
- Complete and provide documents and tasks required for the establishment of Lightstream Services as outlined by Lightstream.
- Provide Lightstream with any existing network documentation such as network diagrams, and configurations, or other pertinent information (e.g., circuit IDs, IP addresses).
- Create and provide administrative access to the necessary applications and systems for the establishment of Lightstream Services.

- Provide all necessary Letters of Authorization, Agency, or written approval required to support hardware, network, and infrastructure components covered under this service.

#### 2.12.2. Lightstream's Obligations:

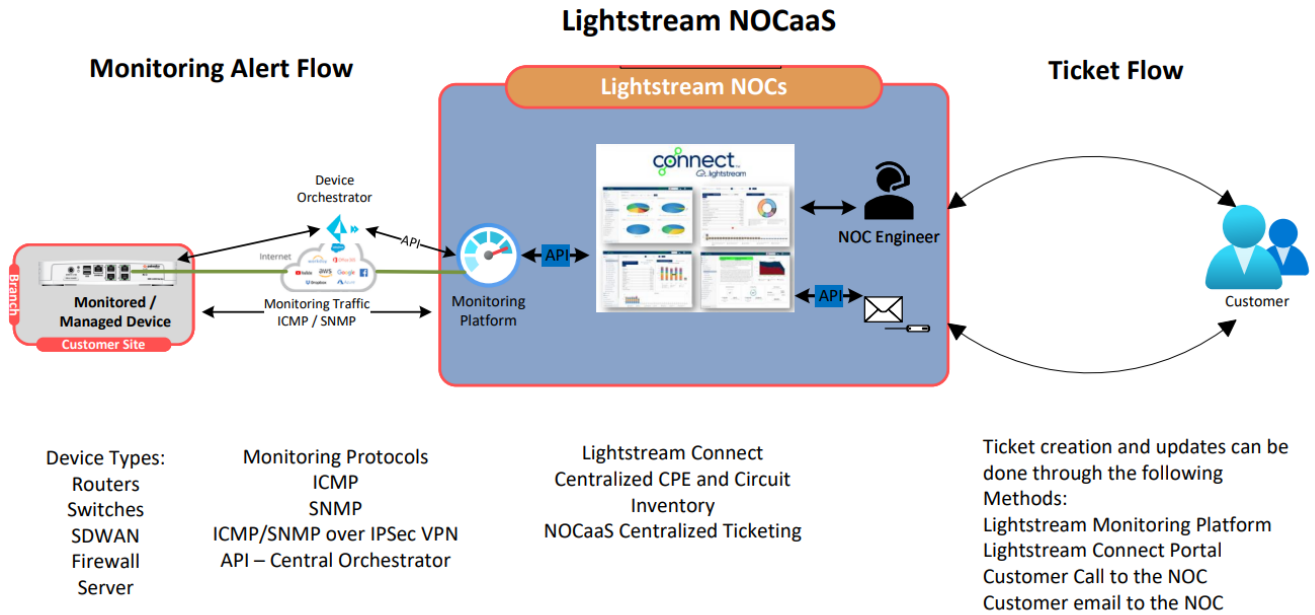
- Lightstream will provide a lead onboarding contact and associated contact information to act as Lightstream main point of contact during onboarding process.
- Lightstream will provide required documentation to Customer.
- Lightstream will provide timeline expectations and timeline delivery requirements for onboarding.
- Lightstream will provide portal access and training for the Lightstream event management portal.
- Lightstream will provide all appropriate escalation information to the Customer.
- Lightstream will provide necessary information regarding data and obligations as outlined above for the Client to complete their deliverables.
- Lightstream will establish and manage onboarding status calls/updates with appropriate Customer contacts.

