Maintenance Ticketing Gateway

CenturyLink™

Implementation Guidelines

January 13, 2012

For MTG Software Version 1.0

Versioning

All releases of this document are listed in chronological order.

There is no relationship between the document number and the software release number.

Document Release	Date	Description
1.0	January 13, 2012	Initial document for MTG release 1.0

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Disclaimer

This document provides an overview of a CenturyLink™ service. It is intended to assist users in determining the type and structure of information requested and returned by the service.

The information contained herein does not constitute an offer by CenturyLink to provide services, equipments, or materials. Any such services and items will only be provided pursuant to an effective agreement between CenturyLink and the Wholesale customer.

Contents

1 Introduction

1.1 Purpose of Document

This document is intended for Wholesale customers wishing to implement electronic trouble ticketing capabilities with CenturyLink™ for the exchange of Trouble Ticket information for various CenturyLink products and services purchased by the customer. This document addresses the MTG Implementation Process in terms of both business and technical information. Following the Introduction, the Implementation Activities section addresses the Wholesale customer requirements and processes for implementing access to MTG. The remainder of the document contains detailed information about the various transactions and data used within MTG.

A separate document used during the implementation process contains a set of questions for Wholesale customers to answer with the support of their CenturyLink Electronic Implementation Services team, in order to determine the system requirements needed to support trouble ticket transactions via MTG.

CenturyLink's Maintenance Ticketing Gateway (MTG) provides a mechanism to automate communication and the processing of trouble ticket information. This mechanism is available for use by Wholesale customers of legacy Qwest.

MTG provides an electronic bonding facility that enables CenturyLink Wholesale customers of legacy Qwest to use their own repair/ticketing system to manage troubles on their CenturyLink products and services in legacy Qwest territory. This application is used primarily to mechanically process telephone circuit repair activities including repair ticket generation and MLT (Mechanized Loop Tests).

MTG is available for use only in legacy Qwest territories in the following states:

Arizona Colorado Idaho Iowa	Montana Nebraska New Mexico North Dakota Oregon	South Dakota Utah Washington Wyoming

The CenturyLink MTG Ticketing System is based on:

- ATIS Standard "XML Schema Interface for Fault Management (Trouble Administration)," ATIS-0300003.2010, an industry standard for exchange of trouble ticket information

- ATIS- 0300079 –tML Transport Profile: This document recommends a Transport Profile Specification to support the Telecommunications Markup Language (tML) Framework. The intent is to facilitate the

interchange of XML formatted business transactions between service requestor and service provider. MTG does not implement every detail of the transport profile, but does use many of the asynchronous concepts described within the guidelines.

- XML POTS Service Test ATIS-0300002.2009, "XML Schema Interface for POTS Service Test." This standard provides an XML schema information model for POTS Service Test based on ATIS-0300262.2007 and an XML schema interface for POTS Service Test function specified in the same ANSI standard.

- This service uses Telecommunication Markup Language (tML).

1.2 Acronyms

BA	Business Analyst
CM	Configuration Management
HTTPS	Hyper Text Transfer Protocol Secure
EISM	Electronic Implementation Services Manager (CenturyLink)
LAN	Local Area Network
MTG	Maintenance Ticketing Gateway
OSS	Operational Support Systems
SM	CenturyLink Service Manager
SOAP	Simple Object Access Protocol
SSL	Secure Sockets Layer
XML	Extensible Markup Language

2 Implementation Activities

2.1 Implementing Access to Maintenance Ticketing Gateway Interface

If you determine that your company can support an XML environment and you would like to conduct business with CenturyLink via the Maintenance Ticketing Gateway (MTG), contact your CenturyLink Service Manager (SM) for a referral to an Electronic Implementation Services Manager (EISM).

2.1.1 Business to Business Maintenance Ticketing Gateway

The use of MTG via XML provides an effective mechanism to automate the communication and processing of trouble ticket information and to reduce manual processes. The MTG Implementation Process will progress according to an agreed upon plan and timeline. The typical project phases for Wholesale or Large Business customers implementing a current MTG release will include:

1. **Initial Communications:** During this phase, all activities to initiate a Customer's implementation are discussed, and the Kickoff conference call is held to introduce specific team members.

    - Electronic Implementation Services Manager (EISM): Responsible for facilitating meetings, coordinating the overall Project Timeline, and is the primary point of contact for the Customer during the entire implementation process.

    - Business Analyst (BA): Responsible for providing assistance with the business rules that govern the Trouble Ticket process and are enforced by the Gateway

2. **Implementation Project Timeline and Test Plan Negotiation:** During this phase, the Implementation Project Timeline and Test Plan is proposed, negotiated and approved.

3. **Requirements Review:** The Requirements Review phase provides an opportunity for a Customer to review CenturyLink's MTG Technical Specifications for trouble ticket transactions and ask any questions they may have regarding those requirements.

4. **Connectivity Testing:** During this phase, Customer connectivity is established and tested. This phase includes the set up of the Customer configuration.

5. **Progression Testing:** This phase affords the Customer the opportunity to validate their technical development efforts and to quantify Trouble Ticket

processing results. CenturyLink provides an environment for Customers to test the MTG interface for connectivity and transaction processing.

6. **Testing Certification:** The purpose of this test phase is to enable our Customers to conduct a series of required API test case scenarios against Maintenance Ticketing Gateway (MTG) application. Upon completion, the partner will provide their results in the MTG Testing Certification document to the MTG Project Team for review ensuring that they meet CenturyLink's expected results prior to deploying to production. Successful completion of these minimum tests, along with review and signoff by the MTG Project Team, is a requirement of all partners prior to CenturyLink granting access to it's production systems. Unless directed otherwise, all partner testing will be performed in CenturyLink's MTG test environment.

7. **Production:** The Customer moves to production once testing is successfully completed. With new implementations, the EISM will support the customer for one week after production turn-up.

2.2 Trouble Ticket Capabilities

Sending accurate and complete information is critical for the successful processing of Trouble Ticket transactions. CenturyLink strongly recommends that Customers using MTG review the Technical Specifications Document in conjunction with implementing this service. The MTG Technical Specifications Document may be obtained from the CenturyLink Electronic Implementation Services Manager, or from: http://www.centurylink.com/wholesale/systems/mtg.html.

2.3 Initial Communications Activities

Prior to the Kickoff call between CenturyLink and the Customer, it is recommended that the Customer review and answer the Customer Questionnaire provided as section three of this document. The answers to these questions will provide a basis for ongoing discussions as part of the implementation process.

The following activities will occur as part of the project initiation meeting (Kickoff call) between CenturyLink and the Customer:

1. Provide an overview of the Maintenance Ticketing Gateway and the products supported by this interface.

2. Discuss hardware/software requirements

3. Provide overview of connectivity and transport type used by CenturyLink

4. Determine if the customer will require a new Digital Certificate, or will reuse an existing one
5. Introduce CenturyLink and Customer team members and identify roles and responsibilities
6. Identify the objectives, scope of the products to be implemented and proposed timelines
7. Review the Implementation Guidelines and the implementation processes
8. Discuss the Testing/Production processes
9. Review documentation resources and distribution
10. Come to agreement that the Customer will move forward with an implementation.

