



Wholesale Broadband Access VDSL2

Welcome pack

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Our reference Version 1

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1. Introduction - Scope

This Welcome pack has been written to allow operators to estimate the workload and the impact of implementing the WBA offer.

This document will provide the interested operator with an overview of the main steps needed to implement WBA and their interactions.

Proximus offers a commercial alternative to WBA in order to offer Wholesale VDSL connexions: the Carrier xDSL offer. The latter requires lower workload and knowledge on the OLO side (OLO stands for “Other Licensed Operator”). It is billed via an end-to-end price per line, which make it easily scalable.

In case the information in this document differs from the WBA offer, the latter always prevails.

2. What is WBA?

WBA (Wholesale Broadband Access) is a regulated offer that enables operators to offer data access services to their end users, using the VDSL2 network of Proximus.

The WBA offer consists of four building blocks to deliver data access to the end users (more details: WBA Offer / Main Body).

2.1 OAL

The OAL (OLO Access Line) is the connection between Proximus’s network and the OLO’s network. The network is divided into 5 areas and approximately 600 local networks. There are two PoPs per area and one LEX per local network. The OLO must order an OAL in a Proximus Service PoP or a LEX to provide data access to the end users of the corresponding area.

2.2 Ethernet transport

Between the LEX where the OLO wants to be active and the OAL, data are carried on Proximus Ethernet network through VLANs. When ordering VLANs, the OLO can choose between 4 service qualities and two VLAN options (Shared or Dedicated VLAN). With Shared VLAN, the data from the end users will be bundled in 4 VLANs (one per service quality). With Dedicated VLAN, a specific VLAN will be created to bundle all the traffic from each specific end user.

2.3 End user line

The end user line is the link between the DSLAM (situated in the LEX or in a ROP - Remote Optical Platform) and the end user. It uses the VDSL2 technology to provide a fast end user access on Proximus copper pairs. The access speed depends on the distance and quality of the copper pair between the end user and the DSLAM or ROP. The automatic test called TBF (Test de Bonne Fin) determines the optimal line profile for each end user. The VDSL2 technology is

available up to a limited distance of the ROPs or the LEX. The OLO has to choose and take care of implementing another technology if he wants to reach a national coverage.

2.4 CPE

The VDSL2 technology requires a specific configuration of the CPE (modem). Therefore only CPEs provided by Proximus or CPEs specifically tested for Proximus network will be accepted. (Details: Main Body / Modems; and Annex OLO CPE).

3. What is expected from the operator?

The WBA offer enables operators to develop their own branded data access offer and to take care of the following end user aspects (non-exhaustive list):

- Sales & Marketing;
- End user ordering;
- Billing to end users;
- First Line Helpdesk;
- CPE management: procurement, delivery, return, maintenance;
- CPE firmware upgrades (for WBA with Dedicated VLAN).

From a technical point of view, the operator must take care of the following elements (non-exhaustive list):

- Develop a compatible ordering system (XML or Open Calendar);
- OAL ordering and dimensioning;
- VLAN management and dimensioning;
- IP Transit, Radius, IP addresses management (IP address range, dynamic IP addressing);
- Broadband Access Server, transport backbone;
- First line troubleshooting and repair.

A pre-payment or financial guarantee must be provided as well before implementing WBA.

4. Steps and milestones to implement WBA

The chart and descriptions in this section show the required steps before delivering WBA services to end users. They show the interactions between the different steps and the order that should be followed during the implementation.

4.5 Dependencies chart

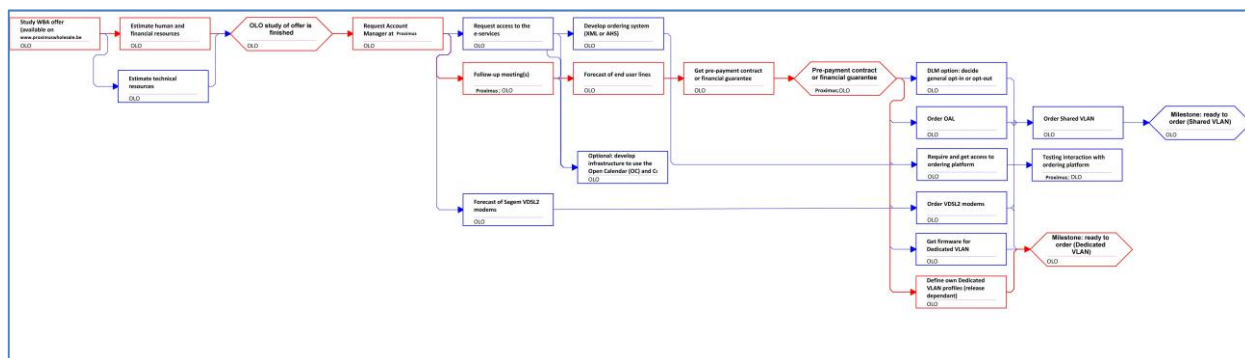


Start_WBA.jpg

This chart shows the dependencies between the steps needed to implement WBA. Some elements can be processed in parallel, while some are required to be completed before the next can start.

Detail and reference documentation on each block can be found in the following sections.

