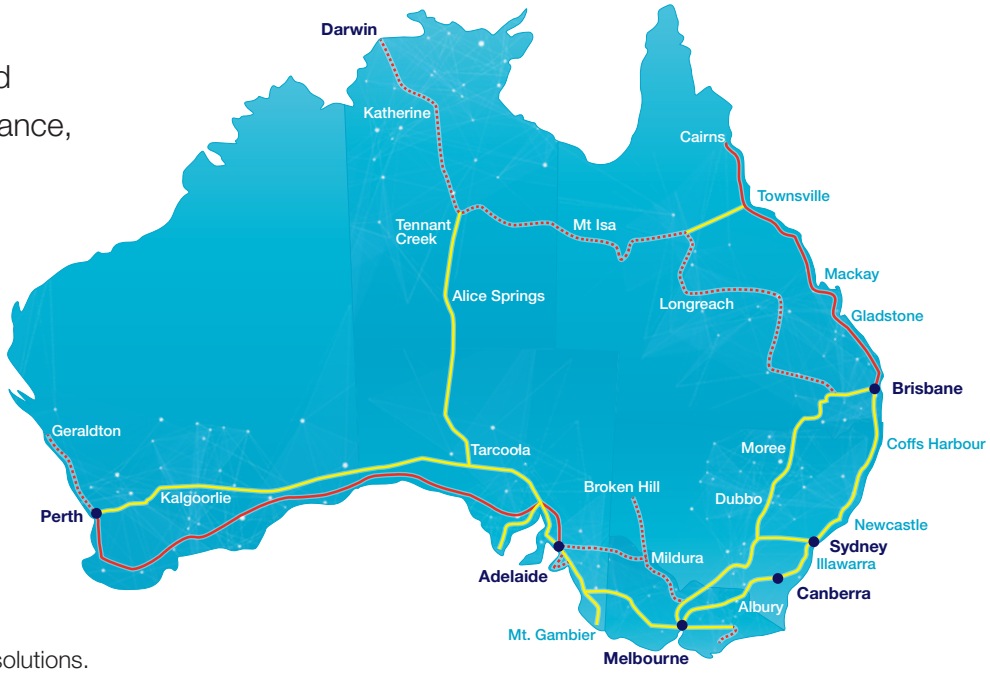
VOCUS

Regional Backbone Blackspots Program

data sheet

RBBP Switched Ethernet Services

Nextgen Group's RBBP Switched Ethernet offers premium performance, customer controlled, flexible point-to- point or multipoint to multipoint data services.



Nextgen Group's firbre network

Flexible Configurations

Nextgen Group's RBBP Switched Ethenet services are aligned with the major MEF service types to provide the flexibility and choice required to customise solutions.

Point to Point Switched Ethernet (E-Line)

Aligned with MEF EPL and EVPL service specifications, these point-to-point services provide committed bandwidth directly between two locations for maximum control.

Multipoint Switched Ethernet (E-LAN)

Aligned with MEF EP-LAN and EVP-LAN service specifications, these multipoint services provide minimum site-to-site latency and in-built QOS support.

VLAN transparency

When configured as EPL or EP-LAN, Nextgen Group's RBBP Switched Ethernet services preserve and carry transparently the customer VLAN tags.

Service multiplexing

When configured as EVPL or EVP-LAN, Nextgen Group's RBBP Switched Ethernet services provide for delivery of multiple services on a single interface. Site classifications and pricing zones Prices are dependent on the type of delivery location and the particular RBBP Route.

Site classifications and pricing zones

Prices are dependent on the type of delivery location and the particular RBBP Route.

Site types are:

- Carrier Point of Interconnect (CPoI)
- Backbone Point of Interconnect (BPoI)
- Nearest Capital City (selected Data Centres)
- Sydney (selected Data Centres)

Service Speeds

Nextgen Group's RBBP Switched Ethernet services support a wide range of practical service rates between 10 Mbit/s and 1000 Mbit/s.

Wholesale Only

Nextgen Group's RBBP Services are offered only on the RBBP network and to the wholesale market comprising:

- Licensed Carriers
- Carriage Service Providers
- Internet Service Providers
- Broadcast Transmission
- Providers
- Systems Integrators
- Utilities

Product	RBBP Switched P2P Ethernet		RBBP Switched Multipoint Ethernet	
Mode	**EPL**	**EVPL**	**EP-LAN**	**EVP-LAN**
Ethernet Virtual Connection Service Attributes				
EVC Type	Point-to-Point		Multipoint-to-Multipoint	
Maximum number of UNIs	2		50 (advisory-only limit)	
EVC MTU, DA to FCS inclusive	9000 Bytes		9000 Bytes	
CE-VLAN ID Preservation	Yes	Yes	Yes	Yes
CE-VLAN CoS Preservation	Yes	Yes	Yes	Yes
Unicast Service Frame Disposition	Deliver unconditionally		Deliver unconditionally	
Multicast Service Frame Disposition	Deliver unconditionally		Deliver unconditionally (flooding)	
Broadcast / Unknown Unicast Service Frame Disposition	Deliver unconditionally		Deliver conditionally: up to 10% of EVC bandwidth at the UNI or 256 Kbit/s, whichever is greater	
Layer 2 Control Protocols Processing	As per the “Layer 2 Control Protocol Processing” table		As per the “Layer 2 Control Protocol Processing” table	

