

Chorus UFB Services Agreement

Direct Fibre Access Service: Service Description for  
Chorus Data Centre Service

Reference Offer

June 2021

## 1. Interpretation

- 1.1 References to clauses or sections are references to clauses or sections in this Service Description unless expressly provided otherwise. The definitions set out in the General Terms and the Operations Manual apply to this Service Description unless expressly provided otherwise.
- 1.2 References to the Operations Manual are references to the operations manual for Direct Fibre Access Service and references to the Service Level Terms are references to the Service Level Terms for Direct Fibre Access Service. Except as varied by this Service Description any references to Direct Fibre Access Service in either the Operations Manual or the Service Level Terms shall include the Data Centre Connect Service.
- 1.3 This Service Description covers the provision of the Data Centre Connect Service.
- 1.4 The General Terms in Chorus Reference Offer apply to provision of the Data Centre Connect Service subject to any modifications, exclusions, and clarifications:
- 1.4.1 set out in clause 1.5 below; and
  - 1.4.2 that are necessary to ensure the General Terms are appropriate to the provision of the Data Centre Connect Service as notified by Chorus to the Service Provider on 40 Business Days' notice.
- 1.5 the Data Centre Connect Service:
- 1.5.1 may be withdrawn by the Chorus on 12 months' notice. Clauses 5.2 (a) and 5.2 (b) of the General Terms do not apply to the withdrawal of the Data Centre Connect Service. Any instance of the Data Centre Connect Service that is subject to a Minimum Service Term that expires after the 12 months' notice of withdrawal, shall continue to be provided by the Chorus on the terms of the relevant Service Order until the expiry of that Minimum Service Term; and
  - 1.5.2 is not subject to a Price Cap. Changes to the Data Centre Connect Service Core Charges and Ancillary Charges shall be treated as if the changes were under a Price Cap for the purposes of clauses 24.4 (a) and 24.5(a) of the General Terms and therefore CFH approval for such changes is not required.
- 1.6 This Service Description may be changed by the Chorus using the process for Agreement Changes set out in the General Terms except that:
- 1.6.1 the Change Management Forum's prior approval of any such proposed Agreement Change under clauses 24.1 and 25 of the General Terms is not required;
  - 1.6.2 CFH approval of any such proposed Agreement Change will not be required under clauses 24.1(d)(ii) and 24.8 of the General Terms; and
  - 1.6.3 the Service Provider may not propose any Agreement Change in relation to this Service Description in accordance with clause 24.1(b) of the General Terms.

## 2. The Data Centre Connect Service

- 2.1 Chorus Data Centre Connect Service is a throughput managed fibre-based access service. It transports data between selected Data Centres and the designated Chorus Central Office where it can be interconnected with Chorus DWDM Network, Service provider Equipment Co-located Equipment or third party services as part of a high-speed secure data transmission solution.
- 2.2 The selected Data Centres are those where Chorus has installed appropriate equipment and are listed on website [sp.chorus.co.nz](http://sp.chorus.co.nz). The list will be updated from time to time.

- 2.3 Each data centre has a route to a designated primary exchange and diverse exchange. These are defined during network build process, based on network architecture designed to maximise network availability and diverse protection. No alternative exchanges or routes are available, (refer to Appendix A and clause 8 Fibre Diversity).
- 2.4 The Data Centre Connect Service is only available in two speed options 10 Gbps and 100 Gbps.
- 2.5 A diagram of the configuration for the Data Centre Connect Service is set out in Appendix A. The Data Centre Connect Service consists of the provision of 10Gbps or 100Gbps transport service from either a splice or LC PC bulkhead connector at the Data Centre to either:
- 2.5.1 the MOFDF at the Chorus designated exchange; or
  - 2.5.2 where the Service Provider is taking a Chorus Backhaul Service an interconnection with that service.
- 2.6 The Data Centre Connect Service is an input service which the Service Provider can use as a building block to combine with other Chorus services (or with the Service Provider's own network or wholesale services provided by other providers) to provide fibre based telecommunications services to End Users.

2.7

### **3. Data Centre Connect Service and implementation activities**

- 3.1 Part 5 of the Direct Fibre Operations Manual shall not apply to the Data Centre Connect Service and clause 3.2 to 3.4 shall apply.

