

# Test Agreement

## Test Description: Satellite Multicast For Education Technical Trial



**This Agreement is a Standard Form of Access Agreement for the purposes of Part XIC of the Competition and Consumer Act 2010 (Cth) where one is required for NBN Co to supply a Test Product.**

# Test Agreement

## Test Description: Satellite Multicast For Education Technical Trial

Version	Description	Effective Date
1.0	Issued on 1 August 2017	Execution Date

### Copyright

This document is subject to copyright and must not be used except as permitted below or under the *Copyright Act 1968* (Cth). You must not reproduce or publish this document in whole or in part for commercial gain without the prior written consent of NBN Co. You may reproduce and publish this document in whole or in part for educational or non-commercial purposes as approved by NBN Co in writing.

Copyright © 2017 NBN Co Limited. All rights reserved. Not for general distribution.

### Disclaimer

This document is provided for information purposes only. The recipient must not use this document other than with the consent of NBN Co and must make their own inquiries as to the currency, accuracy and completeness of this document and the information contained in it. The contents of this document should not be relied upon as representing NBN Co's final position on the subject matter of this document, except where stated otherwise. Any requirements of NBN Co or views expressed by NBN Co in this document may change as a consequence of NBN Co finalising formal technical specifications, NBN Co's ongoing internal reviews, or legislative and regulatory developments.

### Environment

NBN Co asks that you consider the environment before printing this document.

# Contents

<b>Parties</b>	<b>4</b>
<b>Background</b>	<b>4</b>
<b>1. Interpretation and definitions</b>	<b>5</b>
<b>2. Pre-conditions</b>	<b>5</b>
<b>3. Test Product</b>	<b>6</b>
3.1 Test Product Components	6
3.2 Network-Network Interface (NNI)	6
3.3 Connectivity Virtual Circuit (CVC)	6
3.4 Access Virtual Circuit (AVC)	6
3.5 User Network Interface (UNI-D)	6
3.6 Multicast Access Virtual Circuit (M-AVC)	6
3.7 Multicast Domain (MD)	7
<b>4. Trial Activities</b>	<b>7</b>
<b>5. Charges</b>	<b>7</b>
<b>6. Test Participant's Obligations</b>	<b>7</b>
6.1 General obligations	7
6.2 Review and reporting	8
<b>7. Trial Procedure</b>	<b>8</b>
7.1 Satellite Multicast Technical Trial Contact	8

# Test Agreement

## Test Description: Satellite Multicast For Education Technical Trial

### Parties

- NBN Co Limited (ABN 86 136 533 741) of Level 11, 100 Arthur Street, North Sydney NSW 2060 (**NBN Co**);
- [Insert party name] (ABN [insert ABN]) of [insert registered address of test participant] (**Test Participant**)

### Background

- A. This Test Description, together with the Standard Test Terms, forms the Agreement for the Satellite Multicast for Education Technical Trial.
- B. In March 2015, the Distance Education and Broadband Working Group (the **Working Group**) was established to optimise the alignment between NBN Co's Sky Muster Satellite Service and the broadband requirements for distance education. It brings together Commonwealth, state and territory government departments of education and **nbn**. The Department of Communications and the Arts is the secretariat for the Working Group.
- C. Multicast functionality is envisaged to allow the Test Participant to supply uni-directional data once at the NNI which is then replicated over the NBN Co Network and delivered simultaneously to multiple NTDs (**Multicast**).
- D. The purpose of the Satellite Multicast Technical Trial is to enable NBN Co and Test Participant to assess the functionality and performance of Multicast supplied by means of the NBN Co Satellite Network (**Satellite Multicast**) in order to determine if it meets the technical requirements necessary for the provision of distance education lessons.
- E. To be eligible to participate in the Satellite Multicast for Education Technical Trial, Test Participant must enter into an arrangement with a state or territory government department of education which:
  - is represented on the Working Group; and
  - has in place an existing multicast application delivering lessons to students over satellite;to be that state or territory government department of education's retail service provider for the Satellite Multicast Technical Trial, as set out in clause 2(a)(iv).
- F. The Satellite Multicast Technical Trial will commence on or around Monday 21 August 2017 and conclude on or around Friday 29 December 2017, as set out in clause 4.

