Schedule document

N4Protect DDOS and N4Protect DDoS+ Service

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This schedule contains additional terms and conditions, service description and service levels applicable to the Node4 Protect DDoS Service and should be viewed with associated Order Form, Node4's General Terms and Conditions and the Acceptable Use Policy.

1. Overview

The Node4 N4Protect DDoS service provides the Client with an optional two-element service to mitigate against DDoS attacks.

1.1 Appliance service N4Protect DDoS+ (Proactive)

The in-line appliance service N4DDOS+ provides a heuristics-based mitigation of application layer DDoS attacks including:

- HTTP-GET Attacks
- HTTP-PST Attacks
- SSL Attacks
- N4Protect DDoS+ also includes N4Protect DDoS NetScrubbing
- Others

Application mitigation can apply both ingress and egress or just ingress. Baselining of traffic profiles is required before moving from Detection to Prevention. Any significant change to standard traffic profiles requires a re-learning process. White listing of trusted sources is recommended such as VPN peer IPs & remote management IPs.

1.2 NetScrubbing service N4Protect DDoS (Re-Active)

The net scrubbing service N4Protect DDoS mitigates volumetric DDoS attacks including:

- TCP SYN Floods *SYN, SYN ACK, etc.)
- ICMP Flood Attacks (Ping Barrage, Smurf, etc.)
- UDP Flood Attacks (UDP Barrage, Fraggle, Etc.)
- Reflection Attacks
- Others

The NetScrubbing service is activated by Node4 engineers for each N4Protect DDoS Client when a service impacting volumetric attack event is identified (impacting service to that Client or Node4s network). This service is active for the duration of that attack.

2. Definitions

"Centralised Internet Breakout (CIB)" a Node4 service providing Clients with internet access from the core network with optional resilience.

"Client Responsible Incident" means in the event that a Service Affecting or Non-Service Affecting Incident is identified as being attributable to Client Provided Equipment, Premises, Client power supplies, or the action of the Client, employees or agents of the Client, the Incident shall be deemed the responsibility of the Client. Any downtime shall not be included in service availability measurements and does not qualify for compensation.

"DDoS" – means Distributed Denial of Service

"Event Fee" means a charge incurred when a volumetric DDoS attack is mitigated

"Incident" means an unplanned interruption to a service or a reduction in service quality**"**

Installation Fees" means charges payable by the Client for the installation of Services as provided in the Order Form;

"Monthly Review Period" means the calendar monthly periods commencing on the 1st of each month during the Term, over which Service performance measurements are calculated, provided that the first Monthly Review Period will commence when the implementation of such Product or Service is completed by Node4 and such Product or Service is available for use by the Client;

"NetScrubbing Service" means the service provided by Node4 in which a Client's IP range is redirected to an external system for the duration of a Volumetric DDoS attack;

"Node4 Network" means the network wholly owned and managed by Node4;

"Non-Service Affecting Incident" means a Incident or condition which is not a Service Affecting Incident.

"Planned Outage" means proactive work required to maintain the service provided, Node4 may with reasonable notice require a temporary outage in service. Wherever possible Node4 will agree the outage with you in advance of the required work. Any planned downtime shall not be included in Incident or service reliability measurements;

"Service Affecting Incident" means any failure of Node4 service, which, in our reasonable opinion causes a loss of a Client's service. In all such cases the service shall be deemed unavailable and the length of downtime recorded by Node4 from when the Incident is registered by Node4 and a Service Ticket allocated.

"Service Availability" means the time for which a Node4 service is usable, expressed as a percentage of the total time in a given Monthly Review Period. The Node4 service shall be deemed available for the purposes of calculating Service Availability if it is not usable due to an event outside our reasonable control, a Client Responsible Incident, a Third Party Attributable Incident or is due to a Planned Outage.

"Service Desk" means the single point of entry for all Service Tickets and Service Requests which can be accessed over the phone, by email or via our portal.

"Service Request" means a request for a change for information

"Service Ticket" means the tickets which are raised in relation to Incident or Service Request

"Third Party Attributable Incident" means in the event that a Service Affecting or Non-Service Affecting Incident is identified as being attributable to a third party this measurement period shall not be included in service availability measurements. Such Incidents do not qualify for rebates or compensation. Node4 will endeavour to resolve and rectify such Third Party Attributable Incidents as soon as possible.

"Time To Resolve Incident" means the length of time from the issue of the Service Ticket to repair and resolution or the service circuit and/or associated equipment. "Virtual Domain" A Client's unique context within the Node4 Equipment.

"Volumetric Attack" means a DDoS attack intended to paralyse the system or resource through saturation of the network (typically multiple Gbps).

3. Specific terms

The following terms and conditions shall apply when Node4 provides N4Protect DDoS Services to the Client.

3.1 Client cooperation

Node4 expects any Client to co-operate to provide full notice and visibility of any cyber-attack incident when required, and to treat advanced notification of such as urgent. This may include sharing of information such as ransom emails or telephone calls.