### 3. General Customer and Lightstream Responsibilities Matrix

Responsibility	Customer	Lightstream
Provide key stakeholder as owner of the service	✓	✓
Provide access to Network Devices	✓	
Provide circuit inventory, network diagram and carrier information	✓	
Provide serial numbers and model information (device management)	✓	
Provide carrier letters of authorization	✓	
Provide escalation contacts - for contact notification of an outage	✓	
Provide timeline for implementation		✓
Establish Monitoring access		✓
Validate and Upload customer inventory and network data		✓
Establish carrier portal access		✓
Upload assets into monitoring tool		✓
Training and access for portal and ticketing		✓
Provide escalation list and training		✓
Weekly project calls during onboarding		✓

Responsibility	Customer	Lightstream
Monitoring tune-up		✓
Monthly service reviews and reporting		✓
Quarterly Business reviews		✓

## Appendix A: Lightstream Process Diagram





## Appendix B: Service Elements by Asset Type

### 1. Secure SD-WAN

Network Asset: Secure SD-WAN	Carrier Management	Device Management
<b>SUPPORT SERVICES SCOPE (ASSET/PLATFORM)</b>		
Continuous Resource Monitoring Platform (Monitor & Notify)	✓	✓
Hardware Inventory (SNMP Supported)	✓	✓
Software Inventory (SNMP Supported)	✓	✓
SD-WAN Orchestration Management		✓
Firmware Updates (Scheduled or Incident Based)		✓
IP Address Configuration		✓
Interface Management		✓
ISP/WAN - Connectivity Management		✓
VLAN Management		✓
Security Policy Management		✓
VPN Management (Site-to-Site/SSL/Client)		✓
Logging to Third Party Collectors		✓
OEM Support Management		✓
Network Policy Configuration and Management		Add-On
Web Content Filtering Config & Support		Add-On
BGP Configuration & Support		Add-On
User Authentication (RADIUS, LDAP, MFA)		Add-On
Configuration Management (Backups and Versioning)		Add-On
Asset Return Materials Authorization (RMA)		Add-On
Next-Generation Feature Support (IPS/IDS Config & Support, Etc)		Add-On
High Availability Support (Hot Sparring & SDN)		Add-On
Periodic Performance Review and Recommendations		Add-On
Compliance Assurance / Documentation / Auditing (Quarterly)		Add-On
<b>REPORTING</b>		
Hardware and Software Inventory (Upon Request)	✓	✓
Monthly Incident Detail (Scheduled)		✓
Performance to SLA -MTTA, MTTR, Etc (Scheduled)		✓
Network Assessment (Scheduled - Annual Business Review)		Add-On
<b>TOOLS / PLATFORM</b>		
Incident Management Platform	✓	✓
Project Management Office	✓	✓
Network Management System	✓	✓
Application Performance Monitoring System (Site24x7)		✓

## 2. Endpoint Asset: Desktop, Laptop, VDI, Mobile Device, Workstation

Network Asset: Desktop, Laptop, VDI, Mobile Device, Workstation	Device Management
<b>SUPPORT SERVICES SCOPE (ASSET/PLATFORM)</b>	
Continuous Resource Monitoring Platform	✓
Hardware Inventory	✓
Software Inventory	✓
Patch Management (OS)	✓
System Maintenance (Defrags, Disk Check, Cleanup)	✓
Basic OS Support (Windows, macOS, ChromeOS)	✓
Unlimited Live Answer Service Desk (End User)	✓
End User Business Application & Email Support (M365 / Google WS)	✓
Local Account / Directory Services Management	✓
Domain & Mail Services (DC/Exchange)	✓
Security & Distribution Group Management	✓
SPAM Filtering - User & System Administration	✓
Network Connectivity Support	✓
Endpoint Management Software Administration (End User)	Add-On
Identity & Access Management (End User)	Add-On
Single Sign On (SSO) Management (End User)	Add-On
Operating System Re-install / Upgrades	Add-On
3rd Party Software Installations	Add-On
Application/Workload Support	Add-On
Asset Return Materials Authorization (RMA)	Add-On
Business App & Email Backup Management	Add-On
<b>REPORTING</b>	
Patch Status Summary (Scheduled)	✓
Hardware and Software Inventory (Upon Request)	✓
Monthly Incident Detail (Scheduled)	✓
Performance to SLA -MTTA, MTTR, Etc (Scheduled)	✓
Network Assessment (Scheduled - Annual Business Review)	Add-On
<b>TOOLS / PLATFORM</b>	
RMM Endpoint Agent Windows	✓
Remote Access Management	✓
Lightstream Connect (Ticketing System)	✓
Endpoint Apple Device Management	Add-On
Assessment Platform	Add-On