# 1. Interpretation and definitions

For the purposes of this Test Description:

- (a) the singular includes the plural and vice versa;
- (b) any capitalised term used but not defined has the meaning given to that term in the Standard Test Terms; and
- (c) any capitalised term used but not defined in this Test Description or the Standard Test Terms has the meaning given to that term in the WBA.

**Agreement** means this Test Description together with the Standard Test Terms.

**Satellite Multicast Technical Trial** means the activities undertaken by NBN Co and Test Participant in accordance with this Agreement together with the performance of the obligations set out in this Agreement.

**Satellite Multicast Technical Trial Contact** means each person appointed by NBN Co and Test Participant as:

- (a) their single central contact point regarding the Satellite Multicast Technical Trial; and
- (b) any additional people appointed as contact points in relation to specific matters regarding the Satellite Multicast Technical Trial (such as operational or technical issues).

**Satellite Multicast Test Product** is defined in clause 3.1.

**Standard Test Terms** means the agreement entitled "Test Agreement – Standard Test Terms" entered into between NBN Co and Test Participant.

**Test Description** means this document, which is issued by NBN Co under the Standard Test Terms.

## 2. Pre-conditions

- (a) To participate in the Satellite Multicast Technical Trial and be supplied the Test Product, Test Participant must, by 19 August 2017 or a later date notified by NBN Co:
  - (i) be a party to a WBA;
  - (ii) have undertaken the on-boarding and pre-certification activities prescribed by NBN Co for the Satellite Multicast Technical Trial;
  - (iii) have entered into the Standard Test Terms and this Agreement; and
  - (iv) have entered into an arrangement with a state or territory government department of education which:
    - is represented on the Working Group; and
    - has in place an existing multicast application delivering lessons to students over satellite;

to be that state or territory government department of education's retail service provider for the Satellite Multicast Technical Trial.

## 3. Test Product

### 3.1 Test Product Components

- (a) The **Satellite Multicast Test Product** is a Test Product comprised of the components described in sections **3.2** to **3.7** supplied by NBN Co to Test Participant.
- (b) Subject to this Agreement, NBN Co will supply Test Participant with the Satellite Multicast Test Product as necessary, in **nbn's** opinion, for the Satellite Multicast Technical Trial.

### 3.2 Network-Network Interface (NNI)

- (a) The **Network-Network Interface** or **NNI** is the interface at a POI where the Test Participant's traffic is handed over to the NBN Co Network.
- (b) NBN Co will manually provision an NNI at the POI which NBN Co notifies Test Participant is the POI associated with the Satellite Multicast Technical Trial.

### 3.3 Connectivity Virtual Circuit (CVC)

- (a) A **Connectivity Virtual Circuit** or **CVC** is Ethernet-based Layer 2 virtual capacity on the NBN Co Network used to carry Test Participant traffic between multiple AVCs in a CSA on an aggregated basis and the NNI at the POI serving that CSA.
- (b) NBN Co will manually provision the CVC for the Test Participant in traffic classes and bandwidth profiles that, in **nbn's** opinion, are necessary for the Satellite Multicast Technical Trial.

### 3.4 Access Virtual Circuit (AVC)

- (a) An **Access Virtual Circuit** or **AVC** is an Ethernet-based Layer 2 virtual connection on the NBN Co Satellite Network that carries Test Participant traffic to and from a UNI-D used to serve a Premises.
- (b) NBN Co will manually provision AVCs for the Test Participant in traffic classes and bandwidth profiles that, in **nbn's** opinion, are necessary for the Satellite Multicast Technical Trial.

### 3.5 User Network Interface (UNI-D)

- (a) The **User Network Interface - Data** or **UNI-D** is the physical port on an NTD to which NBN Co supplies the AVC and M-AVC component of the Satellite Multicast Test Product.

### 3.6 Multicast Access Virtual Circuit (M-AVC)

- (a) A **Multicast Access Virtual Circuit** or **M-AVC** is a functional variant of the AVC which is specific to Multicast applications and is an Ethernet-based virtual connection on the NBN Co Satellite Network operating in the downstream direction only that carries Test Participant's multicast traffic to multiple UNI-Ds used to serve Premises.