#### ***Standard Installation***

##### *Installation at designated Chorus Central Offices*

- 3.2 The Standard Installation of the Data Centre Connect Service at the designated Chorus Central Offices includes connection to either:
- 3.2.1 a Tie Cable from the MOFDF to the Service Provider's Footprint at the Chorus Central Office. The Tie Cable will be supplied pursuant to the terms of the appropriate Co-location Service; or
  - 3.2.2 an extension service listed below
    - a. where available Intra Candidate Area Backhaul Service (including dark ICABS and Metro ICABS) to another Chorus Central Office; or
    - b. where available Chorus Relay Connect Service to another Chorus Central Office; or
    - c. Handover Connection Service; or
    - d. Either directly or via TPAD a Third party network.

##### *Installation at a selected Data Centre*

- 3.3 Installation at the data centre varies according to individual data centre's interconnection facility and policy. Chorus will either:
- 3.3.1 install and connect to either a splice or connector on the Data Centre 's appointed interconnection point. The Service Provider is then responsible for providing the connectivity between their footprint in the data centre to the appointed interconnection point; or
  - 3.3.2 install and connect to either a splice or connector on the Chorus OFDF within the data centre. The Service Provider is then responsible for providing the connectivity between their footprint in the data centre and the Chorus OFDF; or

- 3.3.3 install and connect or splice to a fibre cable provided at the data centre 's appointed interconnection point. The Service Provider is responsible for providing the cable between their footprint in the data centre to the appointed interconnection point.
- 3.4 Chorus may be able to provide and connect the cable between their footprint in the data centre and the termination point.

#### **Termination Points**

##### *Chorus Central Office Termination Point*

- 3.5 At the Chorus Central Office, the termination point for the purposes of the Connection and the service demarcation point is either
- 3.5.1 a splice or connector on the MOFDF; or
- 3.5.2 a virtual point within the Chorus Network providing interconnection to a Chorus Backhaul service

##### *Data Centre Termination Point*

- 3.6 At the data centre the termination point for the purposes of the Connection and the service demarcation point is, depending on the data centre's interconnect policy, either a splice or connector:
- 3.6.1 on the Data Centre 's appointed interconnection point in the Data Centre; or
- 3.6.2 an interconnect tie cable provided by the data centre; or
- 3.6.3 on a Chorus OFDF.

#### *Testing*

- 3.7 The Chorus will test the Data Centre Connect Service from the termination point at the Data Centre to the MOFDF the termination point at the Chorus Central Office to ensure it is within the technical specification set out in Appendix B. End to end testing between Service Provider equipment may be available on request.

#### *Additional Service Characteristics*

- 3.8 The Chorus will provide certain support and other assistance as part of the Data Centre Connect Service including:
- 3.8.1 an electronic facility for service requests;
- 3.8.2 an electronic facility for fault notifications; and
- 3.8.3 a tool to assist the Service Provider in determining the location and availability of the Data Centre Connect Service.
- 3.9 The Data Centre Connect Service specifically excludes:
- 3.9.1 provision or maintenance of any cabling or connection or active device beyond the Service Demarcation Points described in clauses 3.5 and 3.6. If a fault reported by the Service Provider is found to be caused by the Data Centre's or Service Provider's equipment (CPE) or the wiring beyond the service demarcation point, then the Service Provider may be charged the "No fault found" Ancillary Charge in the Price List; and
- 3.9.2 configuration, monitoring, operation, on-going support or maintenance of Service Providers' or Data Centre's applications, equipment, or networks; and
- 3.9.3 supply of AC Mains & UPS Power, accommodation in a suitable environment for electronic equipment, heating, ventilation, air conditioning and facilities at the Central Office or Data Centre Service Provider's footprint.

#### **4. Interconnection Requirements**

- 4.1 To use the Data Centre Connect Service the Service Provider must have the capability to access and interconnect with the Data Centre Connect Service, either by:
- 4.1.1 co-locating Service Provider equipment at the relevant Chorus Central Office using a Footprint and tie cable to MOFDF provided under the appropriate co-location service; or
  - 4.1.2 where the Service Provider does not take a co- location service at the relevant Chorus Central Office, by taking either:
    - a. the Jumpering Service and a backhaul service from the relevant Chorus Central Office MOFDF to connect to Service Provider equipment (as defined in the Central Office and POI Co-location Service Description) elsewhere; or
    - b. the TPAD Service and a Third Party service from the relevant Chorus Central Office MOFDF to connect to Service Provider equipment elsewhere.