## 3. Firewall

Network Asset: Firewall	Carrier Management	Device Management

SUPPORT SERVICES SCOPE (ASSET/PLATFORM)		
Continuous Resource Monitoring Platform (Monitor & Notify)	✓	✓
Hardware Inventory (SNMP Supported)	✓	✓
Software Inventory (SNMP Supported)	✓	✓
Firmware Updates (Scheduled or Incident Based)		✓
IP Address Configuration		✓
Interface Management		✓
ISP/WAN - Connectivity Management		✓
VLAN Management		✓
Security Policy Management		✓
VPN Management (Site-to-Site/SSL/Client)		✓
Logging to Third Party Collectors		✓
OEM Support Management		✓
Web Content Filtering Config & Support		Add-On
BGP Configuration & Support		Add-On
User Authentication (RADIUS, LDAP, MFA)		Add-On
Configuration Management (Backups and Versioning)		Add-On
Asset Return Materials Authorization (RMA)		Add-On
Next-Generation Feature Support (IPS/IDS Config & Support, Etc)		Add-On
High Availability Support (Hot Sparring & SDN)		Add-On
Periodic Performance Review and Recommendations		Add-On
Compliance Assurance / Documentation / Auditing (Quarterly)		Add-On
REPORTING		
Hardware and Software Inventory (Upon Request)	✓	✓
Monthly Incident Detail (Scheduled)		✓
Performance to SLA -MTTA, MTTR, Etc (Scheduled)		✓
Network Assessment (Scheduled - Annual Business Review)		Add-On
TOOLS / PLATFORM		
Incident Management Platform (Zoho Desk)	✓	✓
Project Management Office (Zoho Projects)	✓	✓
Network Management System (Zabbix)	✓	✓
Application Performance Monitoring System (Site24x7)		✓

#### 4. Router

Network Asset: Router	Carrier Management	Device Management
SUPPORT SERVICES SCOPE (ASSET/PLATFORM)		
Continuous Resource Monitoring Platform (Monitor & Notify)	✓	✓
Hardware Inventory (SNMP Supported)	✓	✓
Software Inventory (SNMP Supported)	✓	✓
Firmware Updates (Scheduled or Incident Based)		✓

IP Address Configuration		✓
Interface Management		✓
ISP/WAN - Connectivity Management		✓
VLAN Management		✓
Logging to Third Party Collectors		✓
OEM Support Management		✓
Traffic Monitoring		Add-On
QoS Management		Add-On
ACL Management		Add-On
BGP / Routing Protocol Configuration & Support		Add-On
Configuration Management (Backups and Versioning)		Add-On
Asset Return Materials Authorization (RMA)		Add-On
High Availability Support (Hot Sparing & SDN)		Add-On
Periodic Performance Review and Recommendations		Add-On
Compliance Assurance / Documentation / Auditing (Quarterly)		Add-On
<b>REPORTING</b>		
Hardware and Software Inventory (Upon Request)	✓	✓
Monthly Incident Detail (Scheduled)		✓
Performance to SLA -MTTA, MTTR, Etc (Scheduled)		✓
Network Assessment (Scheduled - Annual Business Review)		Add-On
<b>TOOLS / PLATFORM</b>		
Lightstream Connect (Ticketing System)	✓	✓
Project Management Office	✓	✓
Network Management System	✓	✓
Application Performance Monitoring System (Site24x7)		✓