- (b) NBN Co will manually provision M-AVCs for the Test Participant in traffic classes and bandwidth profiles that, in nbn's opinion, are necessary for the Satellite Multicast Technical Trial.

### 3.7 Multicast Domain (MD)

- (a) A **Multicast Domain** or **MD** is a functional variant of the CVC which is specific to Multicast applications and is Ethernet-based virtual capacity on the NBN Co Network that carries the Test Participant's multicast traffic from the NNI at the POI serving a CSA to multiple M-AVCs in that CSA.
- (b) NBN Co will manually provision a Multicast Domain for the Test Participant in a bandwidth profile that, in nbn's opinion, is necessary for the Satellite Multicast Technical Trial.

### 3.8 Facilities Access

- (a) Test Participant must, to the extent specified by NBN Co, acquire facilities access under a WBA or other agreement between NBN Co and Test Participant, for the POI at which NBN Co supplies the NNI for the Satellite Multicast Test Product.

## 4. Trial Activities

- (a) The Satellite Multicast Technical Trial activities will:
  - (i) commence on or around Monday 21 August 2017; and
  - (ii) be completed within a period of approximately 18 weeks, concluding on or around Friday 29 December 2017;

unless extended by NBN Co or terminated earlier in accordance with this Agreement.

- (b) NBN Co may, by giving Test Participant 5 Business Days' written notice, amend either or both of the dates on which Satellite Multicast Technical Trial activities begin and cease.

## 5. Charges

- (a) NBN Co will not charge Test Participant for the Satellite Multicast Test Product.
- (b) To the extent that NBN Co supplies facilities access under a WBA for the POI at which NBN Co supplies the NNI for the Satellite Multicast Test Product, NBN Co will waive the applicable charges under the WBA that relate to facilities access acquired solely in respect of the NNI for the Satellite Multicast Test Product.

## 6. Test Participant's Obligations

### 6.1 General obligations

- (a) Throughout the Satellite Multicast Technical Trial, the Test Participant:
  - (i) is responsible for the supply, management and compliance of all telecommunications services delivered to the End User;
  - (ii) must comply with Australian law in respect of lawful interception and data retention; and

- (iii) must not use the Satellite Multicast Test Product, or any component of the Satellite Multicast Test product, for any purpose other than to assess the functionality and performance of Satellite Multicast.

## 6.2 Review and reporting

- (a) At regular intervals during the Satellite Multicast Technical Trial and within 10 Business Days of completion of the Satellite Multicast Technical Trial, the Test Participant will, at NBN Co's request:
  - (i) provide information and feedback directly to NBN Co regarding the Satellite Multicast Test Product;
  - (ii) meet with NBN Co to review and evaluate the performance of the Satellite Multicast Test Product; and
  - (iii) use reasonable endeavours to obtain and assist NBN Co to directly obtain feedback from any End User and/or relevant third parties regarding the performance of the Satellite Multicast Test Product, the NBN Co Network and NBN Co's relevant processes and procedures.
- (b) Test Participant must immediately notifying NBN Co if Test Participant becomes aware of any actual or likely unexpected or unintended impact of the Satellite Multicast Technical Trial, including in respect of any person not actively participating in the Satellite Multicast Technical Trial.

## 7. Trial Procedure

### 7.1 Satellite Multicast Technical Trial Contact

- (a) At NBN Co's request, the Test Participant must make relevant Satellite Multicast Technical Trial Contacts available for the purpose of co-ordination of the Satellite Multicast Technical Trial.
- (b) NBN Co and Test Participant will provide telephone and email contact details of their Satellite Multicast Technical Trial Contacts to each other on commencement of the Satellite Multicast Technical Trial, and maintain and provide updates to these contact details for the duration of the Test.



# Execution

## Executed as an agreement

---

Signed for **NBN Co Limited** by its authorised representatives:

---

Signature of authorised representative

---

Signature of authorised representative

---

Name of authorised representative

---

Name of authorised representative

---

Date of signature

---

Date of signature

---

Signed for **[Insert party name]** by its authorised representatives:

---

Signature of authorised representative

---

Signature of authorised representative

---

Name of authorised representative

---

Name of authorised representative

---

Date of signature

---

Date of signature

