

States and Notifications Process Document

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Document Overview

Amendment Record

Revision No.	Changes	Author	Date
1.0	<p>Final version:</p> <ul style="list-style-type: none">• Updated Order and Fault State (4.1)• Updated Notifications (4.2)• Inserted new Push Notification section (4.2.2)• General updates, corrections, and revisions	Product Management	October 2020

4 Orders & Faults: States and Notifications

All order requests and fault tickets placed by Service Providers will have a range of states and various notifications associated with the specific order request or fault that determines where the order is in its lifecycle.

Orders may exist in one of the state conditions for a period of time (e.g. several days), whereas a different order state may only take minutes or seconds to transit from one state to the next, or to be completed. An example of an order which may only take a matter of minutes or seconds to complete is an in-situ order, where the service can be electronically enabled at the End User premises and no engineer appointment is required.

4.1 Order and Fault State

4.1.1 Order State

Typically, the state will determine if an order can be updated or not by the Service Provider. An order request can only be in one order state at any one time during its order journey. The state that an order or information request can be in, as presented to the Service Provider via the Web Portal or API channels, are outlined in the tables below:

Table 2: Pre-Order States

State	Description	Modifiable?
New	The order has been submitted but has not been validated by NBI.	No
Rejected	The order has been rejected by NBI.	No
Pending	Occurs when the pre-order has been accepted, is currently active and waiting to be processed into a full order. Note: a deferred premise may also be in a pending state.	Yes
Processed	Used to signify the Pre-Order has now been processed to a full order.	No
Cancelled	An in-flight pre-order has been successfully cancelled.	No

Table 3: Survey Order States

State	Description	Modifiable?
New	The order has been submitted but has not been validated by NBI.	No
Rejected	The order has been rejected by NBI.	No
In Progress	After NBI has accepted the order and until the order is moved to the next state.	Yes

In Progress – with NBI	Issued after NBI has taken ownership of the order. An RELA notification may also be issued to the Service Provider during this state, which would contain additional information on the status of the survey order.	No
On Hold	The order is on hold with NBI, pending resolution of the underlying issue.	No
In Progress - with RSP	The order is with the Service Provider to either reschedule an appointment, or to cancel the order. A Reschedule Service Provider (RESP) notification provides detailed information on the issue.	Yes
Completed	The order has been completed.	No
Cancelled	An in-flight order has been successfully cancelled.	No

Table 4: Order States

State	Description	Modifiable?
New	The order has been submitted but has not been validated by NBI.	No
Rejected	The order has been rejected by NBI.	No
In Progress	After NBI has accepted the order and until the order is not modifiable.	Yes
In Progress – with NBI	Issued after NBI has taken ownership of the order. An RELA notification may also be issued to the Service Provider during this state, which would contain additional information on the status of the product order.	No
On Hold	The order is on hold with NBI, pending resolution of the underlying issue.	No
In Progress - with RSP	The order is with the Service Provider to either reschedule an appointment, or to cancel the order. A Reschedule Service Provider (RESP) notification provides detailed information on the issue.	Yes
Completed	The order has been completed.	No
Cancelled	An in-flight order has been successfully cancelled.	No

4.1.2 Fault State & Ticket Types

The Web Portal will have service desk/trouble ticketing functionality.

The following Ticket Types shall be supported for Service Provider use, for both Fulfilment and Assurance:

- A. **IN: Incident** – A fault with an End User or a group of End Users. The action to resolve the Incident may require a Network Intervention.

- B. **CR: Change Request** – where a CR is a Container for handling a Change *2 to FABRIC &/or NW-SERVICE against a Test- or Production Baseline. The action to make the Change may require formal Change Management; and that activity is tracked in a Network Intervention, see E below.
- C. **SR: Service Request**: A general request for service *3 - i.e. NBI being asked to do something by some authorized Actor, where not one of the three Types above, which requires tracking.

Each Ticket Type has an associated list of Ticket Categories. For example, the Ticket Type Incident has the following Ticket Categories:

- End User Connection Issue (single End User)
- Other Issue/Query
- Network Issue (multi End User)
- Billing Issue
- Service Provider Portal Issue

The following Status Transition Diagram illustrates the ticket lifecycle.



