Wholesale Dublin Ethernet Access (WDEA)

Product Description

Version Control

Version	Status	Update	Effective Date
1.0		Version 1.0	11 November 2009
V2.0	Final	This document is based on V1.0 Implementation of Standardised Change Control.	21/06/2017

This document follows change control procedure:

Proposed is defined as a document status when the approved document is uploaded to Proposals Section of open eir Website.

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For information:

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- Publish means the action of uploading a document to the website regardless of status or location.
- If there are changes to the document between 'Proposed' and 'Final', change control operates.

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1 Preface

This Product Description defines the eircom Wholesale Dublin Ethernet Access (WDEA) Product. This document is without prejudice to any future position that eircom may adopt in respect of eircom's provision of WDEA Product. This document should be read in conjunction with the following eircom Wholesale documents:

- eircom Wholesale Leased Line Access Reference Offer
- eircom Wholesale Network Price List
- WREA & WDEA Inter Operator Process Manual

These documents are published on eircom's website www.eircomwholesale.ie. . These documents may be updated and modified from time to time. For the avoidance of doubt, the latest published version of these documents on the eircom website www.eircomwholesale.ie is deemed to be the most current document governing the service.

2 Product Overview

The Wholesale Dublin Regional Ethernet Access Product is point to point transparent Ethernet service.

It provides Ethernet connectivity over the WDEA network from an Operator's end user site to an Operator's site.

This product is available to Authorised Operators only.

3 Product Features and Availability

The product provides a transparent Ethernet link from an Operator's end user site via a WDEA node to the Operator's Point of Presence (POP). An Operator may nominate one or several of the WDEA node's as their preferred aggregation node. eircom will provide a connection from an Operator's preferred aggregation node/WDEA node to the Operator's Point of Presence. eircom will configure a service VLAN on both the Operator's end user NTU and the Operator's NTU at the Operator's Point of Presence. An example of the product configuration is set out in Figure 1 below.

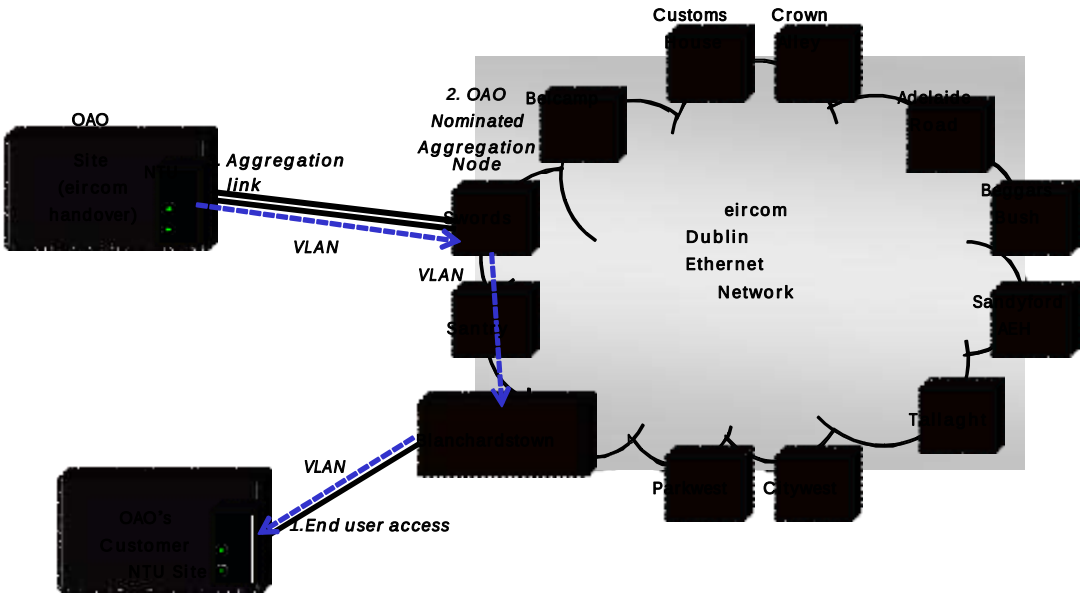


Figure 1: Network Diagram

WDEA is delivered over the WDEA network. This is a native Ethernet based network providing coverage at twelve WDEA nodes (Adelaide Road; Beggars Bush; Sandyford (AEH); Tallaght; Citywest (4050); Park West; Blanchardstown; Santry; Swords; Belcamp; Customs House; and Crown Alley).