#### **5. Capacity and geographic availability**

- 5.1 The Chorus will supply the Data Centre Connect Service at the relevant centres published on Chorus SP Portal where there is sufficient capacity.

#### **6. Service Provider Responsibilities**

- 6.1 Other Service Provider responsibilities are detailed in the General Terms and Operations Manual.
- 6.2 The Service Provider will be responsible for all the design, specification and commissioning of their equipment and plant (both active and passive) connected to the Data Centre Connect Service.

#### **7. Fibre Diversity**

- 7.1 Part 8 Fibre Diversity of the Direct Fibre Access Service Operations Manual does not apply, and the following clauses applies to the Data Centre Connect Service instead.
- 7.2 Every data centre where the Data Centre Connect Service is offered has a default primary route and a diverse route. The diverse route (a second instance of the Data Centre Connect Service between the data centre and the Central Office) is designed and built during the equipment deployment and network build process. The service includes on-going management to ensure core network paths remain diverse (diagram Appendix C).
- 7.3 Both primary route and diverse route path information is made available to a Service Provider during the feasibility or ordering stage. The primary route is the default route in ordering system when a Service Provider order a single Data Centre Connect service.
- 7.4 Each instance of the Data Centre Connect Service, primary and diverse, will be treated as an individual line for the purpose of Service Levels.
- 7.5 There may be practical limitations to providing full physical diversity between the designated exchange and the relevant data centre. The Data Centre Connect Service will where possible provide diverse cable routes a minimum of the width of a street apart, with no shared manholes or access points and separate entries into the Central Office.
- 7.6 Specific diversity design outside the pre-defined primary and diverse routes is not available in the Data Centre Connect service.

7.7 When ordering a second diverse instance of the Data Centre Connect Services the Service Provider must indicate in the Service Request that the request for a diverse circuit and which current service it is diverse to.

## 8. Service Levels

8.1 Service Levels for the Direct Fibre Access Service in Chorus Reference Offer (as updated from time to time) shall apply to the provision of the Data Centre Connect Service subject to any modifications, exclusions, and clarifications:

8.1.1 set out in this clause 9; and

8.1.2 that are necessary to ensure the Service Level Terms are appropriate to the provision of the Data Centre Connect as notified by the Chorus to the Service Provider on 40 Business Days' notice.

8.2 Clauses 1.1, 1.2 and 1.3 of Appendix 1 to the Direct Fibre Access Service Level Terms do not apply and the following new clause 1.1 and 1.2 will apply to Chorus Data Centre Connect instead:

*1.1 The Chorus must complete each installation of a Data Centre Connect Service connection on the date accepted by the Service Provider via the Chorus's ordering and booking system.*

*1.2 Any time period:*

- a. during which any Force Majeure Event prevents installation of a Connection or prevents restoration of Connection which is subject to Downtime; or*
- b. during which the Chorus is, due to a Force Majeure Event, unable to safely access any location or premises where physical access is required to install a Connection or restore a Connection which is subject to Downtime; or*
- c. which reflects any minimum notice requirements or access constraints contained in any existing arrangements referred to in clause 12.2(b) of the General Terms and which contain the permissions or consents that are relied upon,*

*will be added to the periods specified in clause 1.1 as applicable.*

8.3 Clauses 2.1.to 2.4 of Appendix 1 to the Direct Fibre Access Service Level Terms will apply to the Data Centre Connect Service. For convenience clauses 2.1 and 2.2 are repeated here:

*2.1 Subject to clauses 2.2 and 2.3 the Chorus must ensure that Data Centre Services for which Downtime is reported to the Chorus are restored within the following timeframes from the time that Downtime is reported in the OSS/BSS reporting system:*

*(i) Before midday are restored by 7pm on that day; and*

*(ii) After midday are restored by midday on the following day.*

*2.2 For the purposes of clause 2.1:*

*(i) Downtime has the meaning set out at Appendix A to the Direct Fibre Access Service Operations Manual, except that Downtime in relation to availability of a Relay Connect Service connection will not be measured in relation to End Users but rather in relation to the length of time that the Service Provider is without service at any Service Provider site or sites connected to the Services;*

*(ii) Service at a Data Centre Connect Service connection is restored when the service at the connection meets the service specification, either by way of a workaround or resolution of the fault.*