## 5. SD-WAN

<b>Network Asset: SD-WAN</b>	<b>Carrier Management</b>	<b>Device Management</b>
<b>SUPPORT SERVICES SCOPE (ASSET/PLATFORM)</b>		
Continuous Resource Monitoring Platform (Monitor & Notify)	✓	✓
Hardware Inventory (SNMP Supported)	✓	✓
Software Inventory (SNMP Supported)	✓	✓
SD-WAN Orchestration Management		✓
Firmware Updates (Scheduled or Incident Based)		✓
IP Address Configuration		✓
Interface Management		✓
ISP/WAN - Connectivity Management		✓
VLAN Management		✓
Logging to Third Party Collectors		✓
OEM Support Management		✓

Network Policy Configuration and Management		Add-On
BGP Configuration & Support		Add-On
Configuration Management (Backups and Versioning)		Add-On
Asset Return Materials Authorization (RMA)		Add-On
High Availability Support (Hot Sparring & SDN)		Add-On
Periodic Performance Review and Recommendations		Add-On
Compliance Assurance / Documentation / Auditing (Quarterly)		Add-On
<b>REPORTING</b>		
Hardware and Software Inventory (Upon Request)	✓	✓
Monthly Incident Detail (Scheduled)		✓
Performance to SLA -MTTA, MTTR, Etc (Scheduled)		✓
Network Assessment (Scheduled - Annual Business Review)		Add-On
<b>TOOLS / PLATFORM</b>		
Lightstream Connect (Ticketing System)	✓	✓
Project Management Office	✓	✓
Network Management System	✓	✓
Application Performance Monitoring System (Site24x7)		✓

## 6. Server

Network Asset: Server	Device Management
<b>SUPPORT SERVICES SCOPE (ASSET/PLATFORM)</b>	
Continuous Resource Monitoring Platform	✓
Hardware Inventory	✓
Software Inventory	✓
Patch Management (OS)	✓
System Maintenance (Defrags, Disk Check, Cleanup)	✓
Basic OS Support (Windows, Linux)	✓
Security & Distribution Group Management	✓
Network Connectivity Support	✓
Identity & Access Management (Endpoint Support Required)	Add-On
Single Sign On (SSO) Management (Endpoint Support Required)	Add-On
Multi-Factor Authentication (MFA) Management (Endpoint Support Required)	Add-On
Operating System Re-install / Upgrades	Add-On
3rd Party Software Installations	Add-On
Application/Workload Support	Add-On
Asset Return Materials Authorization (RMA)	Add-On
Server Backup Management	Add-On
<b>REPORTING</b>	
Patch Summary (Scheduled)	✓
Hardware and Software Inventory (Upon Request)	✓

Monthly Incident Detail (Scheduled)	✓
Performance to SLA -MTTA, MTTR, Etc. (Scheduled)	✓
Network Assessment (Scheduled - Annual Business Review)	Add-On
<b>TOOLS / PLATFORM</b>	
RMM Endpoint Agent Windows	✓
Remote Access Management	✓
Lightstream Connect (Ticketing System)	✓
Assessment Platform	✓

