

Nokia ONT Easy Start Solution



NOKIA

Accelerate time to
market with automated
FTTH service provisioning

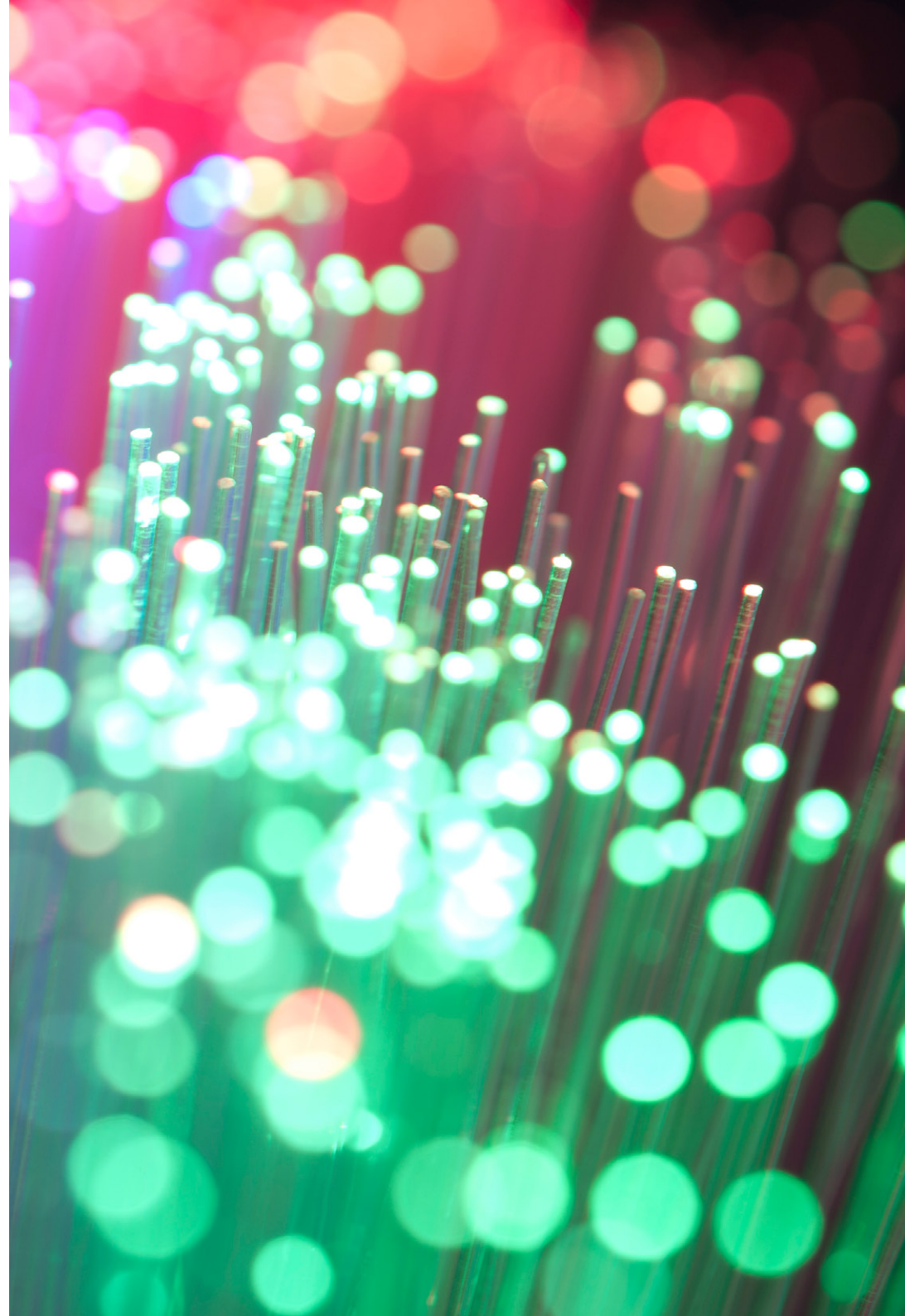
Operators are looking to reap the benefits of the latest innovations in GPON and XGS-PON fiber to the home (FTTH) technologies. They want to offer more bandwidth and better services, but for this to happen they first need to connect the customers to the fiber network — a more complicated challenge than might be expected.

FTTH networks are shared so the location of the optical network terminal (ONT) isn't automatically known when the terminal is connected. That's why a technician must currently make a site visit to ensure the ONT is connected to the right customer and that the right service package is applied. As a result, connections for new FTTH customers and ONT upgrades for existing customers involve many steps.

The project manager must plan and schedule the activation, field technicians have to visit the site, and customers need to be at home — a real inconvenience. Adding to the challenge, provisioning of the ONT takes time and can introduce errors when done manually.

This is where the Nokia ONT Easy Start solution makes all the difference. By automating a multistep and complex process, the Nokia ONT Easy Start solution speeds up, simplifies, and transforms FTTH provisioning into a virtually error-free process.