2.4 Initial Communications Phase Completion

The initial communications phase will be considered complete with an agreement to either move forward with an implementation or to suspend or halt progress due to limitations on the Customer side. This agreement and rationale will be documented in the meeting minutes by the EISM. Additional team meetings will be held as agreed upon.

2.5 Project Timeline Negotiation

An Implementation Project Timeline represents the milestones and responsibilities of all parties throughout the planned MTG implementation process. These milestones will be mutually agreed upon. Regularly scheduled conference calls will be conducted as needed to review progress, answer questions, and identify and communicate resolution of issues. The assigned project manager will be responsible for maintaining and monitoring progress within the Project Timeline. A mutual negotiation and approval process will be used to manage changes to schedules as recommended or required by either party. All parties will give sufficient advance notice to the other party to allow adequate analysis of the impact of any proposed schedule changes.

The inability of either party to meet any of the milestones contained in the Implementation Project Timeline on the date(s) identified may result in the need to renegotiate a revised Project Timeline/Test Plan. All revised plans will be developed based on the availability of resources from within the respective organizations and may contain dates that are substantially different from those described in the original plan.

2.5.1 Project Timeline Negotiation Activities

The following activities will occur during the Project Timeline development and approval process:

1. CenturyLink EISM will provide Project Timeline for milestones that are required for a new implementation to MTG for the Customer's review.
2. The Customer will review the proposed Project Timeline and ask any questions about the content.
3. The EISM will work with the Customer to incorporate changes to the Project Timeline and reissue, if necessary, for a final review and approval.
4. The Customer will review Project Timelineand approve timeline when there is mutual agreement. This will be the final approved Project Timeline for the implementation/migration.

2.5.2 Project Timeline Negotiation Phase Completion

This phase of the MTG Implementation will be considered complete with the creation of an agreed upon, approved Project Timeline.

2.5.3 Requirements Review

A critical factor in a successful implementation is a thorough understanding by the Customer of MTG. The requirements review phase of implementation will provide the Customer with an opportunity to develop a clear understanding of these requirements. This review is critical to the Customer who will:

- Develop and define the business processes and procedures necessary to support the use of their MTG interface for trouble ticket transactions.
- Develop the appropriate documentation (i.e., Methods and Procedures) necessary to support the use of the MTG interface by Customer personnel.
- Perform any necessary database gap analysis for the purpose of ensuring that all data fields that carry the trouble ticket information can be successfully populated.
- Identify appropriate data values.

2.5.4 Requirements Review Activities

It is the Customer's responsibility to perform a thorough review of all CenturyLink requirements and specifications. CenturyLink will provide support to clarify issues and answer questions regarding MTG business rules, requirements, and the Implementation Process. CenturyLink recommends the

following process to ensure that the Customer has a thorough understanding of the answers to each question:

1. The Customer reviews CenturyLink specifications as documented in the Technical Specifications Document, located at: http://www.centurylink.com/wholesale/systems/mtg.html
2. Questions arising from the Customer's review of MTG requirements should be logged on the question log and will be reviewed during the Implementation meetings. The MTG Question Log is located at: http://www.centurylink.com/wholesale/systems/mtg.html
3. CenturyLink will either provide a response to the question or identify those questions requiring further investigation and research. CenturyLink will research these questions and will generally provide an initial response within 5 business days from the submittal. Responses are typically communicated during the Implementation meetings but may be given via email or phone outside of the meeting.

2.5.5 CenturyLink MTG Implementation Documentation Overview

The following documents provide additional information on the Implementation Process, or are designed to capture necessary business and configuration parameters. Distribution of these documents will occur as needed during the course of the implementation project.

Distributed prior to the kickoff call:

- Kickoff Agenda
- Contact List Template
- MTG Implementation Questionnaire

Additional information can be found on the Wholesale OSS website (http://www.centurylink.com/wholesale/systems/mtg.html) including:

- Technical Specifications Document

2.5.6 Requirements Review Phase Completion

The Requirements Review phase of the implementation will be considered complete when the Customer determines that they have adequately reviewed CenturyLink's specification documentation and have a thorough understanding of it. This understanding will be critical to the effective development of the customer's interface with CenturyLink.

2.5.7 Connectivity Testing

Customers must have a digital certificate issued by CenturyLink, and a NetworkID and UserId, for authentication/authorization of inbound customer requests in order to access MTG. The specifics of connectivity testing will be defined during implementation meetings.

CenturyLink Digital Certificates are issued for each of your systems and are required for each system that will be used to access MTGweb services. CenturyLink will provide a Digital Certificate ID and PIN and instructions for downloading the certificate from CenturyLink. The certificate must be downloaded within 30 days. Certificates will expire every 5 years.

Customers will be assigned both a network ID and UserID during the MTG customer implementation process.

For additional information, please call your Implementation manager.

2.5.8 Progression Testing

Progression Testing Phase: This phase is accomplished using the MTG Testing environment. Progression testing provides the Customer with the opportunity to validate technical development efforts and to quantify processing results during the MTG implementation process. Testing also verifies the Customer's ability to send correct XML transactions through MTG.

The Testing environment relies on several back end systems. Testing must be closely coordinated to ensure effective testing during your scheduled window.

2.6 Production

Once testing has been completed according to the test plan, the Customer will be readied for production. There are some configuration settings that must be completed in the production environment before the customer can begin sending transactions in production.

Customer will be in Controlled Production for 2 days to closely monitor progress and ensure everything is working properly. This will be defined and coordinated prior to your production date. A call will be scheduled to monitor and track results for a set of predefined transactions to determine readiness to enter full Production.

As testing begins to wind down, the Customer and CenturyLink will reaffirm the production date from the Project Timeline and the EISM will direct any environment configuration that is necessary. On the agreed upon date for production, the Customer may begin sending in transactions to CenturyLink.

2.6.1 Production Support Contacts

MTG support to Customers who have recently been placed into production will be provided as follows:

Timeframe	Technical Support	Contact Information
First Week after Implementation	Electronic Implementation Services Manager (EISM)	Provided by EISM
After First Week	Application AIP Support Team	CenturyLink Help Desk (Add TN information)

2.6.2 Change Management Process

CenturyLink facilitates a regularly-scheduled forum in which CenturyLink and the CLECs communicate about Operational Support System (OSS) interface changes, release lifecycles, release notifications, and communication intervals. The CenturyLink CLEC Industry change management forum is referred to as the Change Management Process (CMP).