This network supports Point-to-Point transparent Ethernet services. It has a contended core network (i.e., no dedicated bandwidth assigned to individual customer services). It offers core network resilience (SDH type protection – sub 50ms failover).

Operators should note that the WDEA network is fixed as the Ethernet node network equipment is no longer available. There is limited port availability at busy WDEA node locations and eircom cannot therefore guarantee service availability at each of the node locations

An Operator may nominate one or more of the WDEA node's as their preferred aggregation node. The capability to provide an Aggregation Link at the preferred WDEA node is dependent on the node port availability. Where a connection is possible, eircom will provide a fibre connection from this node to the Operator's POP. eircom configures a service VLAN on both the Operator's end user NTU and the Operator's POP NTU.

An operator will aggregate their traffic on the Aggregation Link. Operators are solely responsible for capacity management (bandwidth/contention) on the Aggregation Link.

The Dublin Ethernet network is designed to support contended Ethernet services and makes use of statistical multiplexing of customer traffic to maximise utilisation of the network. There is finite capacity on the core links used for the Dublin Ethernet network and Operators should be aware that sustained high level of use will result in congestion on the network.

The eircom WDEA product is being provided on a transitional basis as the supporting network is currently planned to be decommissioned on a phased basis as the replacement NGN is rolled out. This will be implemented in conjunction with the Operator in order to minimise end user disruption.

The WDEA network is currently scheduled to be decommissioned during Q2 2010.

4 Product Components

The product consists of the following components:

1. Dublin Ethernet Access Circuit - providing VLANs and

   Bandwidth options, and

   Class of Service options (CoS) – Standard, Premium and Traffic based

2. Dublin Aggregation Link

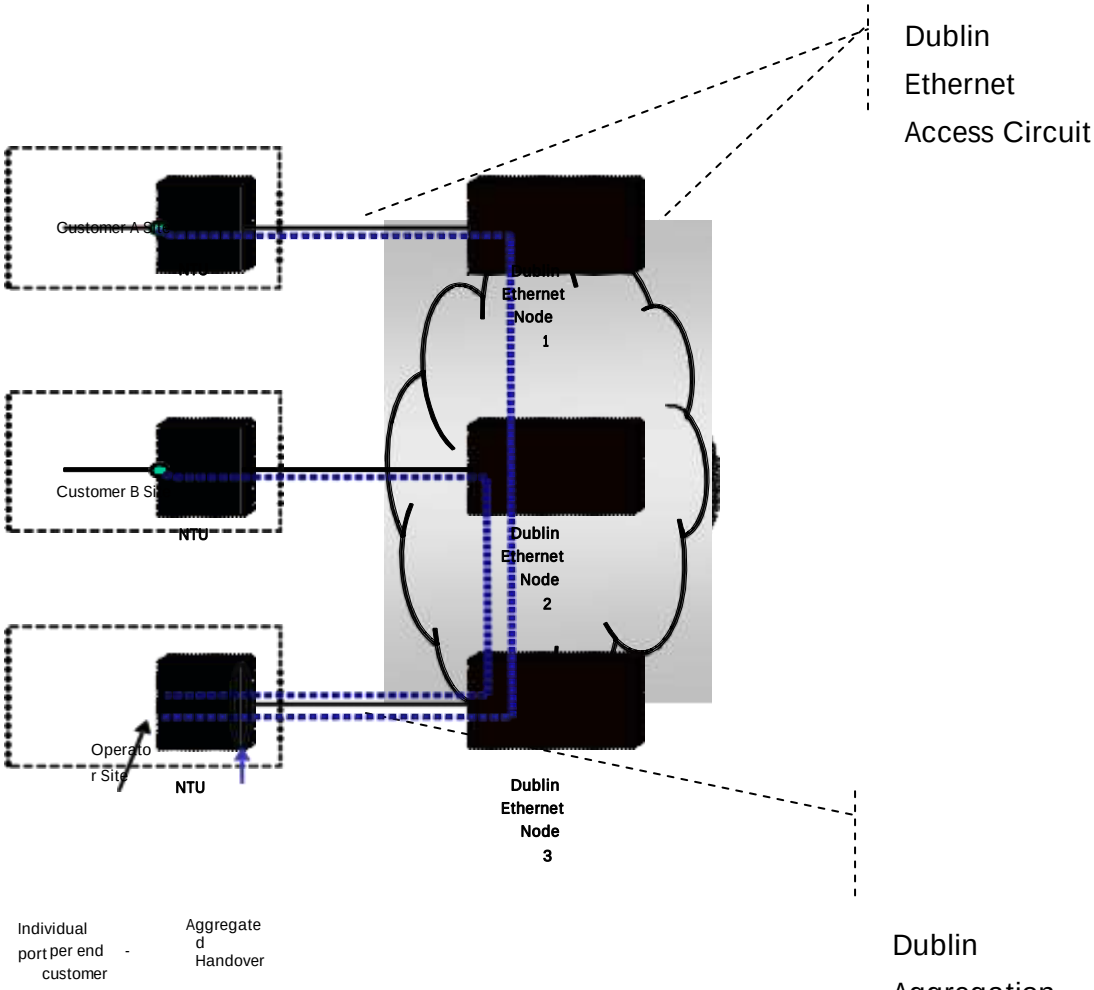

Dublin
Ethernet
Access Circuit
Customer A Si
NTU
Dublin
Ethernet
Node
1
Customer B Si
NTU
Dublin
Ethernet
Node
2
Operato
r Site
NTU
Dublin
Ethernet
Node
3
Individual
port per end
customer
-
Aggregate
d
Handover
Dublin
Aggregation
Link

Figure 2: Regional Network

4.1 Dublin Ethernet Access Circuit

A Dublin Ethernet access circuit is delivered as a dedicated access circuit from an Operator's end user site within 4kms of the serving WDEA node to the Operator designated Dublin Aggregation Link.

A Dublin Ethernet access circuit is available to an Operator's end users located within 4kms of the WDEA node. The standard price applies where the end user's premises is served by useable eircom owned duct and is within 500 metres of an available eircom access fibre which can connect to the eircom access nodes of the serving WDEA node.

Operator's end users located beyond 4kms of the WDEA node will be assessed on a case by case basis to determine if service may be provided. In the event that service may be provided the connection charge will be assessed on a case by case basis.

All Dublin Ethernet access circuits are subject to survey. End user access product resilience is not offered

The Dublin Ethernet access circuit is terminated on eircom NTU located at the Operator's end user site. There are two eircom NTU options available (mixture of 1G optical and 1G copper ports)

24 ports

48 ports

The NTU specifications are located in Appendix 1

The Dublin Ethernet access circuit physical service termination point is defined as the eircom NTU located at the Operator's end user site.

4.1.1 Service VLAN

The End User Access Circuit product bandwidth will be restricted to the rate that the Operator has purchased. The End User Access Circuit bandwidths available are outlined in the table below.

Standard (Mbit/s)	Premium (Mbit/s)
	1
	2
	3
	4
	5
10	10
20	20
50	50
	60
100	100
	150
200	
300	
400	
500	
600	
700	
800	
900	
1000	

Table 1: Available Bandwidths

Please note that 1Mb/s; 2Mb/s ; 3Mb/s; 4Mb/s ; 5Mb/s premium are only available on an existing circuit with at least a 10Mb/s VLAN already on it.