It is divided into four stages: S1-S4, where:

S1: is the initial/opening stage of the Ticket Lifecycle

S2: is the opening stage of the Ticket Lifecycle, between Ticket opening and before the Ticket is assigned to any Handling-Queue. The Service Provider must populate the ticket with mandatory, minimum, and sufficient details in order to facilitate swift resolution.

S3: is the core handling stage of the Ticket Lifecycle.

HandlingAssigned and **HandlingStarted** indicate the assignment of a Ticket to a Handling Queue and Handling User; and the subsequent commencement of any substantive activity on the Ticket.

The Status: **WaitingForClient** and **WaitingForOther** represent periods during the Ticket Lifecycle during which the assigned Ticket-Handler is waiting for either the Service Provider to act on a request for action or additional information; or for some Other party to act e.g. for some analysis or field test or other action to complete.

A Remedy (Workaround or Preliminary Response) is distinguished from a Resolution (Fix or Final Response) in the Ticket Lifecycle; as demarked by Status: **HandlingRemedy** <Supplied | Rejected> and Status: **HandlingResolution**<Supplied | Rejected> respectively.

The Status: **HandlingComplete** is distinguished from Status: **Closed**.

HandlingComplete marks fulfillment of Ticket-Handling obligations for performance under the SLA; by delivery of an accepted Remedy and Resolution; and subsequent concluding the Ticket Handling by updating the Ticket Handling- and related DataSet to a closing standard. The Ticket Closing is a final action, by mutual agreement.

S4: is the concluding and closing stage in the Ticket Lifecycle. A Closed Ticket may be ReOpened if the fault re-occurs within 10 days.

4.2 Notifications

All orders and faults will have associated notifications during the order or fault lifecycle. The notifications which a Service Provider can expect to receive for orders and faults are outlined in the tables below. 5. For eligibility notifications please see Section 6.

The table below show the notifications, with a description and some sample data contained within the notification, applicable to a Pre-Order:

Table 5: Pre-Order Notifications		
Order Notification	Description	Example
Deferred	Indicates that NBI has been unable to pass this premises as part of the network build, for the reasons provided and will be managed on an individual basis from this point onwards.	Reason Code: "1001" Reason: "Localised flooding" Indicative Date: "2019-11-28"

Table 5: Pre-Order Notifications		
Order Notification	Description	Example
Revised	Informs the Service Provider that the projected Ready for Service date has moved, either forwards or backwards.	Reason: "OLT delayed" Date: "2019-11-28"
Request to Cancel (RTC)	Issued to the Service Provider if the Pre-Order has been disputed, and the Pre-Order needs to be cancelled. Note: Action required by Service Provider.	Reason: "End User dispute" Date: "2019-11-28"
Processed	Indicates that NBI has processed the pre-order and it is now a full order.	Order ID: "PROD_25000_42532" Line ID: "1234567890" RFS Date: "2020-09-28"
Cancelled	Issued when an order is cancelled.	

The table below shows the notifications, with a description and some sample data contained within the notification, applicable to a survey order:

Table 6: Survey Order Notifications		
Order Notification	Description	Example
Appointment	Notification to indicate change of appointment date for the survey request.	Appointment Date: "2020-03-12" Appointment Slot: "AM"
Status Change	Indicates a change of status in the survey request.	Status: "Design Complete" Description: "Pending Design Review & Approval"
Approval Required	Notification to indicate survey now requires approval from the Service Provider before updating the connection design. Note: Action required by Service Provider.	Customer Contribution: "425" Approve By Date: "2020-03-31"
Notes	Provides additional information on the progress of the survey.	Text: "The house is a new build and has ducting available from road to north side of building."
Request to Cancel (RTC)	Notification to indicate NBI would like the survey request cancelled due to reason provided. Note: Action required by Service Provider.	Code: "S001" Reason: "Customer refusing access to the property" Date: "2020-03-31"
Completed	Issued when the order has successfully been completed.	Completion Date: "2020-03-31" Customer Contribution: "450" Connection Standard: "Standard 1a"

Table 6: Survey Order Notifications

Order Notification	Description	Example
Cancelled	Issued when an order is cancelled.	