CenturyLink encourages CLECs implementing the MTG interface to participate in the CMP process. Online registration can be found on the CMP website page. Release notifications, team meeting information, and change requests are also provided to all registered team members via e-mail. For further CMP information, please refer to the following website:

http://www.CenturyLink.com/wholesale/cmp/index.html

During testing with CLECs, situations may occur that require CenturyLink to submit a Change Request internal to CenturyLink to fix an issue in CenturyLink's Test systems. When an issue is discovered that substantially impacts a CLEC's ability to use a transaction in MTG, notification will be distributed via e-mail within three (3) business-days. Notification of any production issues will follow the CMP guidelines section 12.0. Please refer to the following URL for more information: http://www.CenturyLink.com/wholesale/cmp/whatiscmp.html

CenturyLink will notify all CLECs that have subscribed to the unplanned event notifications and Test environment notifications. It is the CLEC responsibility to subscribe to those notifications they wish to receive. The notification will include a description of the problem and, if known, a potential fix date. If a fix date is not known, CenturyLink will update all impacted CLECs with the fix date when known. CLECs intending to implement new transactions will be informed of any known issues for that transaction during the Kickoff call.

2.6.3 Hours of Availability for Maintenance Ticketing Gateway

http://www.centurylink.com/wholesale/cmp/ossHours.html

2.6.4 Service Level Agreements

Wholesale customers may have specific contractual date and time frames for service delivery stated in their Service Level Agreement with CenturyLink. Those Agreements are negotiated separately from the services supported by MTG.

3 Communication Protocol

The following diagram is an overview of the access topology into the CenturyLink XML Interface for electronic bonding trouble administration.

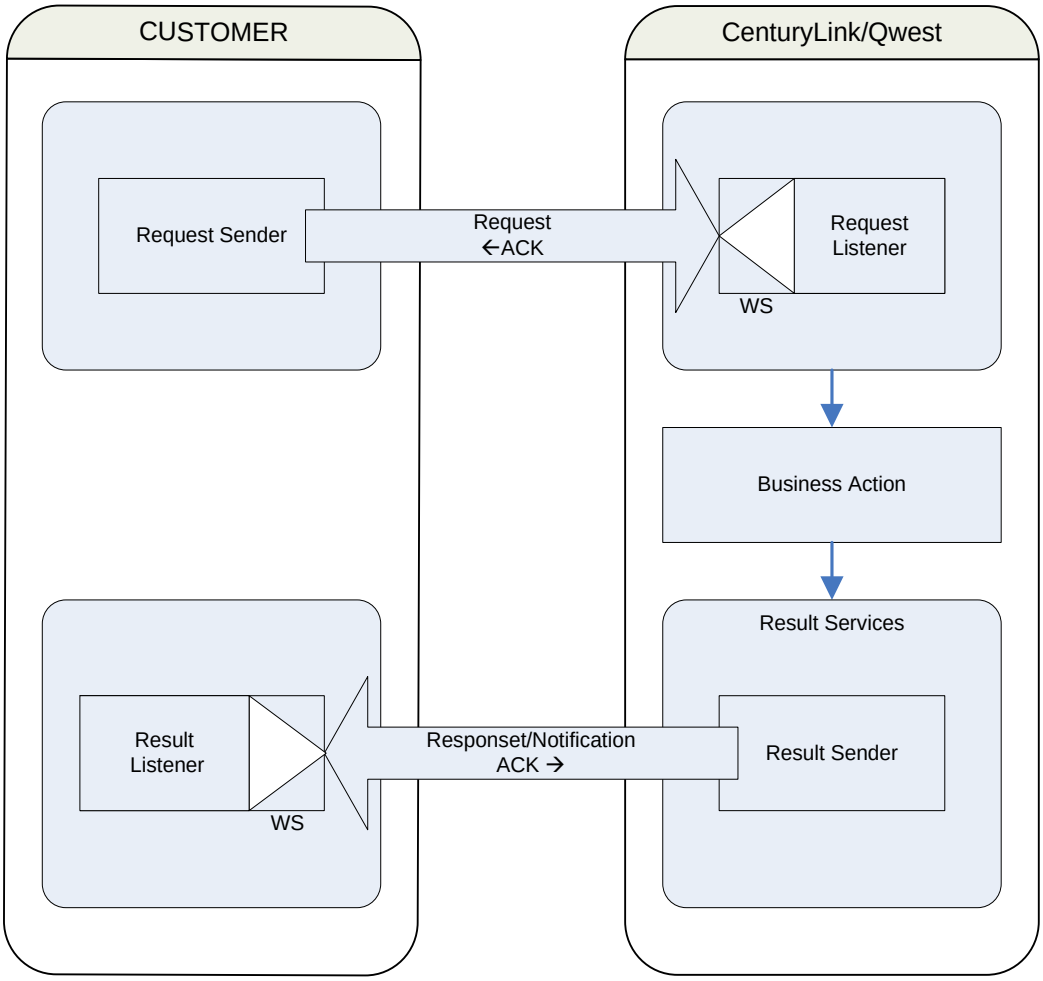


Figure 1 Connections Between customer and CenturyLink

Logical connectivity is offered as illustrated in Figure 1, “Connections between customer and CenturyLink.”

4 Security

4.1 CenturyLink/customer Responsibilities

Each company is responsible for ensuring that only authorized users have access to the host systems and gateways to the other company.

4.2 Authentication

CenturyLink customers must have a Digital Certificate to make use of CenturyLink XML API.

MTG uses two-way Secure Socket Layer/Transport Layer Security (SSL/TLS). The SOAP header is not used for transport security.

Please follow the X.509v3 standard.

For inbound transactions, the customer must send the CenturyLink-provided digital certificate.

For outbound transactions, CenturyLink will send the customer-provided digital certificate.

4.3 Validation of Ownership (Authorization)

4.3.1 Create Request

The CenturyLink MTG gateway validates that a serviceId (circuit/TN) entered belongs to the Manager (i.e., customer) via MCN or ACNA/RSID comparison.

4.3.2 All Other Requests (After Successful Create Request)

The CenturyLink MTG gateway validates that a trouble report entered belongs to the Manager (i.e., customer).

5 Business Functions

This section defines agreements, clarifications, or exceptions for business functions, attributes, and processes.

