

Enet Services

Service Level Agreement

Version 3.4



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Revision History

Version	Date	Status	By Whom	Revision details
3.3	Feb 2020	Final	Enet	Final
3.4	April 2020	Final	Enet	Formatting

Associated Documents

Title	Location	
Ethernet Product Description	All are available from the Enet Account Manager	
Interconnect Product description	All are available from the Linet Account Manager	



Acronyms

Unless otherwise defined herein, capitalised terms used in this document shall have the same meaning as set out in the services agreement between Enet and the Customer (the "MSA") to which this SLA is a schedule.

Acronyms/Terms	Definitions
Carrier	The entity ordering the service from Enet; commonly known and referred to as the Customer in the Service Agreement.
End-User	The user or users of the delivered service to the Carrier
False Alarm	Where Enet responds to a Carrier fault report and the cause does not lie with Enet's equipment
charge	or services, Enet will apply a false alarm charge.
Managed Service	Where Enet supplies, installs, maintains and manages the NTU at the End User location
NTU / NID	Network Terminating Unit (NTU) also known as Network Interface Device (NID); it serves as the demarcation point (demark) and interface between the Carrier/End-User and Enet networks.
NMS	Network Monitoring System
NOC	Network Operations Centre
On-net	Where all Access network (Last mile) service elements are delivered using the Enet network and the End User location is readily accessible to the MAN fibre network.
Rental Day	The Annual Recurring Charge of the service divided by 365.
Service unavailability	The service unavailability shall be deemed to have commenced on the earlier of: (i) an indication of the fault on the Enet NMS if reactive SLA or (ii) on the receipt of a report by Enet from the Carrier. Where the fault has been repaired, and Enet, notwithstanding reasonable efforts on its behalf, has not succeeded in contacting the Carrier to agree service restoration, the conclusion of service unavailability shall be deemed to have ended at the time when the network management system indicated same. Valid unavailable hours of a service is the elapsed time between the fault log and the clear time, less any excluded time, as defined in Section 6.
Service Affecting Fault Force Majeure	 A Service affecting fault is defined as: A fault resulting in a total loss of service a period of time (defined as three consecutive CCM frames; with one CCM frame run per second) where no service frames transit a service (Fibre) Enet use CFM (Connectivity Fault Management) CCM (Continuity Check Message) frames to synthetically measure the above service availability for Fibre. As defined in the Service Agreement.
Event	
Working/Business	Defined as 9am and 5pm on working days (Monday to Friday, excluding Irish public holidays
Hours	and bank holidays).



1. Introduction

This Service Level Agreement ("SLA") document sets out the guarantees provided by Enet to its Carriers for applicable products.

For all the products listed below the relevant Enet Product Description provides a more detailed explanation of the products. These products are delivered over a range of Access Media/Last mile options which are available to the Carrier.

This SLA document covers Service Levels for the following products:

1.1 Ethernet Services

Enet offers several key Ethernet product types as follows:

- Enet Managed Ethernet
- Enet Metro Ethernet Point to Point Fibre
- Enet Asymmetrical Ethernet

1.2 Interconnect

• Enet Interconnect Product range



2. SLA Options

The following table shows the products and the SLA applicable to that product:

	Fibre (On-net)			
Access Media Type / Last mile	Fibre Ring	Fibre Pt2Pt		
Ethernet Services (E-Access and E-Line)				
Managed Ethernet*	SLA-T1	SLA-T2		
Metro Ethernet; Point to Point (Pt2Pt) Fibre	-	SLA-T2		
Asymmetric Ethernet	-	SLA-Entry		
Other Products				
Enet Interconnect	SLA-T1	SLA-T2		

TABLE 1: SLA MAPPING TO PRODUCT

The above SLAs apply for On-net fibre service only. SLAs for Extended Reach (Off-net) fibre and Wireless services are available from your Enet account manager.

Unprotected (UP): Unprotected circuits require no co-related protection paths over the Enet network as they are normally protected by the Carrier over another telecom provider's network. The target availability for unprotected circuits is 99.5%.

All diagrams show the Layer 2 Access element of the services.