## 7. Storage

Network Asset: Storage	Device Management
<b>SUPPORT SERVICES SCOPE (ASSET/PLATFORM)</b>	
Continuous Resource Monitoring Platform (Monitor & Notify)	✓
Hardware Inventory (SNMP Supported)	✓
Software Inventory (SNMP Supported)	✓
Firmware Updates (Scheduled or Incident Based)	✓
Volume Creation & Management	✓
RAID Management	✓
Host Connectivity Management	✓
Logging to Third Party Collectors	✓
OEM Support Management	✓
Snapshot Management	✓
RF Monitoring	Add-On
Performance Optimization (IOPS, Throughput, Response Times)	Add-On
Data Deduplication and Compression	Add-On
Replication of Storage Volumes	Add-On
Cluster / Node / VM Management	Add-On
Configuration Management (Backups and Versioning)	Add-On
Asset Return Materials Authorization (RMA)	Add-On
High Availability Support (Hot Sparing & SDN)	Add-On
Periodic Performance Review and Recommendations	Add-On
Compliance Assurance / Documentation / Auditing (Quarterly)	Add-On
<b>REPORTING</b>	
Hardware and Software Inventory (Upon Request)	✓
Monthly Incident Detail (Scheduled)	✓
Performance to SLA -MTTA, MTTR, Etc. (Scheduled)	✓
Network Assessment (Scheduled - Annual Business Review)	Add-On
<b>TOOLS / PLATFORM</b>	
Lightstream Connect (Ticketing System)	✓
Project Management Office	✓
Network Management System	✓

Application Performance Monitoring System (Site24x7)	Add-On
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## 8. Switch

Network Asset: Switch	Carrier Management	Device Management
<b>SUPPORT SERVICES SCOPE (ASSET/PLATFORM)</b>		
Continuous Resource Monitoring Platform (Monitor & Notify)	✓	✓
Hardware Inventory (SNMP Supported)	✓	✓
Software Inventory (SNMP Supported)	✓	✓
Firmware Updates (Scheduled or Incident Based)		✓
Interface Management		✓
VLAN Management		✓
Logging to Third-Party Collectors		✓
OEM Support Management		✓
IP Address Configuration		Add-On
QoS Management		Add-On
ACL Management		Add-On
Traffic Monitoring		Add-On
Port Security		Add-On
Configuration Management (Backups and Versioning)		Add-On
Asset Return Materials Authorization (RMA)		Add-On
High Availability Support (Hot Sparing & SDN)		Add-On
Periodic Performance Review and Recommendations		Add-On
Compliance Assurance / Documentation / Auditing (Quarterly)		Add-On
<b>REPORTING</b>		
Hardware and Software Inventory (Upon Request)	✓	✓
Monthly Incident Detail (Scheduled)	✓	✓
Performance to SLA -MTTA, MTTR, Etc. (Scheduled)	✓	✓
Network Assessment (Scheduled - Annual Business Review)		Add-On
<b>TOOLS / PLATFORM</b>		
Lightstream Connect (Ticketing System)	✓	✓
Project Management Office	✓	✓
Network Management System	✓	✓
Application Performance Monitoring System (Site24x7)		✓

## 9. Wireless LAN

Network Asset: Wireless LAN	Device Management
<b>SUPPORT SERVICES SCOPE (ASSET/PLATFORM)</b>	
Continuous Resource Monitoring Platform (Monitor & Notify)	✓
Hardware Inventory (SNMP Supported)	✓

Software Inventory (SNMP Supported)	✓
Firmware Updates (Scheduled or Incident Based)	✓
Wireless LAN Controller Management (AP & SSID MACD)	✓
Logging to Third Party Collectors	✓
OEM Support Management	✓
RF Monitoring	Add-On
Performance Optimization (AP Power Levels / Channel Frequency)	Add-On
Traffic Monitoring	Add-On
Configuration Management (Backups and Versioning)	Add-On
Asset Return Materials Authorization (RMA)	Add-On
High Availability Support (Hot Sparring & SDN)	Add-On
Periodic Performance Review and Recommendations	Add-On
Compliance Assurance / Documentation / Auditing (Quarterly)	Add-On
<b>REPORTING</b>	
Hardware and Software Inventory (Upon Request)	✓
Monthly Incident Detail (Scheduled)	✓
Performance to SLA -MTTA, MTTR, Etc. (Scheduled)	✓
Network Assessment (Scheduled - Annual Business Review)	Add-On
<b>TOOLS / PLATFORM</b>	
Lightstream Connect (Ticketing System)	✓
Project Management Office	✓
Network Management System	✓
Application Performance Monitoring System (Site24x7)	✓