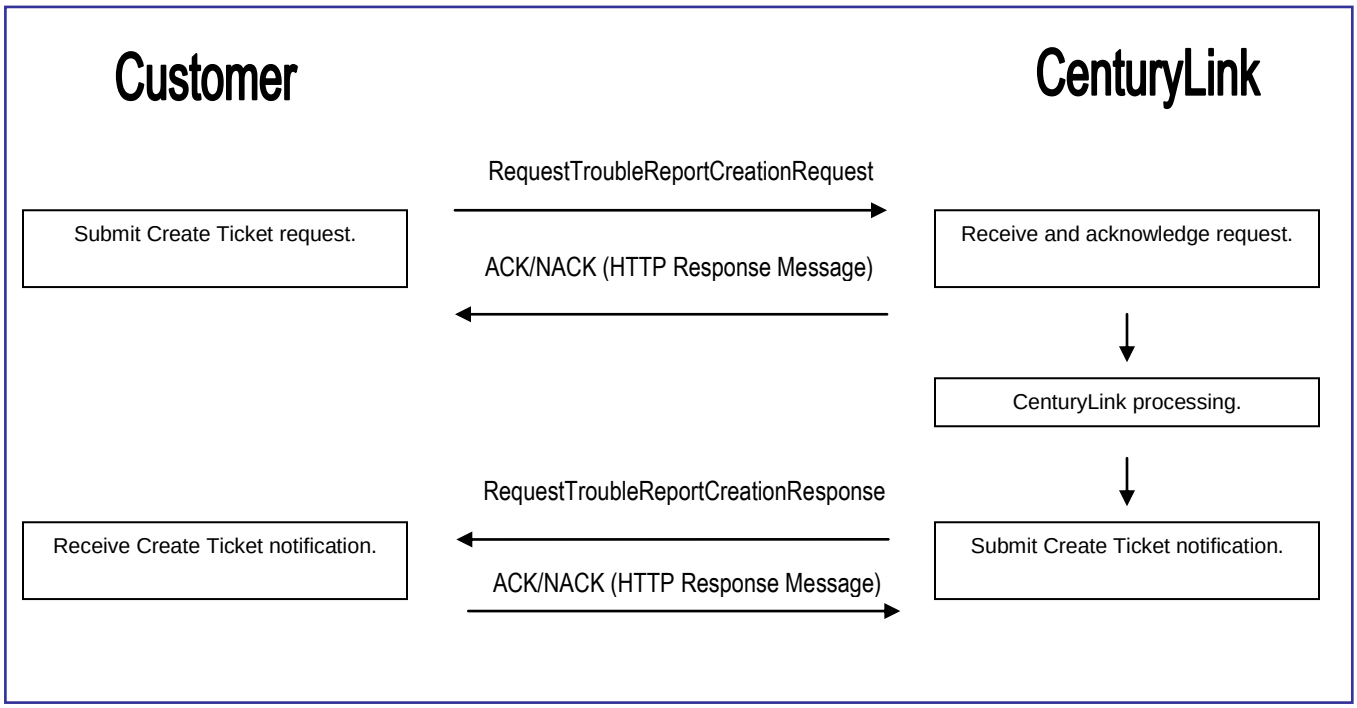
5.1 Definition of Functions

This section defines the business transactions which are agreed will be supported via Electronic Bonding. For each of these transactions, CenturyLink will evaluate the request and determine if an error condition exists. If errors exist, CenturyLink will respond with the appropriate tML defined error message. If no error conditions exist, the response echoes back the header and TargetObjectName information, and returns other attributes applicable to the specific transaction.

See 'MTG Supported Transactions – Trouble Administration', and, 'MTG Supported Transactions – POTS Service Test' at http://www.centurylink.com/wholesale/systems/mtg.html for more detail

5.1.1 Create Trouble Report (RequestTroubleReportCreationRequest)

The request to create a trouble report originates from the customer. The customer issues a Create Trouble Report transaction to create the trouble report in the CenturyLink's OSS. The customer is required to supply mandatory attributes in accordance with TRFD rules and defined XSD rules. CenturyLink is required to validate circuit ownership before transmitting the create response. The trouble report will then be routed to the appropriate group for resolution.



Auto-Test Rules:

POTS:

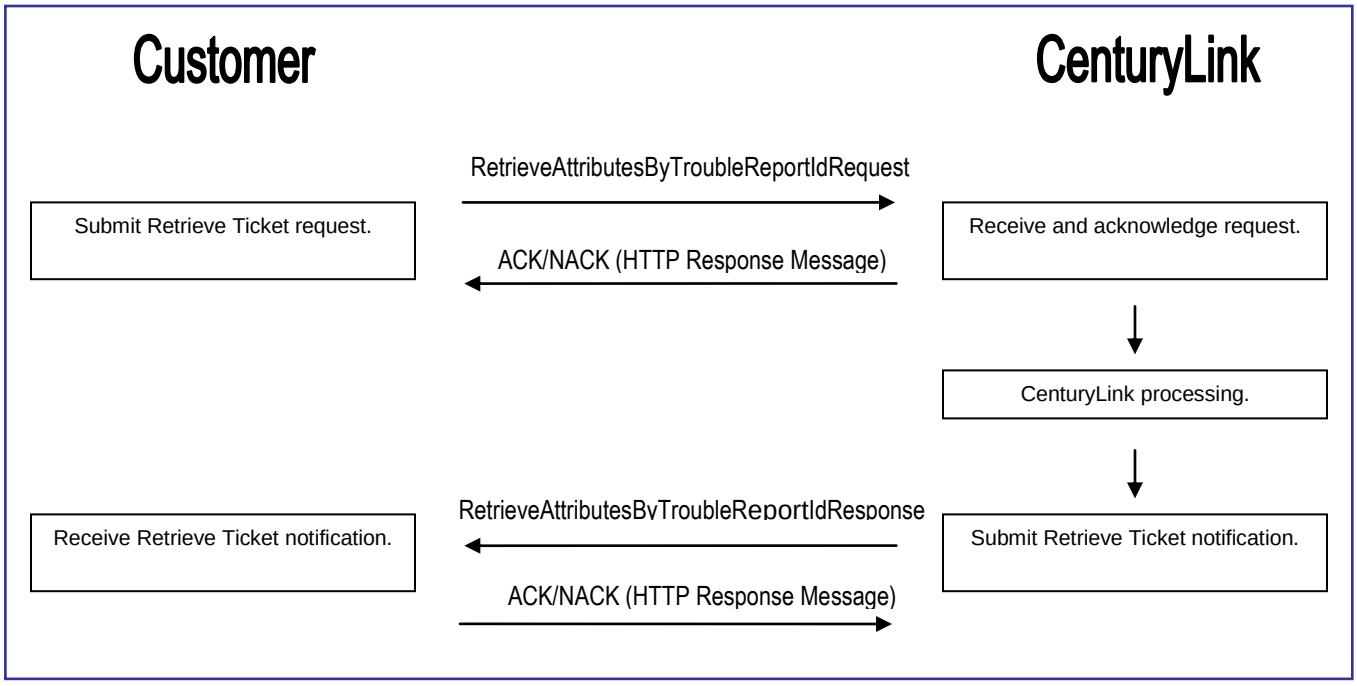
Auto-test is not applicable. Downstream systems determine if an MLT will be run.

Design:

AutoTest is determined by circuit type. If the circuit is not a candidate for AutoTest, this function will not be performed.