^{*}SLA-T1 can only be provided on an E-Line circuit where both ends use Fibre Ring as the Last mile option.



2.1 SLA-T1: Fibre ring (On-net) services with Enet NTU

This SLA is for Enet Managed Services as listed in Table 1 "SLA Mapping to Product" delivered over On-net Fibre Access ring in the last mile and delivered as a Metro handoff.

Further details and T&Cs on SLA-T1 are available in the "Enet's Service Level Agreement".



FIBRE - RING (ON-NET)

SLA-T1	Delivery
Access Media/Last mile	Fibre Ring (On-net)
Enet Managed Demarcation device at End-User site?	Yes (NTU)
On-net: Standard delivery (Fibre ring) * 6 weeks	
*Subject to Wayleave, site survey and correctly completed order form (see Section 4)	

SLA-T1	Availability
Availability**	Target 99.99% with penalties at 99.82% or below
Availability Hours**	24x7x365
Availability Measurement Period	Quarterly
SLA-T1	Features
Proactive fault logging	Yes
Time to Advise Carrier of Service affecting fault	30 minutes (Fibre Ring services)
Target repair time to begin	Within 4 Clock Hours of valid fault log time.
Status Update Frequency	30 minutes or as agreed

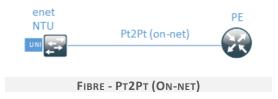
TABLE 2: ENET SERVICES SLA-T1

^{**}Subject to General Terms and Exclusions in Section 6



2.2 SLA-T2: Fibre Pt2Pt services with Enet NTU

This SLA is for Managed Services as listed in Table 1 "SLA Mapping to Product", delivered over Point to Point access fibre (On-net or Off-net) in the last mile and delivered as a Metro handoff.



SLA-T2	Delivery	
Access Media/Last mile	Fibre Pt2Pt (On-net and Off-net)	
Enet Managed Demarcation device at End-User site?	Yes; (NTU)	
On-net: Standard delivery Fibre*	6 weeks	
*Subject to Wayleave, site survey and correctly completed order form (see Section 4)		

SLA-T2	Availability
Availability Target***	Target 99.9%
Availability Hours***	24x7x365
Event Based TTR: Fibre	8 Clock hours
Measurement Period	Per incident – on request
SLA-T2	Features
Proactive fault logging	Yes, for On-net services only
Time to Advise Carrier of Service affecting fault	30 minutes, or as agreed on a case by case basis
Status Update Frequency	Per hour for On-net fibre or as agreed

TABLE 3: ENET SERVICES SLA-T2

^{***}Subject to General Terms and Exclusions in Section 6



2.3 SLA-Entry

This SLA is for Enet services as listed in Table 1 "SLA Mapping to Product" offering a Metro solution.



SLA-Entry	Delivery
Access Media/Last Mile	Fibre Pt2Pt (On-net)
Enet Managed Demarcation device at End-User site?	Yes (NTU)
On-net: Standard delivery Fibre*	6 weeks
* Subject to Wayleave, site survey and correctly completed order form (see Section 4)	

SLA-Entry	Availability
Availability Target	Target 99.9%
Availability Hours	Working Hours: 09.00 to 17.00, Mon – Fri
Event Based TTR	2 working days
Measurement Period	Per incident – on request

SLA-Entry	Features
Proactive fault logging	No
Time to Advise Carrier of Service affecting fault	n/a, the Carrier initiates fault logging
Status Update Frequency	4 Working Hours or as available

TABLE 4 ENET SERVICE SLA ENTRY

^{**} Excludes Irish public holidays



3. Network Performance SLA

The tables below represent the target network performance of Enet services under normal conditions. Performance is impacted by the Access Media/Last mile chosen and delivered On-net. This is for guidance purposes only and does not include unprotected End to End circuits.

Below is the target Network Performance for Managed Services and is measured over Enet controlled network elements only. The Regional and Dublin figures have been added to provide clarity past the Metro handoff points.