3.2 Third parties

The Client commits to fully manage all their customers and suppliers directly. Node4 will not interface directly with any third parties working with the Client unless by prior arrangement. If the Client requires Node4 to provide their customers with a customer care or NOC service this is available on request and subject to Professional Service Fees.

Node4 shall not be liable in respect of any contract, agreement or relationship that Client may have with any third party. If a dispute arises between Client and a third party involving Node4's N4Protect DDoS service, Node4 shall provide the Client with reasonable information and assistance (to the extent that such is not adverse to Node4's interests to Client (at Client's expense)) in the resolution of such dispute.

4. Fees

Fees will commence when the implementation of such Product or Service is completed by Node4 and such Product or Service is available for use by the Client this is following completion of firewall deployment and implementation of initial configuration.

Fees may comprise any or all of the following.

4.1 Installation and set-up fees

Any applicable Design, Configuration, and Installation Fees for the implementation of the N4Protect DDoS service shall be detailed on the Order Form.

4.2 Rental fees

Rental Fees for each service are charged separately and are paid monthly in advance based on the Services N4 Protect DDOS and Internet Bandwidth (CIB).

Rental Fees are applied as and when the service is made available.

4.3 Event fee

In the event of a volumetric attack the Event Fee is calculated according to the amount of data and the duration of the attack. The following formula is used:

Event Fee = (Event Data x Event Rate) x (Event Duration/Total Month)

Where;

- Event Data: 95th percentile of the dropped data during the attack based on 5 minute poll intervals.
- Event Rate: The Mbps rate applied to the dropped data.
- Event Duration: The length of time of the volumetric attack.
- Total Month: The number of 5 minute polls in a month (8640).

4.4 Professional service fees

Additional tasks undertaken at the request of the Client by Node4 personnel, will be charged at rates agreed between the parties in advance.

5. Client responsibilities

In order to deliver the service we expect the Client to provide:

- IP Addressing information
- Liaison with Node4 Engineering, Provisioning and project management teams.
- Liaison with Node4 Client Support teams.

6. Service provision

The Node4 N4Protect DDoS service provides the Client with DDoS mitigation services for their CIB from within the Node4 network. The service may protect either a Data Centre based resource (i.e. N4Cloud or Co-location) or a DIA service.

6.1 Site equipment

For N4 Protect DDOS+ the Client is provisioned in a service profile on managed Node4 Equipment which is in-line of the Clients CIB. No Client premises equipment (CPE) is provided with the N4Protect DDoS service.

6.2 Hosting and co-location

Any hosted services are identified on the Order Form and are subject to the Co-location Service Schedule.

6.3 Internet security

Node4 can provide N4Protect DDoS Clients with additional Internet Security services.

NGFW Firewall and virus protection options are available from Node4 on request.

6.4 IP addresses

The number of IP addresses assigned as protected by the N4Protect DDoS Service will be identified on the Order Form.

It is the Client's responsibility to use their assigned IP addresses. Use of non-assigned IP addresses will result in immediate disconnection from the network.

6.5 Monitoring

Node4's core infrastructure is monitored on a 24/7 basis. This excludes Client premises equipment. Node4 can provide advanced monitoring services for Clients requiring additional monitoring.

Large scale volumetric DDOSs will be detected by Node4 monitoring systems. Small scale may not be detected but may still be service affecting.

Application DDDOS, N4Protect DDOS+, can be configured to raise Service Tickets for specific events. The types of incidents which Service Tickets will be discussed during service provision.

6.6 Essential Maintenance

Where Node4 plans to perform essential maintenance Node4 will endeavour to perform such

works during periods of lower usage and will endeavour to give the Client ten (10) days prior notice. In the event of an emergency Change or Service Affecting Incident such notice may be less than 24 hours. This is without prejudice to or limitation of the definition of Planned Outage.

This notice may be provided on N4Status (www.n4status.co.uk) rather than a direct notification. Clients can subscribe to status updates on the N4Status website to receive automated direct notifications.

6.7 Professional services

Support on configuration is provided within business hours only and for a period not exceeding 15 working days from installation. Technical Support is provided for the configuration implemented by Node4; we will not provide support for configuration outside of the original Client requirement.

Additional Professional Services are subject to the price list below.

All incremental expenses incurred during these Professional Services will be passed directly to the Client. Provisioning costs such as cabling will be discussed and agreed with the Client in the Order Form.

7. Incident management

7.1 Incident handling

Incidents are handled as outlined in Incident Management Schedule Document.

7.2 Fault duration

All Incidents recorded by the Node4 monitoring system will be reconciled against the corresponding Service Ticket raised by the Service Desk. The exact Incident duration will be calculated as the elapsed time between the Service Ticket being opened and the time when Service is restored.