The table below shows the notifications, with a description and some sample data contained within the notification, applicable to a full order:

Table 7: Product Order Notifications

Order Notification	Description	Sequencing	Example
Appointment	Issued when a reserved appointment expired, was no longer available, and a new appointment has been provided.	After accept response.	Appointment Date: "2020-03-12" Appointment Slot: "AM"
CSID Update	Contains the details of the CSID for the line.	Issued within a few hours of accept response.	CSID: "CAV_OLT001eth1/2/3/4/ONU/OnuSLT/UNI" Line ID: "1234567890"
VLAN Update*	*For Business Products only NBI specify the VLAN ID.	Issued within a few hours of accept response.	"2001"
Status	A change in the job status for the order. 3 core types of status notifications: Civils, Ownership and Job Update.	Civils - issued on civils works date. Ownership - 48 hours prior to appointment (with NBI) and potentially after local arrangement (with RSP). Job Update - on appointment or day before appointment.	Status Classification: "Job Update" Reason: "On Route"
Reschedule Local Arrangement (RELA)	Issued when engineer has rescheduled an appointment locally with the End User.	Issued while appointment is in NBI's ownership.	Reason: "Customer not at home customer contacted" Appointment Date: "2020-03-12" Appointment Slot: "AM",
Reschedule Service Provider (RESP)	Issued when the appointment is not able to be delivered. The notification will specify the reason. The Service Provider must either reschedule an appointment or cancel the order.	Issued at any time from NBI Ownership to completion	Reason: "Customer requested to cancel" Reason Code: "CRC1" Date: "2020-03-31"
Request to Cancel (RTC)	Issued after 21 calendar days if the Service Provider has yet to reschedule an appointment or cancel the order. Note: Action required by Service Provider.	21 days after RESP notification	Reason: "No response from End User" Date: "2019-11-28"
Notes	Provides an update to the Service Provider regarding the order in the form of a note.	At any time after accept response	Text: "Made 3 attempts to call on 29/11/2019 no response 10:24, 17:43 and 19:43"
Hold	Order cannot be delivered by NBI and is held by NBI pending resolution of the underlying cause.	Likely to be after NBI Ownership (2 days prior to appointment)	Reason: "Outage" Next Update Date: "2019-11-28"

Completed	Issued when the order has successfully been completed.	Immediately after scheduled appointment completes	Partial Completed Flag: "True" Line ID: "1234567890"
Early Life Fault	A valid issue or fault has been detected or logged within 10 working days of the installation complete.	Immediately before Completed notification	Reason: "Speed Test Low"
Cancelled	A notification to indicate order request has been cancelled due to the reason provided.	7 days after RTC	

Note: The above tables of examples are not the full values for each notification – for a full list of notification details, please consult the latest API Specification.

4.2.1 Additional Information in Notifications

System Error Codes are provided to the Service Provider when common system errors occur. For example; "Account Not Active" or "Appointment Expired". For a full list of Error Codes please refer to Appendix 2.

4.2.2 Push Notifications

NBI offers Push Notifications, where a Service Provider wishes to be informed proactively of all asynchronous updates in near real time.

If a Service Provider wishes to use the Push Notifications mechanism, then this is required to be setup and tested during the onboarding process. If the Service Provider subsequently requires Push Notifications after onboarding, then they must contact their NBI account manager which can ensure appropriate setup and testing.

4.2.3 In-Life Fault Notifications

The notifications that can be sent during the access fault ticket life cycle will be defined in line with ticket status and flows defined in 4.1.2 Fault State & Ticket Types.

These notifications will be updated in consultation with Industry.

4.3 Fault Codes

When the Service Provider submits an incident report/ticket, fault codes are used to describe the nature of the problem. They also help determine if an appointment is required to resolve the issue.

Fault Sub-codes are also available to provide further detail, for example:

- "Service Loss" with Sub-code options of "Authentication issue"

Suitable Fault Codes / Clear Codes based on current Industry Fibre best practice will be listed in Appendix 3.