Layer 2 Control Protocol Processing

Layer 2 Control Protocol	Port-based service (EPL, EP-LAN) (Service Multiplexing = No)	VLAN-based service (EVPL, EVP-LAN) (Service Multiplexing = Yes)
Spanning Tree Protocol	Tunnel	Discard
PAUSE (802.3x)	Discard	Discard
LACP/LAMP	Discard	Discard
Link OAM	Discard	Discard
Port Authentication (802.1x)	Discard	Discard
E-LMI	Discard	Discard
LLDP	Discard	Discard
GARP/MRP	Tunnel	Tunnel

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UNI and EVc Per UNI Service Attributes

Mode	EPL	EVPL	EP-LAN	EVP-LAN
Standard Interfaces	100 Mbit/s: 100BASE-LX10, as per IEEE 802.3-2005 Subclause 1.4.12 1000 Mbit/s: 1000BASE-LX10, as per IEEE 802.3-2005 Subclause 1.4.21			
Mode	Full duplex		Full duplex	
MAC Layer	IEEE 802.3-2005		IEEE 802.3-2005	
UNI MTU, DA to FCS inclusive	9000 Bytes		9000 Bytes	
Service Multiplexing	No	Yes (using CE VLAN)	No	Yes (using CE VLAN)
Maximum number of EVCs	1	50 (advisory only)	1	50 (advisory only)
Bundling	No		No	
All to one bundling	Yes	No	Yes	No
Ingress BW profile per ingress UNI	No (UNI BW ≥ EVC BW)		No (UNI BW ≥ EVC BW)	
Ingress BW profile per EVC	CIR = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 150, 200, 250, 300, 350, 400, 500, 600, 700, 800, 900 or 1000 Mbit/s] EIR = 0, CM=Colour Blind Achieved rate may be lower depending on interface type and customer frame size distribution.			
Ingress BW profile per Class of Service (CoS)	No		1 or 4 CoS 4 CoS Service Frame mapping at UNI based on 802.1p (CE VLAN Tag) or DSCP Class 1: CIR=5% of EVC CIR, EIR=0 Class 2: CIR=30% of EVC CIR, EIR=0 Class 3: CIR=0 EIR=100% of EVC CIR Class 4: CIR=0 EIR=100% of EVC CIR All classes served in exhaustive strict priority order from 1 to 4	
Egress BW profiles	Same as respective ingress above		Same as respective ingress above	
Layer 2 Control Protocols Processing	As per the 'Layer 2 Control Protocol Processing' table		As per the 'Layer 2 Control Protocol Processing' table	
Interface features	Unprotected Interfaces Only		Unprotected Interfaces Only	
Aggregated Interfaces	Not Available		Not Available	
Target Availability	End to End: 99.95%		End to End: 99.95%	
Core Protection Options (where available)	Protected / Geographically Protected		Protected / Geographically Protected	
Protection Switching	≤100ms Note that alternative path distance may be significantly different		≤100ms Note that alternative path distance may be significantly different	
Access Protection	Unprotected		Unprotected	
Commissioning standard	IETF RFC 2544		IETF RFC 2544	
Customer to Provide	Rack space, 240V AC 50Hz power and cross-connects at customer sites.			

Class of Service mapping at UNI

Class	802.1p value (EP-LAN, EVP-LAN) (Service Frames must have 802.1Q tag)	DScP/PHB values
Class 1	7	56, 48
Class 2	6	46, 40, 38, 36, 34, 32
Class 3	5, 4, 3	30, 28, 26, 24, 22, 20, 18, 16
Class 4	2, 1, 0, Untagged	14, 12, 10, 8, 0

Non Standard Interfaces

Non standard interfaces can be supported for additional charge through an additional NTU that Nextgen Group must supply and locate in the customer's premises.

The customer will need to provide space, power and cooling to support this device.

Non Standard Interfaces include:

- 10BASE-T
- 100BASE-TX, 100BASE-FX
- 1000BASE-T, 1000BASE-SX

RBBP Service Delivery Points	RBBP Network Segment - Nearest Capital City
Services on RBBP networks can be purchased: - between locations on a particular RBBP Network Segment - to selected data centres in the nearest capital city - to selected data centres in Sydney	Gerraldton – Perth
	Darwin – Brisbane or Adelaide
	Broken Hill – Adelaide or Melbourne
	Victor Harbor – Adelaide
	South West Gippsland – Melbourne