- 8.4 Appendix 2 to the Fibre Access Service Level Terms does not apply and the following new Appendix 2 will apply to the Relay Service instead:

### **Appendix 2**

*The following table specifies the Service Rebates payable by the Chorus.*

<b>Service Level (references are to clauses in Appendix 1)</b>	<b>Core Service Rebate</b>
<b>Chorus Data Centre Connect Provisioning Core Service Levels</b>	
<i>1.1 – installation of Data Centre Connect Service</i>	<i>\$363.88 each time that the connection is not delivered with a “RFS” certificate by the date referred to in clause 1.1</i>
<b>Chorus Data Centre Connect Restoration Core Service Levels</b>	
<i>2.1 – Data Centre Connect Service fault restoration</i>	<i>\$363.88 each time the Service Level is not achieved</i>

## **9. Operations Manual**

- 9.1 The Operations Manual applies to provision of the Data Centre Connect Service subject to any modifications, exclusions, and clarifications:
- 9.1.1 As set out in clause 3.1; and
- 9.1.2 As set out in this section 10; and
- 9.1.3 that are necessary to ensure the Operations Manual is appropriate to the provision of the Data Centre Connect as notified by the Chorus on 40 Business Days' notice.
- 9.2 Forecasts for the Data Centre Connect Service are to be included in the forecast figures provided in accordance with Part 2 – FORECASTING of the Direct Fibre Access Service Operations Manual.
- 9.3 Section 8.1 and 8.3 of The Direct Fibre Access Service Operations Manual does not apply, and the following new section 8.1 and 8.3 applies to the Data Centre Connect Service instead:

### *Pre-qualification*

- 8.1 *Pre-qualification is a service that enables the Service Provider to:*
- 8.1.1 *determine if the Data Centre Connect Service is available between the requested Data Centre and the designated exchanges*
- 8.1.2 *confirm primary and diversity path information*
- 8.1.3 *determine when the applicable Data Centre Connect will be available in the future for areas outside of the current availability list*
- 8.3 *Automated Pre-qualification is available in OSS/BSS or by sending an email to Chorus Customer Solution team. If pre-qualification request is sent through by email channel, all responses will be provided by emails. The same applies to Special Manual Pre-qualification if required.*