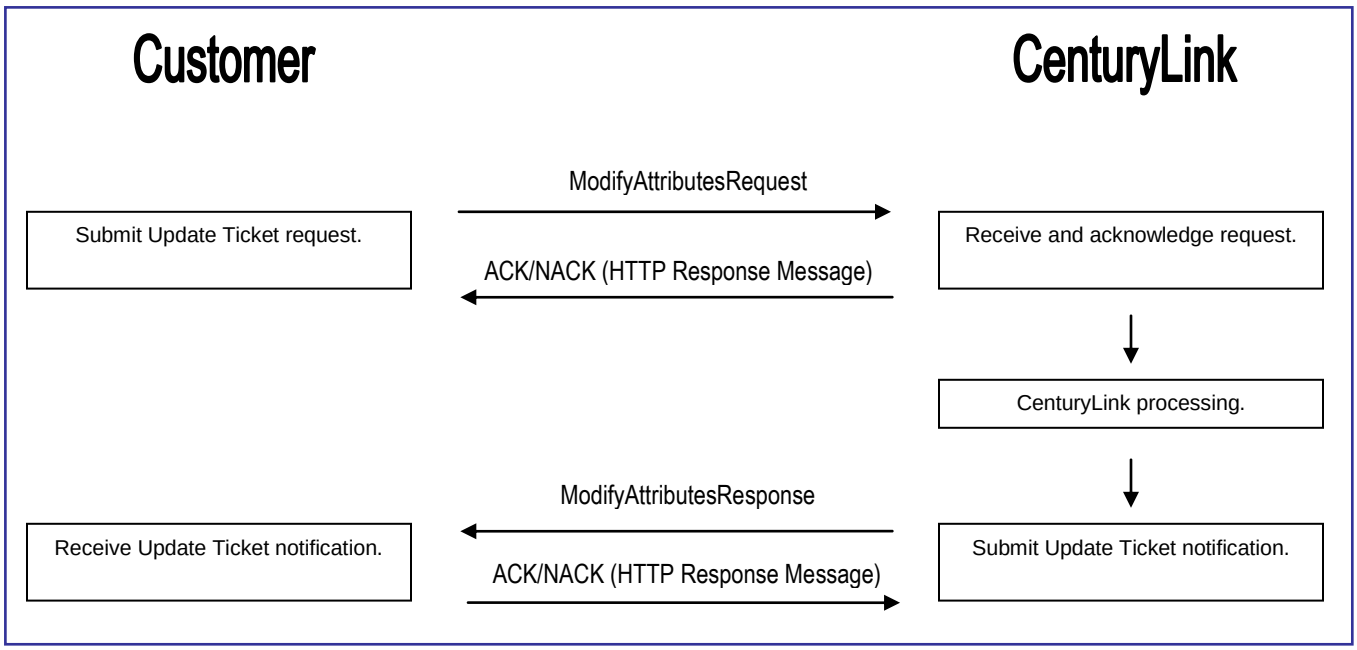
5.1.2 Retrieve Trouble Report (RetrieveAttributesByTroubleReportIdRequest)

This transaction is used by the customer to obtain status and other information from CenturyLink about a previously entered trouble report. The customer issues a Retrieve Trouble Report transaction and CenturyLink will respond by returning the current values of all supported attributes.



5.1.3 Add Trouble Information (AddTroubleInfoRequest)

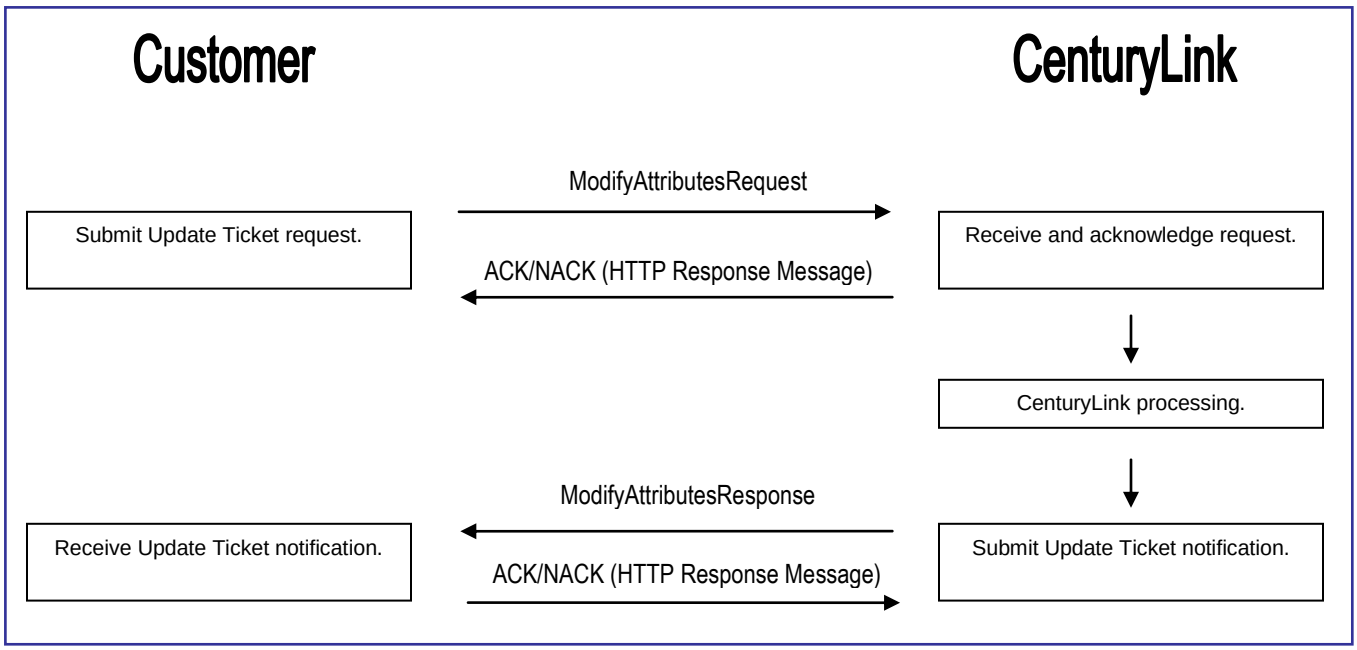
A request to add trouble information to an existing trouble report originates from the customer. The customer issues an Add Trouble Information transaction. When CenturyLink receives the request, it updates the trouble information on the trouble report. The customer also has the option to issue a Modify Attributes Request in order to add trouble information to an existing trouble report.



5.1.4 Update Trouble Report (ModifyAttributesRequest)

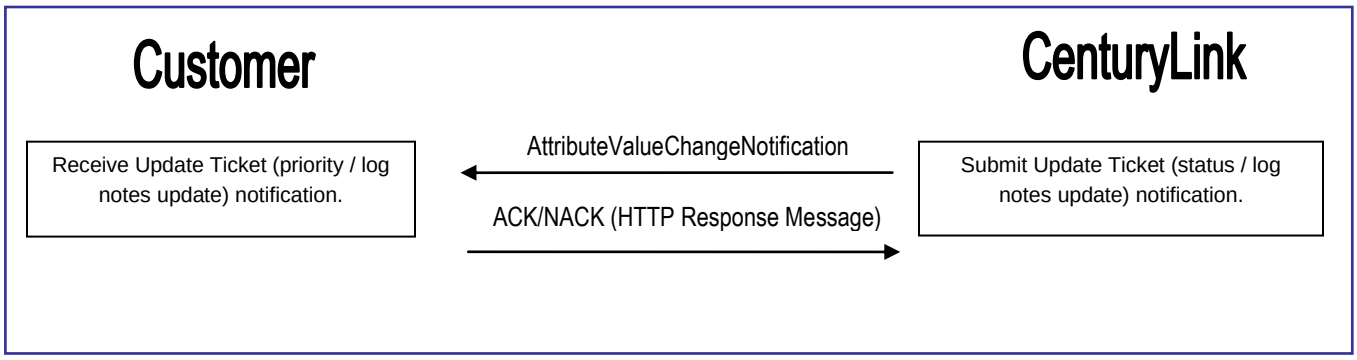
A request to modify information on an existing trouble report originates from the customer. The customer issues an Update Trouble Report transaction only for modifiable attributes. When CenturyLink receives the request, it updates the information on the trouble report.