7.3 Hours of support

The following table details the different Support Hours relating to the Support hours defined on the Order Form. (if nothing included on the Order Form Gold support is included for DDoS and DDoS+ services)

Support Hours	
Bronze	Standard business hours support 9am to 5.30pm week days, excluding bank and national holidays
Silver	Support hours between 7am and 7pm weekdays, excluding bank and national holidays
Silver Plus	Priority 1 and 2 - Support hours between 7am and 7pm 7-days a week, including bank and national holidays, excluding Christmas day, Boxing day and new year's day

Priority 3,4 and Service Request - Support hours between 7am and 7pm weekdays, excluding bank and national holidays |
| Gold | Priority 1 and 2 - Support hours 24/7

Priority 3,4 and Service Request - Support hours between 7am and 7pm weekdays, excluding bank and national holidays |

7.4 Incident priority

Each new Incident will be assigned a priority level by the Service Desk based on the following definitions. These levels allow us to prioritise resources and escalate where appropriate.

Priority	Description
1 - Critical	A major Incident resulting in total loss of service.
2 - High	A major Incident resulting in a severe service degradation or loss of service to a significant percentage of users.
3 - Medium	A minor Incident resulting in a limited or degraded service or a single end user unable to work.
4 - Low	General, single user with degraded service, non-service affecting support.
5 - Service Request	Request for a change to an existing service or system, a request for information or simple questionnaire to be completed.

7.5 Time to repair

Node4 aims to respond, update and resolve Incidents in relation to the N4Protect DDoS and DDoS+ within the following times

Priority	P1	P2	P3	P4	Service Request
Response / Acknowledgement	30 Mins	1 Hour	2 Hours	4 Hours	12 Hours
Commencement	1 Hour	2 Hours	4 Hours	N/A	N/A
Frequency of Updates	1 Hour	2 Hours	12 hours if Resolve / Target to Fix exceeded		
Resolve / Target to Fix	4 Hours	8 Hours	12 Hours	36 Hours	60 Hours

Resolution times in the table above do not apply where there is a Client Responsible Incident, a Third Party Attributable Incidents or events outside Node4's reasonable control, any incidents including these aspects will be excluded from reporting provided.

All priority 1 & 2 Incidents should be raised via the Service Desk by a phone call. Should a priority 1 or 2 incident be raised via the portal or e-mail, the Client is required to follow this up with a corresponding phone call to enable work to commence immediately on the issue.

* Acknowledgement refers to an automated service which generates a response and alerts engineers of a service failure; or where there is dialogue between the client and the engineer.

Service Requests outside of the support contract, or Service Request implemented outside normal business hours these will be dealt with as chargeable projects.

8. Service credits

Node4 will provide the Client with Service Credits, as set out below, for the failure to meet the following target:

8.1 DDoS mitigation

In the event that a volumetric DDoS attack takes place the following SLA to mitigate the DDoS attack and restore Client service is applied. All DDoS attacks are prioritised as a Severity 1 issues, and are given the highest priority to resolve, the target time to resolve is 60 minutes.

DDoS Outages Above 60 Minutes Per Incident (In Minutes)	Service Credits (Percentage of Monthly Recurring Fees for the N4 Protect Service at the Relevant Client Site)
<60	0%
>60 – 240	5%
>240 – 480	10%
>480	20%

8.2 Calculation of service credits

Where a Monthly Review Period incorporates part of a month, any Service credit will apply to a pro-rated Monthly Fee. Service credits will be calculated monthly, aggregated and credited to the Client on a quarterly basis. If a Service is cancelled during a Monthly Review Period, no Service credit will be payable in respect of that Circuit for that Monthly Review Period. The Client must claim any Service credit due to a failure to meet the Service levels, in writing, within twenty one (21) business days of the date at which the Client could reasonably be expected to become aware of such failure. The Client shall not be entitled to any Service credits in respect of a claim unless and until Node4 has received notice of the claim in writing in accordance with the above. Should Node4 require additional information from the Client, the Client shall assist, and shall not be entitled to any Service credits until Node4 has received all the information it has reasonably requested.

8.3 Exclusions to payment of service credits

Service credits will not be payable by Node4 to the Client in relation to the Service Availability for Incidents or disruptions to the Service caused by any of the following:

- The Incident, action or negligence of the Client, its employees, agents or contractors;
- The Client failing to comply with Node4's Standard Terms and Conditions;
- An Incident in, or any other problem associated with, equipment connected on the Client's side of the Node4 Network Termination Point, except where such Incident or problem is directly caused by the action or negligence of Node4, its employees, agents or contractors;
- Any event described in Clause 12 (Force Majeure) of Node4's Standard Terms and Conditions (Schedule 1);
- A failure by the Client to give Node4 access to any equipment after being requested to do so by Node4; or
- Maintenance during any Planned Outage;
- Where the Client is unable to provide 24 hour site access.

Service credits are not applicable for more than one breach of any targets outlined in this document arising from the same occurrence.

In respect of any Monthly Review Period, the total amount of any service credit payable in relation to any service level breach shall not exceed 50% of the Monthly Fees for the affected Service.

The provision of Service credits shall be the sole and exclusive remedy for the failure to meet targets for the Co-location service. Node4 shall have no additional liability to the Client.