Latency (one way)	Real time	100% CIR	0% CIR
Metro		1.5ms	
Regional to Dublin (National 1)	8ms	10ms	15ms
Regional to Regional (National 2)	16ms	20ms	30ms

TABLE 5: LATENCY (ONE-WAY) PERFORMANCE PARAMETERS

Latency between two sites is tested by sending a frame to a destination for return back to the originating box. One-way delay is calculated as half the measured round-trip time.

Jitter and Frame loss figures are detailed below.

Jitter	Real time	100% CIR	0% CIR
Metro		≤1 ms	
Regional to Dublin (National 1)	≤1.5 ms	≤1.5 ms	≤2.5 ms
Regional to Regional (National 2)	≤1.5 ms	≤1.5 ms	≤2.5 ms

TABLE 6: JITTER PERFORMANCE PARAMETERS

Frame Loss	Real time	100% CIR	0% CIR
Standard Metro		0.00001%	
Regional to Dublin (National 1)	0.00001%	0.0001%	0.1%
Regional to Regional (National 2)	0.00001%	0.0001%	0.1%

TABLE 7: FRAME LOSS PERFORMANCE PARAMETERS



4. Delivery

The following table details Delivery SLA targets for **On-net fibre services.**

Delivery Action	Timescale	Business Days
Acknowledgement of an order from the Carrier	Within 1 full business day of receipt: "Acknowledgement"	1
Completion of site survey	Within 5 full business days of acknowledging the order or within an agreed period with the Carrier. The date of the site survey is referred to as the Scheduled Date.	5
Provide the Carrier with a revised quotation or solution, if required, post site survey.	Within 6 business days of the site survey Scheduled Date Enet will complete and approve the site survey details.	6

TABLE 8: ON-NET DELIVERY ACTIONS

Impacts on SLA delivery times

SLA delivery times are subject to the completion of any Wayleaves (private and public), full site survey, license, Local Authority permissions and the provision of the quotation.

Where additional network construction or remediation work is required to extend the Enet network to facilitate the provision of a service at the End-User premises, Enet and the Carrier will agree a due delivery date with the SLA applied to it.

Exclusions to the Delivery SLA

Where:

- An incomplete or incorrectly filled order form causes the order to be partially progressed, rejected or an incorrect service delivered
- Any act or omission by the Carrier to perform its obligations under the Agreement effects Enet's ability to perform its obligations
- The installation site is not available to Enet at the date & time requested for survey or installation, and an alternative slot cannot be agreed despite reasonable endeavours
- The Carrier or End User does not provide accommodation, access and/or power for the installation
- If at any time Enet agrees to use reasonable endeavors to expedite delivery, this will not affect the original agreed delivery date and no Service Level will apply to any expedited date
- Delivery of Order is constrained by Force Majeure
- End-User site equipment is faulty or incompatible with Enet's service
- Enet cannot contact the End-User after reasonable efforts
- Enet and the Carrier agree to construct infrastructure not required for the immediate needs of the ordered service



• The Carrier requests change(s) to the Service (or any part of the Service including equipment) affecting the original forecasted delivery date. Enet reserves the right to re-negotiate a new date for delivery and the SLA will apply to this new delivery date (as agreed by Parties) and Order will be changed to reflect this

5. Fault Repair Process – Monitoring and Logging

Enet operates the following five-step fault repair process:

- 1. Carrier logs a fault or Enet provides pro-active notification as per relevant service level
- 2. Enet analyses the problem and determines an appropriate course of action
- 3. Enet dispatches an engineer to the site as per service level (if necessary)
- 4. Enet start repair
- 5. Enet complete repair/restoration within applicable target as outlined in Section 2

5.1 Logging and Notification

Faults on Enet Services can be logged 24 x 7 x 365 by:

- phone (061-274088) or
- e-mail (noc@Enet.ie)

Enet responsibility and the Carrier input to fault logging is performed based on the applicable service level.

Where the Carrier identifies a fault and requests assistance, Enet responds in line with the applicable SLA. If the Carrier reports a fault, but Enet NOC monitoring indicates normal operation and the Carrier insists on an Enet staff dispatch, the Carrier will be liable for a **false alarm charge** if no Enet related fault is found.