NOTE: A modification of the CommitmentTimeRequest attribute will not result in a change to the original Commitment Time established during the Trouble Report creation.



5.1.5 Status/Log Notes Change Event Notification (AttributeValueChangeNotification (AVCN))

A status change notification (Event Notification) originates from CenturyLink. CenturyLink issues an Event Notification when the status of a trouble report changes to notify the customer of the status change. CenturyLink can also issue an Event Notification to send Log Notes (remarks) to the customer.



5.1.6 POTS Closeout Process

POTS (LMOS) trouble report closure is a two step process (Cleared and Closed). Cleared information is contained in the first event notification, and detailed trouble report closure information is contained in the second event notification.

POTS Cleared Event Notification

CenturyLink first sends a notification (AVCN) containing Cleared state (3), or Cleared Customer Advised (CCA) status (25), the time the trouble ticket was restored (Trouble Report Status Time), and a message (Additional Trouble Status Info). The TR-Change-Denied rules will be applied after the Cleared event notification occurs (CCA) i.e., allowable actions on a cleared trouble report are limited.

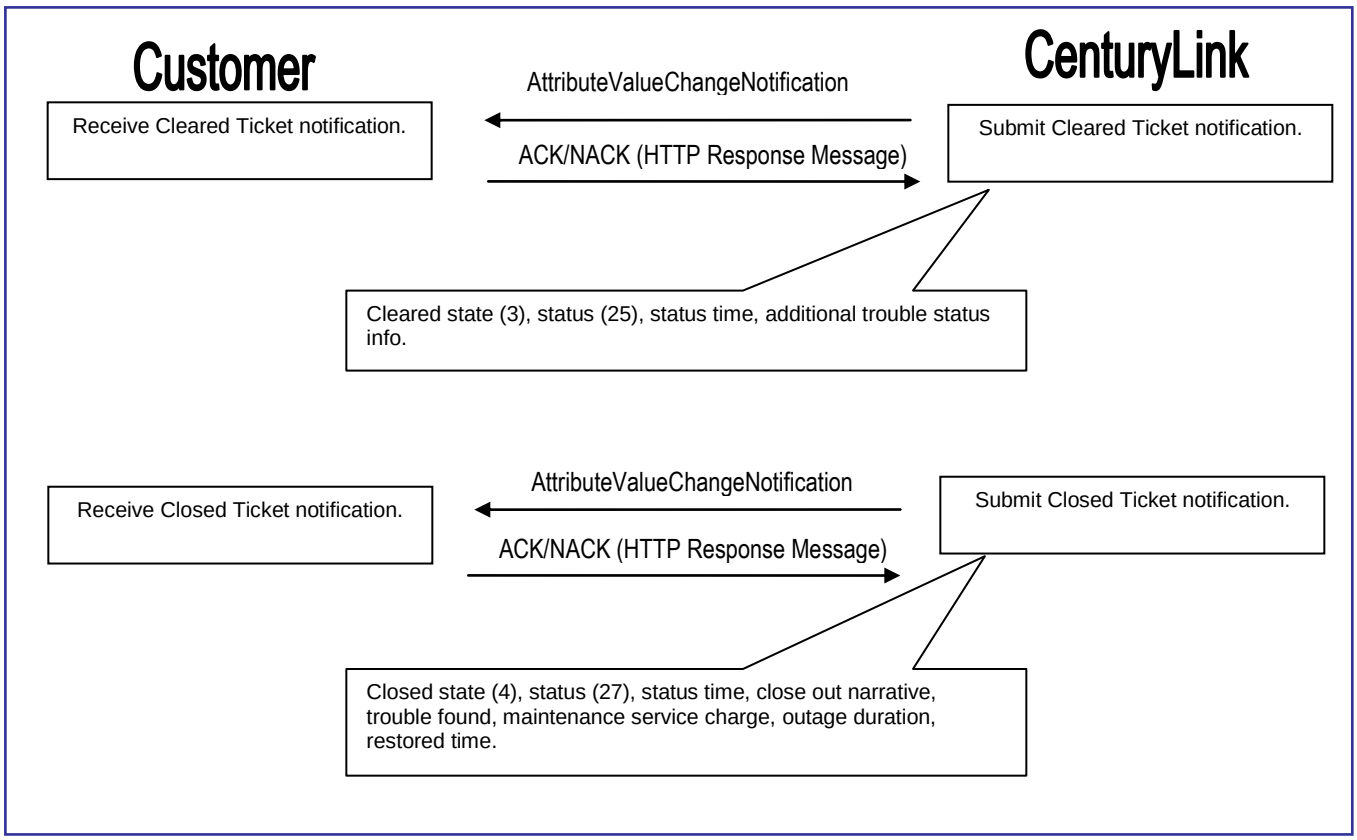
POTS Closed Event Notification

CenturyLink sends the second notification (AVCN) to the customer when the trouble report is closed, and a response is not needed, expected, or waited for to continue processing. The closed notification contains: Closed state (4), status (27), status time, trouble found, maintenance service charge, outage duration, restored time and Close Out Narrative (explaining what CenturyLink found the trouble to be and what caused the trouble). CenturyLink sends the closed transaction as soon as the information is posted in its OSS, so there may be a time interval between the Cleared and Closed events.

Note: There may be a time interval between the Cleared event and the Closed event. If the customer requests status during this interval, the Cleared status information is returned. If the customer attempts to request to change the trouble report (e.g., Cancel) during this interval, the TR-Change-Denied rules will be applied.

Details of the closed notification attributes are:

Attribute	Value	Description
CloseOutNarr	Text	Contains the resolution and cause of the trouble resolved
MaintServiceCharge	Y/N	Y = based on disposition codes 1230, 1240, 1250, 1260 (See Appendix L for details)
OutageDuration	day, hour, min, sec, msec	restoredTime less receivedTime
RestoredTime	GMT	Cleared time
TroubleFound	Enumerated code value	An enumerated code value that identifies the problem resolved (See Appendix O for details.)
TroubleReportState	4	Closed
TroubleReportStatus	27	Closed Out
TroubleReportStatusTime	GMT	Closed Time
AdditionalTroubleStatusInfo	Text	Closed Message text



5.1.7 Design Service Closeout Process

Design Service (WFA) trouble report closure is a three step process. The first step is a CenturyLink-sent Cleared Awaiting Customer Verification Event notification (AVCN), which includes detailed trouble report closure information. The second step is the customer's reply to CenturyLink's request to close the Trouble report. (This reply is sent by the customer as a VerifyRepairCompletionRequest). Assuming the customer did not dispute or deny the request to close the trouble report, the third step is a CenturyLink-sent Closed Event Notification (AVCN).