4.1.2 Dublin Ethernet Access Circuit - VLAN

The WDEA product is a point to point product. The product uses port mapping on the WDEA node in conjunction with port mapping on the Operator's end user site NTU and the Operator's NTU at their Point of Presence.

eircom, as part of product provisioning , will (1) establish the VLAN on a physical port on the NTU at the Operator's Point of Presence and (2) the corresponding product VLAN (with the same ID) on the NTU located at the Operator's end user site to establish the WDEA product.

An Operator's end user traffic within the Service VLAN may be tagged or untagged. Multiple

Service VLANs may be provisioned on an NTU; however each Service VLAN requires a dedicated port at both the end user NTU and the Operator's NTU at their Point of Presence.

The same Service VLAN may be configured on more than one NTU port at the Operator's end user site.

4.1.3 Dublin Ethernet Access Circuit VLAN - Class of Service Options

The VLAN has the capability to support three different class of service options:

Standard

Premium

Traffic based

Standard

The standard class of service option is an NTU port based class of service, providing "best effort" quality of service (QoS) across the network. All Ethernet frames entering the standard class of service designated port on the NTU at the Operator end user site will be placed in the standard priority queue. The traffic will be delivered using a "best efforts" basis in order of receipt.

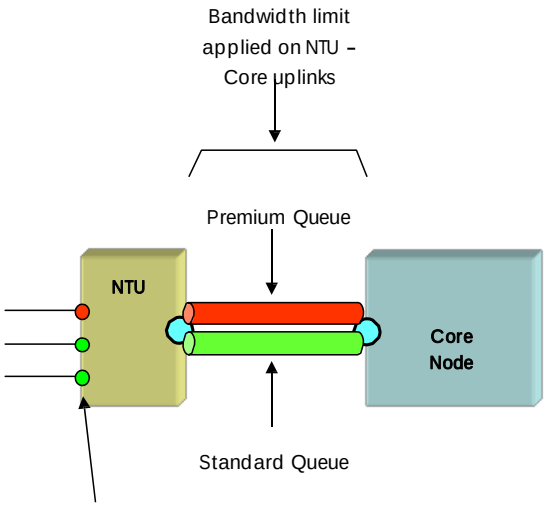
Premium

The premium class of service option is an NTU port based class of service. All Ethernet frames entering the premium class of service designated port on the NTU at the Operator end user site will be placed in the premium priority queue. The premium traffic will be prioritised to be delivered ahead of standard class traffic.

Traffic based

The traffic based class of service option applies the mix of the standard and the premium class of services that the Operator wishes to apply to the NTU port. The traffic based class of service is a .1p bases class of service offering. The Operator will need to mark the traffic .1bits. The Operator will select both the standard and premium bandwidths that apply at the NTU level.

The Operator, when placing the order, will select the Class of Service which they wish to have applied at the NTU level.



No bandwidth limit applied on customer facing ports

Figure 3: Traffic-based CoS

4.2 Dublin Aggregation Link

The Dublin Aggregation Link is delivered as a dedicated access link from the WDEA node to the Operator POP. Handover is always customer sited. The Dublin Aggregation Link will be available at a bandwidth of 1Gbit/s.

The Dublin Aggregation Link is available to Operator Points of Presence (POP) located within 4kms of the serving WDEA node. The standard price applies where the customer's premises is served by useable eircom owned duct and is within 500 metres of an available eircom access fibre which can connect to the eircom access node

Operator Points of Presence (POP) located beyond 4kms of the WDEA node will be assessed on a case by case basis to determine if service may provided. In the event that the service may be provided the connection charge will be assesses on a case by case basis.

All Dublin Aggregation Links are subject to survey. Dublin Aggregation Link resilience is not offered.

The fibre access is terminated on eircom NTU located at the Operator's POP. The eircom NTU has 48 ports which offer a mixture of 1G optical and 1G copper ports.

The NTU specifications are located in Appendix 1.

The Dublin Aggregation Link physical service termination point is defined as the eircom NTU located at the Operator's POP.