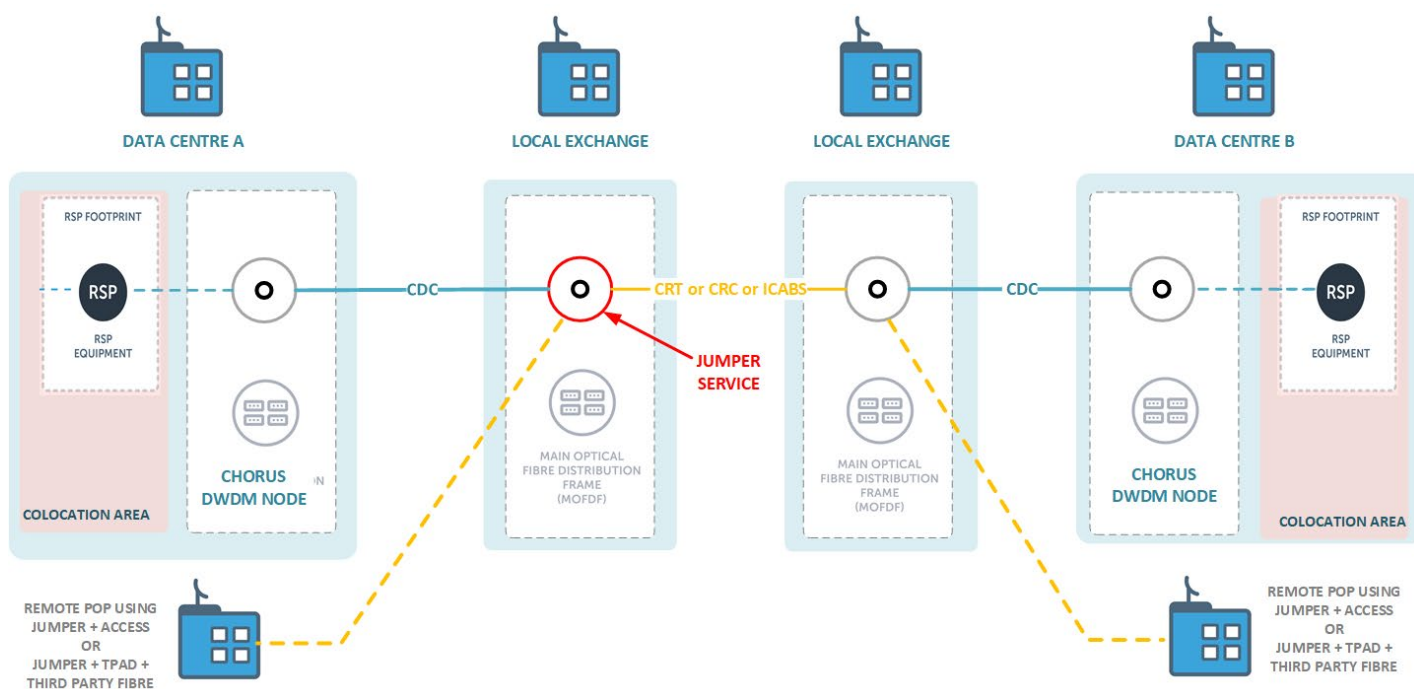
**10. Price List**

- 10.1 The Price List sets out the rental and installation pricing for the Data Centre Connect Service subject to the following modifications, exclusions, and clarifications as set out in this section 11.
- 10.2 Chorus Data Centre Connect Service offers Open, 12 Months, 24 Months, and 36 Months term pricing. The Standard Installation charge is waived for 24 Months and 36 Months terms. The term applies to each individual instance of the Relay Connect Service and transferring the term to another service instance will require Chorus' prior approval.
- 10.3 A Service Provider shall be liable for an "Early Termination Charge" if the Service Provider takes the Relay Connect Service for a fixed term which is eligible for a fixed term discount. Chorus may charge and the Service Provider will be liable to pay an Early Termination Charge (ETC) in relation to any instance of the Relay Connect Service which is terminated prior to the end of the relevant fixed term period.
- 10.4 The ETC:
- 10.4.1 will be charged as a single lump sum on the final Chorus invoice relating to the terminated instance of the Relay Connect Service; and
- 10.4.2 will be equivalent to the total discount of the open term monthly rental charges which the Service Provider has received under this agreement for the relevant instance of the Relay Connect Service to the date of termination as follows:

$$ETC = (\text{months into the fixed term as at date of termination}) \times$$
$$(\text{monthly discount received on open term monthly rental charge})$$



## Appendix A – Diagram



This is a generic diagram showing the standard configuration and service demarcation points. It is not intended to represent every situation or detailed physical architecture. The following points should be noted:

- Data Centre Connect Demarcation Point refer to clause 3.4. It will be agreed between the Chorus and the Service Provider based on the data centre's interconnection policy.
- The diagram also shows how Data Centre Connect works the optional service extension with either other backhaul products by using a jumping service.
- a combination of engineering and interface requirements will determine equipment location in the data centre.

**Appendix B – Data Centre Connect Technical Specification**

Fibre	<p>Ext External fibre must comply with ITU-T specification G.652D.</p> <p>Internal building fibres may comply with ITU-T G.657A, but cable must meet appropriate fire regulations i.e. be Flame-Retardant, Non-Corrosive, Low Smoke, No Halogen (FRNC/LSNH).</p>
Connector Type	<p>RJ45 Electrical interface or Fibre terminations must be SC/APC type connectors (complying with the IEC 61754-4 standard) or alternatively LC/APC type connectors (complying with the IEC 61754-20 standard) as appropriate.</p>
Optic Path	<p>Laser types and path characteristics expected to be designed to a minimum standard which are contained in the documents for 10G, Compliant with Telcordia GR-253/IEEE 802.3ae/G.959.</p> <p>10G variant is either 10G LAN PHY – 10GBase-R or 10G WAN PHY – 10GBase-W</p> <ul style="list-style-type: none"> <li>• The standard Dual Fibre working optic wave lengths are 1310nm(short haul) 1550nm (long haul)</li> <li>• The standard Single Fibre working optic wave lengths are 1270nm [transmit from CPE] and 1330nm [receive at CPE].</li> </ul>
Optic Interface	<p>Either 10G LAN PHY – 10GBase-R or 10G WAN PHY – 10GBase-W</p>