5.1.7.1 Design Service Cleared/Cleared Awaiting Customer Verification Event

A Cleared Event Notification for a Design Service is an OSS request to close a Trouble Ticket. The same Attributes are returned as in the POTS ClosedOut Event, but the State and Status are returned with Cleared and ClearedAwaitingCustVerification values (3/26). Additionally, the Activity Duration attribute will be present, which contains all of the NoAccess periods (total) and the data structures for Dispatch and DelayedMaintenance. The Close Out Narrative is a text message from the CenturyLink repair technician. The Maintenance Service Charge indicates whether maintenance service charges will apply to the trouble report. The Outage Duration attribute indicates the amount of time between the Trouble Report clearing time and the Trouble Report received

time, excluding any times for delayed maintenance or any times the service could not be accessed by the service provider for repair. The TroubleFound code identifies the resolved problem.

Details of the cleared transaction attributes (containing detailed closure information) are:

Attribute	Value	Description
Activity Duration	Activity Type, Duration (day, hour, min, sec, msec), Billable flag	May contain duration (day, hour, min, sec, msec) for activities NoAccess, Dispatch, and DelayedMaintenance, and whether billable.
CloseOutNarr	Text	Technician-entered close out summary.
MaintServiceCharge	Y/N	Indicates whether maintenance service charges will apply to the trouble report.
OutageDuration	day, hour, min, sec, msec	RestoredTime – ReceivedTime - NoAccessDuration – DelayedMaintDuration
RestoredTime	GMT	Technician-entered cleared time (Technician may back date).
TroubleFound	Enumerated code value	An enumerated code value that identifies the resolved problem (See Appendix O for details).
TroubleReportState	3	Cleared
TroubleReportStatus	26	ClearedAwaitingCustVerification
TroubleReportStatus Time	GMT	Cleared Time
AdditionalTroubleStatusInfo	Text	Cleared Message text

Customer Reply (VerifyRepairCompletionRequest) to the Design Service Cleared Event Notification

The Cleared Event Notification from CenturyLink requires a customer reply. Once the Cleared Event Notification is sent to the customer, a 24 hour timer is started. If no response is received for the Cleared Event Notification, then the Trouble Ticket will be closed automatically. A customer-sent VerifyRepairCompletionRequest will verify or dispute the information (Activity

Duration or Closeout Narrative) sent on the Cleared Event Notification, or deny that the trouble has been fixed:

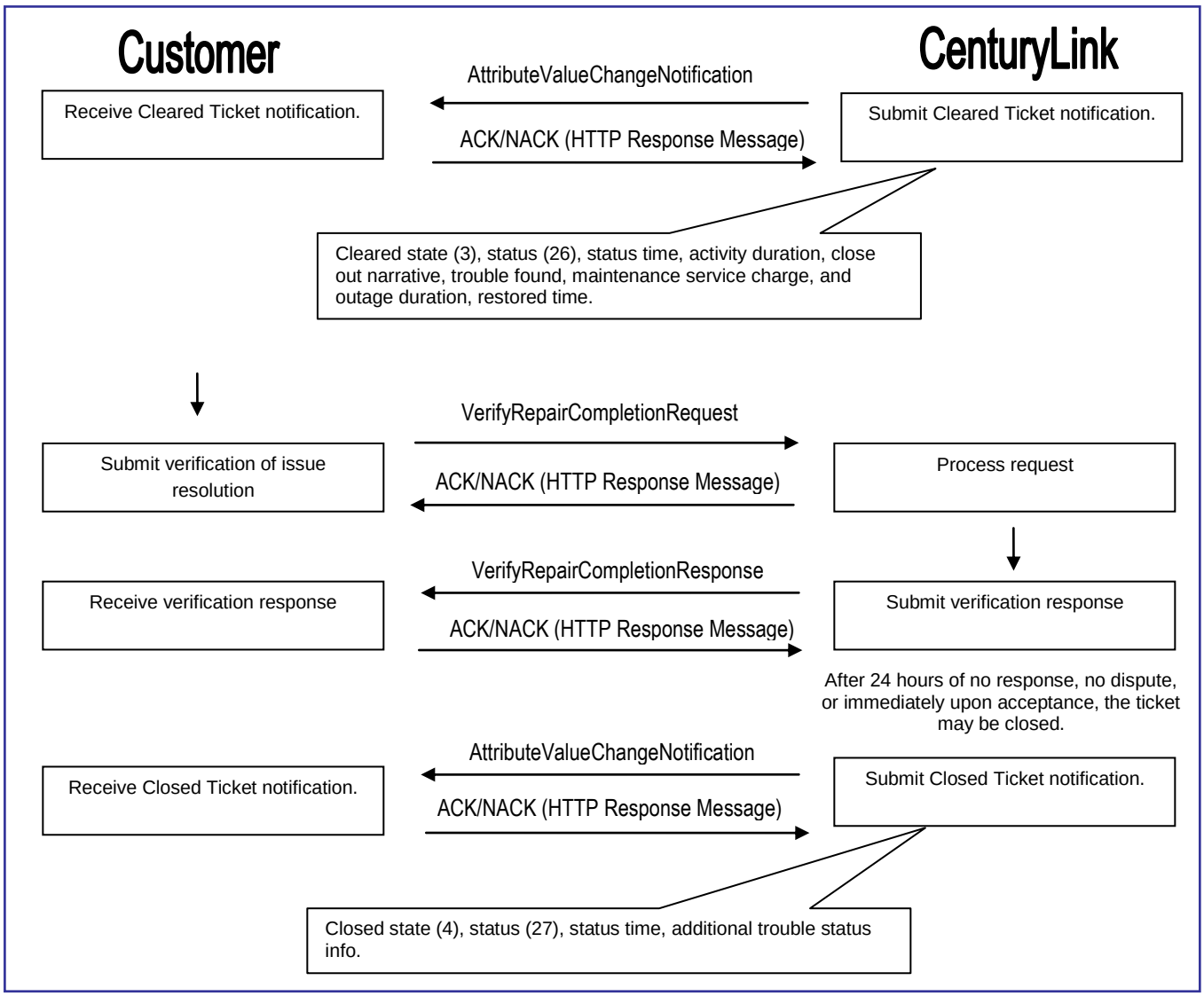
A Verify reply will trigger the CenturyLink process to close the Trouble Ticket.

A Dispute reply triggers a Request for Manual Assistance in the CenturyLink Work Center, in order to resolve the dispute.

A Deny reply will expire the 24 hour timer and put the Trouble Ticket back into open/active status.

