

PROBLEM MANAGEMENT USER GUIDE

Purpose and Objectives

The Information Technology Infrastructure Library (ITIL) defines a problem as the cause of one or more incidents. This document explains Verizon's problem management process.

Problem Ticket Types

There are two types of problem tickets:

- A problem chronic ticket. Used to investigate the underlying cause of repeat incidents on the same circuit
 or device which adhere to the chronic criteria. Opened reactively or proactively.
- A problem customer ticket. Used to investigate the underlying cause of one or multiple incidents, affecting
 one or multiple devices, and should aim at preventing future incidents from occurring. The ticket can be
 opened reactively upon your request.

Neither type should be raised to restore an ongoing service impacting event.

Criteria for opening Problem Chronic Tickets

- A Problem Chronic Ticket should be raised if the same service has experienced multiple incidents for the same service ID in a rolling 30-calendar day window, and you believe that the underlying root cause has not been resolved. It can happen that you experienced multiple service outages in the same period, but the outage causes were unrelated e.g. a fiber cut, a power outage and a loose cable.
- The number of incidents that may trigger a proactive Problem ticket depends on product type, access technology (DSL, TDM, etc.), previous incidents' symptom/resolution codes and the country where the service is terminating.

Criteria for opening Problem Customer Tickets

- A Problem Customer ticket should be raised if it is believed it could help prevent future incidents occurring.
- A typical example could be where you experienced a high number of router failures over various sites. An
 incident ticket would still be required to restore service for each occurrence (each site will have a
 different service ID) but the Customer Problem ticket would investigate the underlying cause.



How to create a Problem Customer ticket

To open a Problem Customer ticket, please call the Service Desk and specifically request to open a Problem Customer ticket.

Please note that when your service is down or is degraded, you should not raise a problem ticket as these issues need to be resolved through the normal incident management ticket process.

When you call to open a Problem Customer ticket, please be prepared to provide the following information:

- 1. The service identifier (Circuit ID, DNS short name, UU-number, etc.)
- 2. As much technical detail as possible to give a Verizon technician a good foundation to start investigating. Tangible evidence such as error logs with time stamps and any other relevant information from your network management systems may prove invaluable. This information can be e-mailed to Verizon and attached to the problem ticket.
- 3. Site details, to include name, phone number and e-mail address of a person who can provide an engineer access to your premises whenever required.
- 4. Technical contact details, to include name, phone number and e-mail address of a technical personnel with whom Verizon technicians can liaise.

After the initial investigation has been completed, Verizon may contact you to release the service for intrusive testing during a maintenance window. Typically, the maintenance window will be 24 hours, but can vary dependent on the symptoms to give a reasonable opportunity to detect intermittent errors.

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When you call to open a Problem Chronic ticket, please be prepared to provide the following information:

- 1. The service identifier (Circuit ID, DNS short name, UU-number, etc.)
- 2. Detailed symptoms of the chronic issue and the impact to your service/operation.
- 3. Contact person to approve maintenance windows.
- 4. Local point of contact details.
- 5. Site access times.
- 6. Confirmation power/equipment and cabling has been checked and verified on site.
- 7. Details of any recent or pending upgrades or migrations.
- 8. Any environmental issues that may affect the site.
- 9. Incident ticket references (up to 5) all relating to similar faults, including the fault type and resolution findings. The applicable criteria is as follows:



Product	Qualifying incident tickets criteria
PIP (all countries) and SDSL (Belgium, France, Germany)	At least 3 tickets within the last 30 days for the same NE ID with similar related issues
Other DSL (all countries), 3rd party (all countries), Customer Owned (all countries) and ADSL/SDSL Spain and Italy	At least 5 within the last 30 days for the same NE ID with similar related issues
IP Dedicated product	At least 3 or more service affecting in last 30 days for the same NE ID with similar related issues
Voice product services	At least 3 or more related service affecting faults within 30 days

After the initial investigation has been completed, Verizon may contact you to release the service for intrusive testing during a maintenance window. Typically, the maintenance window will be 24 hours, but can vary dependent on the symptoms to give a reasonable opportunity to detect intermittent errors.

Proactive Problem Tickets

Verizon logs all incidents related to the same service identifier within a rolling 30-calendar day window to detect problems.

Verizon has specialized technicians and documented processes to proactively detect, initiate and investigate problem tickets. Verizon's ticketing system automatically highlights the number of incidents within the last 30 calendar days to the technician. They will first verify if a problem exists.

If a problem is detected, it will be isolated and then rectified. After rectification, a problem chronic ticket will typically be monitored for an additional 30 days. If Verizon cannot detect any further problems, the problem chronic ticket will be closed. The Verizon technicians may involve other Verizon departments, a third party (PTT/Carrier / Vendor) or dispatch a Verizon field engineer with testers. For a Problem Customer ticket a Root Cause Analysis and / or a Plan of Action (POA) will be provided depending on the issue being investigated.

Progress Tracking and Resolution Timescales

A problem ticket can be tracked via the Verizon Enterprise Center (VEC) portal.

Due to the nature of these investigations, the service can be monitored for many days to detect intermittent errors. Therefore, the problem resolution timescales are typically measured in weeks.

The outcome of the problem ticket investigation will always be shared with you, even if the investigation was inconclusive.



Problem Management - Special Cases

The problem chronic ticket will be closed in the following cases after initial diagnostics:

- The cause lies within the access tail that is provided (owned) by you through a third party.
- Errors or issues are within Verizon's, vendor's or carriers technical specifications.
- You have been unable to provide a date for an obtrusive maintenance window within 7 calendar days of the initial request from Verizon.
- The problem customer ticket will be closed in the following cases after initial diagnostics:
- It is deemed that the ticket does not meet the criteria to be a problem customer ticket.
- You have not replied to follow up questions about the issue within 7 calendar days of the initial request from Verizon.

Background Information

The challenge with chronic problems is that, while there may have been multiple (proactive) incidents related to the same service within a 30-day period, it often happens that these incidents are unrelated (i.e. there is no single cause like a fiber cut and a power outage) or that customers do not follow the Verizon change management process when performing maintenance or changes (to suppress proactive incident ticket creation. Also, some PTT/Carriers do not always notify Verizon of their change management activities which may result in a short duration alarm and a proactive ticket being created. The alarms clear before the technician has had a chance to troubleshoot.



Service Assurance User Guides Library

Documents can be found on the <u>Service Assurance User Guides</u> page. The latest version of this document can be always found here.

General Customer Training Information

Go to our <u>Customer Training Portal*</u> to enroll in training or to download other user and reference guides.

*Registration is required

Verizon Enterprise Center

The <u>Verizon Enterprise Center</u> portal is an easily accessible tool that supports you in dealing with Repair related technical issues via repair tickets, as well as with Invoice inquiries and Account Management requests, offering an alternative to emails and phone calls.

Getting started on Verizon Enterprise Center

Introduction to Verizon Enterprise Center and information on how to register can be found on the Guides & Tutorials page <u>here</u>.



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