It is available as a separate jpg file in attachment to this document.



4.6 Feasibility study (to be done by the operator)

4.6.1 Study WBA offer

The WBA offer is available on www.proximuswholesale.be.

The offer defines the WBA product and explains all the requirements to implement it. It is necessary for operators to have an essential understanding of the needed efforts and of all aspects the product.

4.6.2 Estimate financial resources

Proximus will request a pre-payment or financial guarantee to cover the invoices in line with the forecasts provided by the operator.

WBA is a product that requires upfront investments. A certain amount of end users is needed before reaching a break-even point.

4.6.3 Estimate human resources

WBA is a regulated product that requires technical and operational knowledge and expertise at the operator side. The operator has to make sure he has the required resources available. (see section 3)

IT resources: XML or SOAP development, internal billing and customer handling systems.

Telecom network resources: full understanding of Ethernet network deployment, CPEs and VDSL2 technology.

Operational resources: resources needed for helpdesk, customer care, billing...

4.6.4 **Estimate technical resources**

Implementation of WBA requires technical resources (e.g. compatible Ethernet Backbone...). (see section 3)

More information: WBA offer – Annex Technical Specifications.

4.7 **Preparation of the implementation (Proximus and operator)**

4.7.1 **Request Account Manager at Proximus**

The Account Manager will be the OLO's contact point for all commercial matters.

An Account Manager can be requested via email: Rfq.inbox@Proximus.com.

4.7.2 **Request access to the e-services**

The e-services and the OLO personal page are important to get information to implement WBA.

4.7.3 **Follow-up meeting(s)**

Up to 2 meetings will be planned with the OLO to follow-up the project, discuss the next steps and answer major questions. These meetings are coordination meetings. If the OLO requires more explanations due to a lack of preparation or an insufficient knowledge of the offer, Proximus will charge a fee, as defined in the WBA offer – Annex Pricing & Billing.

Proximus expects the OLO to prepare all its questions on the steps mentioned in this document before the follow-up meeting and send 1 week on beforehand all the questions and the planning that it intends to follow for the implementation of WBA.

4.7.4 **Develop an ordering system**

Implementing an ordering system is mandatory to be able to place order of WBA lines. Two types of ordering systems are available: XML and Open Calendar (OC).

Information: WBA offer – Annex Planning and Operations, Personal page (tab “documentation on ordering”).

4.7.5 **Forecast of end user lines**

The OLO needs to provide an estimation of the amount of end users that it wants to connect with the WBA product. This estimation is necessary for the financial guarantee and the dimensioning of the IT systems. It will help the OLO to dimension its VLAN and OAL as well.

4.7.6 **Develop the Open Calendar (OC) and Certified Technician (CT) functionalities (Optional)**

The OC interface enables the OLO to get a view on Proximus planning and fix the appointment for the installation himself.

The CT process enables the OLO to train and use its own technicians to perform some kinds of installation.

Reference: personal page / documentation on ordering.

4.7.7 **Forecast of VDSL2 modems**

If the operator wants to order Proximus CPEs, it needs to provide rolling forecasts for the need of modems.

4.8 **Pre-payment contract or financial guarantee**

A pre-payment or financial guarantee is required before implementing the new OLO in Proximus systems and before ordering any WBA service (OAL, Shared VLAN, end-user line, modem). It will be based on the forecasts of end-user lines and modems provided by the OLO.

Reference: WBA Offer – Annex Prepayment Terms and Conditions.

4.9 **Implementation of the OLO in Proximus systems**

The main contacts during the implementation of the OLO are the Account Manager and the Service Manager.

4.9.1 **Require access to ordering platform**

The interaction between the operator's ordering system and Proximus platform needs to be configured.

4.9.2 **Order VDSL2 modems**

The maximum time for the delivery of the modems is 8 weeks from the order date.

Reference: order form on personal page.

4.9.3 **DLM option**

The operator can choose the default DLM option for all the end-user lines (opt-in or opt-out).

4.9.4 **Get firmware for Dedicated VLAN (optional)**

A specific firmware must be uploaded into the modem if the customer wants to use the Dedicated VLAN.

Reference: Annex Technical Specifications (Section Modems).

4.9.5 **Order OAL**

The operator needs to order an OAL. This step must be completed before orders of VLAN can occur. There are two kinds of OAL: Proximus-sited and Customer-sited OALs.

Reference: Annex Planning & Operations.

4.9.6 **Define Dedicated VLAN profiles (optional)**

A common pool of Dedicated VLAN profiles is available to all OLOs. Should the OLO want to offer own Dedicated VLAN profiles, he can define its own pool of profiles. The definition of these profiles is release dependant (in general, there are 3 releases per year at Proximus, around March, June and October).

Reference: Annex Planning & Operations.

4.9.7 **Test interaction with ordering platform**

The interaction between the OLO's ordering system and Proximus platform needs to be tested and validated before end user lines orders can occur.

4.9.8 **Order Shared VLAN**

Ordering Shared VLAN is the last step that has to be completed before being able to order end user lines.

Reference: Annex Planning & Operations.

4.9.9 **Order end user lines**

Reference: Annex Planning & Operations.

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