With Nokia ONT Easy Start, operators can streamline installation and accelerate time to market. By remotely automating FTTH subscriber connections, operators get improved quality of service (QoS), fewer truck rolls, and most importantly, increased customer satisfaction.



Radically simplified activation

Nokia ONT Easy Start is an automated GPON provisioning solution that speeds time to market while dramatically changing the OPEX and QoS equation. Operators will benefit from:

Accelerated time to market

- ONT can be shipped to the customer or picked up from the store.
- Subscribers are connected more quickly.
- ONT is automatically configured.
- Appointments for an on-site installer are no longer needed.

Reduced costs

- If fiber is already installed, no truck rolls are needed for new service activation or for an ONT replacement.
- If a technician visit is required, on-site installation time is minimized through automation.
- The cost of customer care is lower due to automated and simpler self-provisioning.

Improved quality of service

- First time right activation: Automation reduces the number of errors.
- Customer self-provisioning: Subscribers are happier when they can do it on their own time without the need to schedule an appointment with a technician.

Figure 1. Key benefits of the Nokia ONT Easy Start solution



Three-step setup process

The ONT Easy Start setup process is as simple as it is effective. Figure 2 shows what the end user sees — whether they are the technician or the customer.

Figure 2. Three-step self-installation

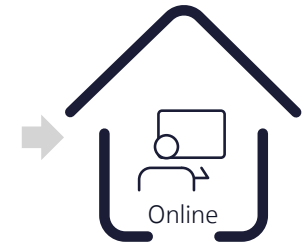
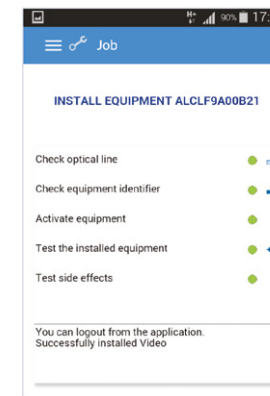
1 Set up subscription



2 Connect ONT and log in to web portal

A screenshot of the Nokia login web portal. It features the Nokia logo at the top, followed by input fields for 'user1', a password (represented by dots), and the equipment identifier 'ALCLF9A00B21'. Below these fields are two blue buttons, the top one labeled 'Log in'.

3 Test and activate ONT automatically





1. Set up service

The customer receives a letter from the service provider that indicates the user credentials. Later, the ONT is shipped separately or picked up from the store. Depending on the setup option chosen, the activation uses one of the methods below:

- Using a wireless connection: The ONT unit has either a QR code or a bar code that takes the user directly to the ONT activation web portal. Scanning the QR or bar code automatically populates the ONT serial number in the login screen to reduce input errors.
- Using a local connection: Using a physical or Wi-Fi® connection, any device with a web browser can be connected to the ONT. By opening a browser, the user is taken directly to

the web portal where the serial number is automatically retrieved to reduce input errors.

2. Log in to web portal

In all setup methods — QR code, bar code and captive web portal — the ONT serial number is retrieved automatically. The customer (or technician) only has to enter the user credentials. After the web portal is populated with the user credentials and ONT serial number, the customer, service package and ONT are automatically linked.

3. Test and activate ONT

With a single click, the customer (or technician) performs basic ONT testing, Layer 2 ONT configuration, and optional basic line testing. Additionally, the ONT software gets downloaded and activated.

ONT Easy Start use cases

New subscription and ONT

- Ship ONT or subscriber takeout from service provider shop
- Customer self-installs ONT

ONT replacement

- Existing customer requires new ONT
- Upsell residential gateway ONT
- Simply ship new equipment with no truck roll
- Customer self-installs ONT

Field technician installs

- Process improvements and automation in existing workflows
- Eliminate errors during installation process
- Reduce time spent on activation

Figure 3. Self-activation methods



QR code



Bar code



Captive web portal

Solution components

The ONT Easy Start solution is a self-contained application that can be easily integrated into the operator's OSS/BSS system. It can be rolled out as an additional module in the existing service provider environment or offered as a hosted solution from a public or private cloud.

The ONT Easy Start solution is already pre-integrated with the Nokia GPON solution, including the ONT, the optical line terminal (OLT) equipment, and the

Nokia 5520 Access Management System (AMS) and the Nokia 5529 Access Provisioning Center (APC) Element Management System (EMS) that provide Layer 2 provisioning. Layer 3 provisioning can be optionally delivered by the Nokia Connected Device Platform (CDP).

ONT Easy Start is defined as a vendor-agnostic blueprint. Therefore, it can also be integrated with third-party GPON solutions.