- The Carrier will **appoint a representative(s)** to notify the NOC of a fault. Each fault will be logged, timed and shall be included in any calculation of Service Credits (Section 6)
- If a fault is detected by the **network management system (NMS)**, if applicable per the SLA, Enet will advise the Carrier of the fault within the agreed time as per SLA
- The **Carrier will notify the Enet NOC** as soon as it is aware of any fault affecting its product. In this case, Enet performs reactive fault analysis and remedy
- Enet is not responsible for remedying faults that the Carrier does not notify to the NOC and that are not detected by the NMS (except where the NMS has a problem with performance or configuration)

The NOC provides updates as per the SLA during the incident by the preferred method (unless otherwise agreed) and advises the Carrier on closure of the fault.

Downtime is measured on the trouble ticket system, as the time between tickets opened when an agreed fault has been identified and when they are closed when Service is restored (excluding any excluded time as outlined in Penalties General Terms and Exclusions. If the performance level falls below the level stated in the SLA, the Carrier will have the right to claim compensation.



5.2 Planned and Emergency work

Planned work: Enet will notify the Carrier at least 15 business days (KPI: 95% of the time) in advance of any On-net service affecting programmed maintenance.

If a planned maintenance period requires extension, Enet will provide regular status information to the Carrier, daily or as otherwise agreed, until the incident is resolved. Enet shall consider any reasonable request from the Carrier for a deferral of any planned maintenance made within 5 Business days of Enet's notice and Enet shall respond to the deferral request within 5 Business days of the request having been made. Enet will endeavor to reschedule to a time agreeable by both Parties.

Emergency works on Enet's or Enet's subcontractor networks may not allow for 15 business days' notice and so are exempt from this rule. Enet will provide the Carrier with as much notice as possible.

Planned works in the Enet or its subcontractors' networks can cause outages especially on unprotected products. While Enet makes every possible effort to minimise the impact on its Carriers, such outages are not included in the availability and penalty credit calculations (Section 6).



6. Penalties

6.1 Applicable SLA Penalties

Enet shall perform at or exceed the service levels as laid out in this document. Where Enet performs below the agreed service levels, service credits shall accrue and be due and payable as set out below.

Availability and TTR is assessed per Service access for each site and not as an entire network across all Carrier sites.

6.1.1 SLA-T1: Fibre ring (On-net) services

Availability Penalties

The Availability penalty credit calculation is based on the following table. Penalties are expressed in Rental Days.

		SLA-T1
From	Up to but excluding	No. of Credit Days (Quarterly)
>99.82%		0
99.73%	99.82%	2
99.63%	99.73%	4
99.50%	99.63%	10
99.00%	99.50%	10
98.00%	99.00%	10
Less than <98.0%		10

TABLE 9: PENALTY DAYS

Upon Carrier request, at the end of each Quarter, Enet will calculate the availability on requested individual services. If in breach of this SLA, a credit note will be issued for rental credits equal to the total of credit days accumulated over the quarter multiplied by the Rental Day charge.

The Carrier will appoint a representative(s) to notify the Network Operations Centre of a fault. Each notified fault will be logged, timed and shall be included in the quarterly calculation of Rental Credits only as specified in this SLA.

The measurement period is quarterly, on request, from the delivery date.



6.1.2 SLA-T2: Fibre Pt2Pt

TTR Penalties

Time to Repair (TTR) credit is a percentage of the actual monthly charge for the affected service and is the monthly recurring charge (MRC) of the month where the SLA is applicable.

Time to Repair SLA		
Target Service Credits		
Repair within 8 Clock hours	2% of Monthly circuit rental per Clock hour in breach (i.e. greater than 8 Clock hours per break).	

TABLE 10: TTR PENALTY

6.1.3 SLA-Entry

TTR Penalties

Time to Repair (TTR) credit is a percentage of the actual monthly charge for the affected service and is the monthly recurring charge (MRC) of the month where the SLA is applicable.