4.3 Product Parameters

PARAMETER	VALUE
Max Frame Size	9000 Bytes
Multicast Traffic	No Limit
Broadcast traffic limit	2% of Up-link Bandwidth
MAC Address Limit	Default limit of 1,000 MAC addresses per NTU port. This limit can be increased up to 5,000 MAC addresses subject to engineering approval.
Max no. of sites	No Limit
Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP)	Tunnelled
PAUSE (802.3x)	Discarded
Link Aggregation Control Protocol (LACP)	Discarded
Marker Protocol	Discarded
Authentication (802.1x)	Tunnelled
All LANs Bridge Management Group Block of Protocols	Tunnelled
Generic Attribute Registration Protocol (GARP) Block of Protocols	Tunnelled

Table 2: Product Parameters

5 Service Management

5.1 Order Handling and Provisioning

Orders for the WDEA Product will be processed using the Wholesale Dublin Ethernet Access Product order form.

Order forms may be obtained on www.eircomwholesale.ie or from the eircom account manager.

The processes for order handling and provisioning are set out in the Order section of the WREA & WDEA IPM published on www.eircomwholesale.ie

5.2 Upgrade / Downgrade

The process for upgrades and downgrades is set out in the Upgrade/downgrade section of the WREA & WDEA IPM published on www.eircomwholesale.ie

5.3 Forecasting

It is recommended that Operators forecast their requirements for Dublin Ethernet Aggregation Links. The process for forecasting is set out in the forecasting section of the WREA & WDEA IPM published on www.eircomwholesale.ie.

5.4 Fault Handling and Repair

The process for fault handling and repair is set out in the Fault section of the WREA & WDEA IPM published on www.eircomwholesale.ie.

5.5 Billing

Billing will be quarterly in advance.

Bills will be available in hard copy format.

5.6 Service Termination Process

In the case of Service termination, the Operator shall grant or secure eircom reasonable access to recover eircom Equipment from the End User Premises. The Service shall be ceased in accordance with the processes outlined in the WREA & WDEA Inter Operator Process Manual.

6 Price

Prices are published in the Network Price List on www.eircomwholesale.ie.

7 Terms and Conditions

Terms and conditions are published on the eircom website at www.eircomwholesale.ie in the Leased Line Reference Offer

Appendix 1 - NTU Specifications

Two NTUs are provided for this product

- Extreme Networks Summit X450a-24t
- Extreme Networks Summit X450a-48t

AC Power

- Optional Redundant Power Supply Unit (External Unit)

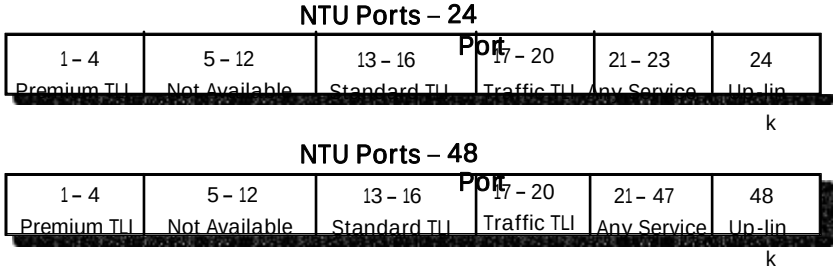
NTU – Core Uplinks

Standard: 1000 Base LX SFP (4km max. range – subject to fibre survey)

Customer Facing Ports:

- Default: 10/100/1000 Base-T
- Default Setting: 100M full duplex but can be changed if required.
- Optional: 1000 Base SX or 1000 Base LX (available on three ports only)
- Connector: LC

Service specific pre-allocation of ports on NTU:



Appendix 2 – WDEA Node Locations

Aggregation Nodes
Customs House
Belcamp
Crown Alley
Adelaide Road
Beggars Bush
Sandyford AEH
Tallaght
Citywest
Parkwest
Blanchardstown
Santry
Swords

Table 3: WDEA Aggregation Node Locations

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