As illustrated in Figure 4, the ONT Easy Start solution supports the three-step automated ONT activation process:

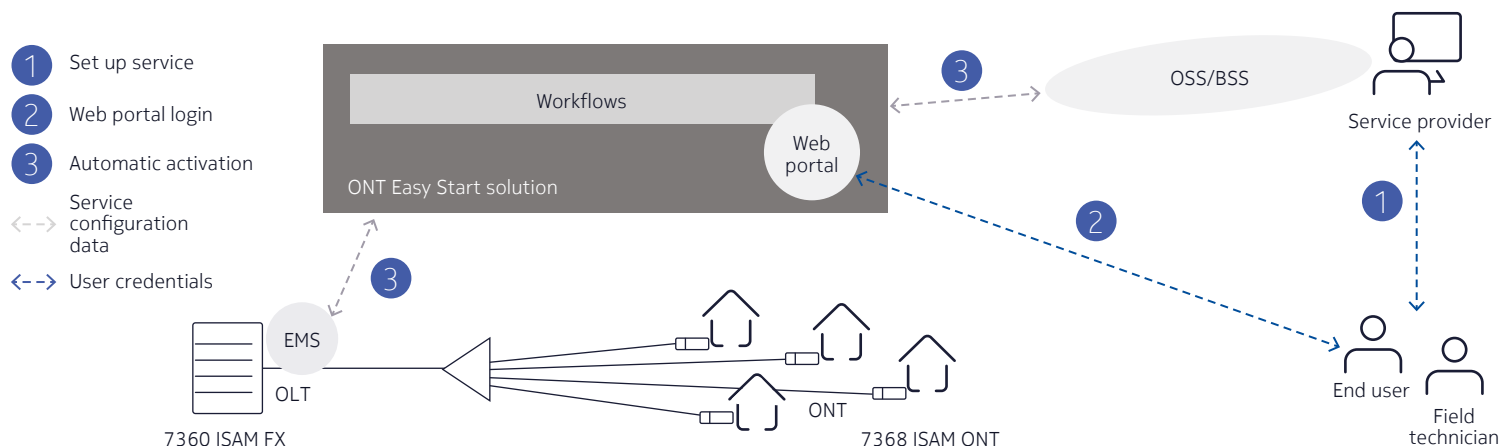
1. The end user sets up a subscription with the service provider. User credentials are exchanged and the ONT is delivered or picked up from the service provider shop. These steps are done to prepare for the service activation and have no interaction with the ONT Easy Start solution.

These steps are also valid for ONT replacements due to maintenance or end of life.

2. The end user (or field technician) connects the ONT to the network and powers it on. It then automatically connects to the web portal and there is error-free retrieval of the serial number using the QR or bar code scan or connecting to a PC or tablet with a web browser to the ONT. Providing the user credentials results in starting the automated activation process.

3. The ONT Easy Start will then obtain the service configuration information from the OSS/BSS, configure the service on the ONT through the EMS and OLT and perform the necessary service tests. The results of these activities are reported back to the OSS/BSS, including possible trouble tickets that can be used by the service provider support and field technician organization to proactively resolve any issue.

Figure 4. ONT Easy Start solution components



Nokia Professional Services have developed an ONT activation automation blueprint. It describes each module, the activation flow, and how it can

Additional components

Nokia Network Analyzer – Fiber (NA-F)

A cost-effective, remote management solution for fiber access networks, the Nokia NA-F allows operators to perform additional line testing to ensure the quality of the fiber connection before provisioning the ONT. This software tool helps reduce operating expenses, increases activation success rates, and improves the overall customer experience.

Network Build Control Management (NBCM)

Combined with ONT Easy start, Network Build Control Management (NBCM) provides control of automated Home Activation for field technicians and Communication Service Provider rollout teams.

NBCM is a professional service using Nokia's expertise, experience and innovative tools automating and increasing project management efficiency for FTTH rollouts. It provides end-to-end project control and reporting, automated process control and work order management across different project tasks.

Nokia Connected Device Platform (CDP)

The Nokia CDP automatically handles Layer 3 provisioning for the ONT. Nokia CDP efficiently and effectively provisions and manages a wide range of devices across multiple domains, including mobile, machine to machine (M2M), Enterprise/IMS, converged fixed/mobile and Wi-Fi.



Why Nokia

Nokia is the worldwide leader in fixed access technologies with over 20 years of industry-leading broadband experience. Operating in more than 130 countries, Nokia has shipped over 18 million GPON ports for over 180 fiber projects worldwide. Nokia powers some of the most advanced fiber networks that are deployed by leading telecom service providers, as well as cable multiservice operators and municipalities. Nokia enables these and other customers to build a competitive advantage, enhance end-user experiences, and accelerate the move to a digital society. The addition of the ONT Easy Start solution to the fixed access portfolio allows GPON/XGS-PON FTTH network operators to more quickly and cost effectively activate and upgrade their customers' home access connections. For those choosing the pre-integrated ONT Easy Start solution with all the optional components, the time to market is accelerated even more.

For more information about how Nokia can contribute to your success, contact your nearest Nokia partner.



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Through B2B networks that sense, think and act, we enable our customers, partners and technology innovators to create the digital services and applications of the future.

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Nokia OYJ
Karakaari 7
02610 Espoo
Finland

Tel. +358 (0) 10 44 88 000

CID: 186447

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