Time to Repair SLA		
Target	Service Credits	
Repair within 2 working days of the report received	2% of Monthly circuit rental per Working Hour in breach*	

TABLE 11: TTR PENALTY - SLA-ENTRY

^{**}A maximum service credit of 25% of monthly rental will be paid per break. A maximum service credit of 50% of one month's circuit rental will be paid in any one 12-month period per circuit. The 12-month period starts on the delivery of the circuit and subsequently on each anniversary of the circuit

^{*}A maximum service credit of 25% of monthly rental will be paid per break. A maximum service credit of 50% of one month's circuit rental will be paid in any one 12-month period per circuit. The 12-month period starts on the delivery of the circuit and subsequently on each anniversary of the circuit



6.2 Penalty Calculation Terms

The Service at a site is defined as unavailable when a site loses connectivity to either a hub/E-NNI site or two or more sites which should be reachable and have not themselves got a fault. Where a hub / E-NNI site itself has a fault, causing it to be unavailable, then only it is defined as unavailable and not the branch sites which can no longer communicate with the hub site.

Enet penalty calculation is based on the duration of the recorded Service Affecting Fault per service logged with Enet, within the given service measurement period (i.e. per incident).

Penalty credits represent full and final settlement of Enet's liability and are the Carriers sole remedy. Measurements carried out by Enet form the basis for the calculation of service levels.

- SLA credits are analysed by Enet, upon request by a Carrier, during the request window
- SLA credits will accrue as outlined in Section 6.3

Service unavailability or delays arising from events in the Carrier's area of responsibility or force majeure are excluded from penalty calculations. This includes time to respond to queries such as power and site access. Full terms are outlined in General Terms and Exclusions to follow.

Service availability is **assessed on a per circuit basis** and will be deemed to be satisfied if the Service is available at the Enet service interface at the service site. For example, for Managed Ethernet, Enet guarantees the availability of Enet managed NTU, Access Circuits and the availability of the Enet Backbone Network.

Availability and TTR is assessed per Service access for each site and not as an entire network across all Carrier sites.

Planned works in the Enet or its subcontractors' networks can cause outages especially on unprotected products. While Enet makes every possible effort to minimise the impact on its Carriers, such outages are not included in the availability and penalty credit calculations.

6.3 Reviewing Performance

The Carrier is responsible for submitting any claims against the SLA. All claims must be submitted to the relevant Account Manager assigned to the Carrier within:

- for services with Availability credits; within one month of the end of each Quarter
 - o e.g Q1 2020; request for credits to be made by end of April 2020
- for services with **Event Based TTR** credits: within one month of the end of the service failure / closure of the incident.

Data produced by Enet shall be binding where there is a conflict of data produced by the Carrier and Enet with respect to a claim. Compensation is paid as a credit against future rentals.

Availability calculations shall start after the end of the first calendar month of Service.



6.4 Service Levels: General Terms

- 1. Measurements carried out by Enet form the basis for the calculation of Service Levels, reviewed by both Parties. Any dispute in respect of the calculation of Service Levels shall be referred to the Dispute Resolution Procedure.
- 2. The Carrier shall notify the NOC as soon as it's aware of any fault affecting the service. Under such circumstances, fault analysis and remedy by Enet shall be reactive to the Carrier notification of the fault to the NOC. Enet shall have no responsibility to remedy faults where the Carrier fails to notify to the NOC or that cannot be detected by the NMS (other than resulting from performance/configuration problems with NMS).
- 3. Regarding Planned and Emergency work please see Section 5
- 4. Planned works, as outlined in Section 5, in the Enet or its subcontractors' networks can cause outages especially on unprotected products. While Enet makes every possible effort to minimise the impact on its Carriers, such outages are not included in the availability and penalty credit calculations.
- 5. Service credits, as specified per SLA in Section 2, are calculated by Enet, only on request from the Carrier as per Section 6.3. Any credits will be granted in the form of a credit against the next applicable Invoice. Any Service Credits will be the Carrier's sole remedy and Enet's sole liability and will be full and final settlement of Enet's liability for failure to provide or repair Services or for failure to achieve the targeted Service Levels.
- 6. Where the origin of a fault is unclear, Enet will assist the Carrier in fault identification. If it is confirmed that the fault does not lie with Enet, the Carrier shall be liable to a False Alarm Charge.
- 7. In circumstances where the fault has been repaired, and Enet, notwithstanding reasonable efforts on its behalf, has not succeeded in contacting the Carrier to agree service restoration, service unavailability shall be deemed to have ended at the time when the network management system indicated same.
- 8. Where an incident or series of connected incidents give rise to unavailability of a number of Services such that but for this Section 5 above Enet would be liable for Rental Credits in respect of more than one Service, the Carrier shall only be entitled to recover Rental Credits in respect of a single affected Service.

 Service levels are measured on a per site basis. Therefore, service levels are assessed per Service access for each site and not as an entire network across all your sites. Where a hub or E-NNI site has a fault causing it and multiple connected sites to be unavailable, the other sites which should be reachable are not defined as unavailable even though they can no longer be connected to the hub site. In this case the total service credit will not exceed the Service Credits that would apply if only the hub site had failed.
- 9. Some Enet services provide access to the Internet from the Carrier sites. The Internet is separate from the Service and excluded from the SLA. Use of the Internet is solely at the Carrier / End-Users risk and subject to all applicable laws. Enet has no responsibility for any information, software, services or other materials obtained by the End-User using the Internet.
- 10. For all Services, including Internet services, Enet cannot guarantee an SLA on connectivity to 3rd parties over a public network.



6.5 Service Levels: Exclusions

1. Agreement Breach

Loss of service due to suspensions arising from non–payment of invoice is excluded from the definition of Service unavailability and time to repair for the purpose of this SLA.

2. Access Issues

Any extra time required as a result of the End-User or Carrier or Property Owner or Local Authority denying access to Enet or Enet's representative to any site, or denying permission for Enet's representative to carry out any necessary repair, reports and tests will be excluded from the calculation of periods of Service unavailability and time to repair.

3. Not operating Product as agreed

Service unavailability arising from faults occurring as a result of or caused by work, changes or alterations made by the End User or Carrier will be excluded from the calculation of periods of Service unavailability and time to repair.

4. Fault not found or not reported properly

Where a Carrier fails to report a fault to Enet. Where a fault is reported, and no fault is detected when the service is tested by Enet.

5. Fault on Carrier or End User equipment

Service unavailability due to a failure or faulty Carrier or End User equipment or network, power supplies or application will be excluded from the calculation periods of Service unavailability and time to repair.

6. End User, Carrier or Third-party entity caused damage

Where the fault is caused by the End User, Carrier or a Third Party external entity whose activities (such as physical cable damage (internal or External), loss of electrical power etc.) cause negative impacts on the service or a Carrier's negligence or willful misconduct, including a failure to follow agreed-upon procedures.

7. Force Majeure

Force Majeure conditions, as outlined in the Service Agreement, apply where Enet is prevented or delayed in carrying out its duties or providing services by circumstances or events beyond its control. Example; where the fault is caused by severe weather conditions such as storms, flooding or lightning, failure of the internet for Internet services.

Enet is not responsible for poor performance levels on products and service offerings that are attributable to circumstances outside the control of Enet and its suppliers, which prevents a Party from complying with any of its obligations under this contract.

8. **Service Force Majeure**: Enet shall not be responsible for shortcoming in its Product and Service offerings performance levels which are attributable to functions beyond its reasonable control and subject to redundancy or other protective or contingency measures specified in the order.



9. Fault or Issue outside Enet Network

If a logged fault is confirmed to not lie with Enet (fault is outside of the Enet network) and deemed false alarm, the fault will be excluded from the availability and time to repair calculations

10. Service Suspension

Any suspension of the Service in accordance with the terms of the Agreement

11. Health and Safety

If the installation or repair would result in a health and safety risk e.g. unsuitable weather/lighting conditions/requirement for Daylight hours, causing inability to access all areas of a facility.

12. **Acts or omission** of persons for whom neither Party is responsible or any other cause whether similar or dissimilar outside its reasonable control including fibre breaks, failure of the wider Internet or Internet's systems such as domain name system, routing, peering or transit affecting a wide number of other providers.