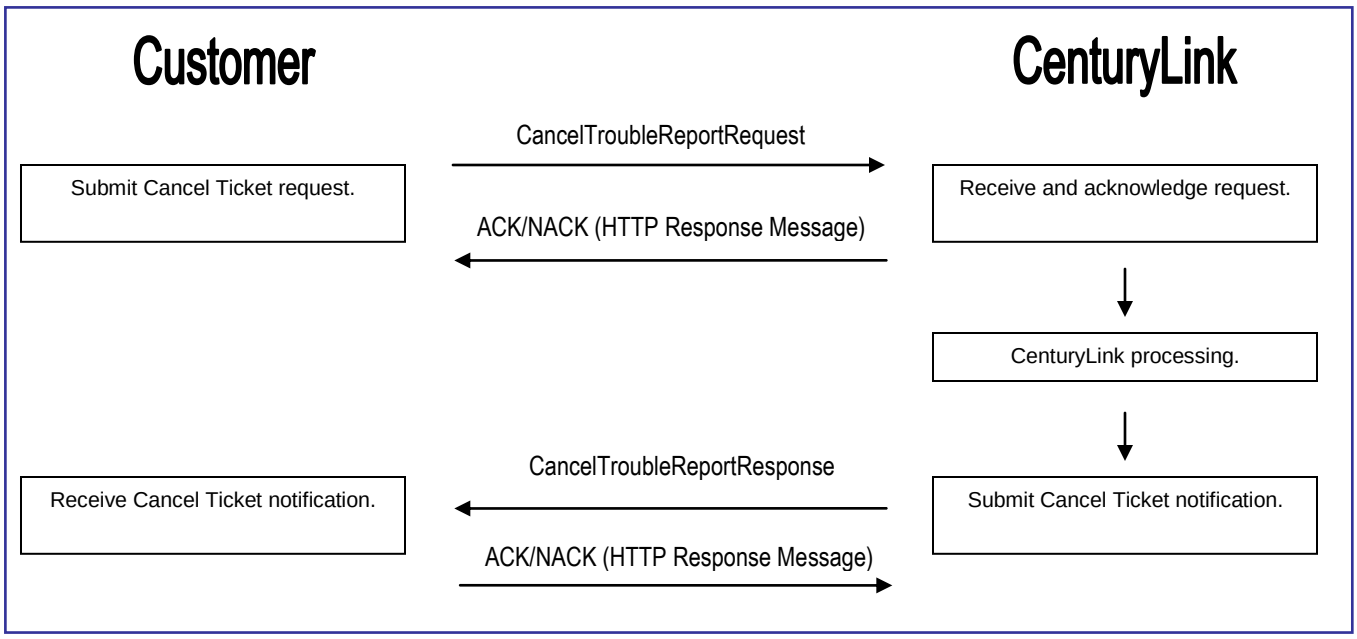
Design Service Closed Event Notification

A Closed Event Notification (AVCN) will be sent when the Trouble Ticket is Closed in the CenturyLink OSS. This Notification includes: TroubleReportState (4), TroubleReportStatus (27), TroubleReportStatusTime (Closed Time GMT), AdditionalTroubleStatusInfo (Closed message).



5.1.8 Cancel Trouble Report

A request to cancel a trouble report originates from the customer. The customer issues a CancelTroubleReportRequest. When the cancel request is received, CenturyLink will screen the trouble report to determine the status of the trouble report. CenturyLink will either send the trouble report to a closeout process if no work is in progress, or will complete the work in progress on the trouble report, until it can be closed appropriately. In the latter case, billing charges may apply.



5.1.9 Request MLT Test (POTS Service Test)

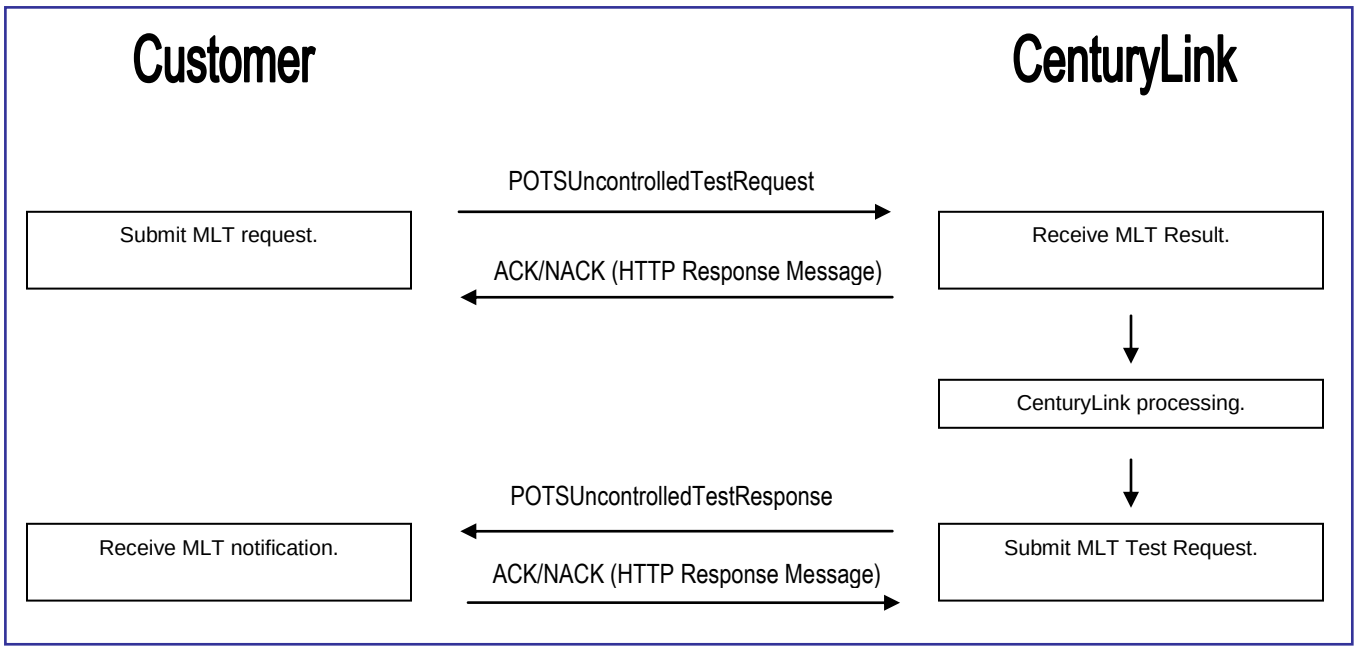
The CenturyLink gateway supports ATIS standard ATIS-0300002.2009 that allows Trading Partner to request an MLT test to be run on a 10 digit POTS telephone number.

A request for an MLT test originates from the customer. The customer issues a POTSUncontrolledTestRequest. CenturyLink is required to validate circuit ownership before transmitting the test request. CenturyLink has implemented the following types of POTS tests:

- full (1),
- quick (2),
- centralOffice (3),
- loop (4),
- startTone (5)

NOTE: If the customer initiates a startTone (5), CenturyLink will automatically remove the tone from the line after 2 minutes.

See 'MTG Supported Transactions – POTS Service Test' at http://www.centurylink.com/wholesale/systems/mtg.html for details.



5.2 Attribute Implementation Definition

The definitions of attributes implemented in MTG, and the method for handling the attributes by CenturyLink are identified in Appendix A, 'Attribute Definitions'.

See 'MTG Supported Transactions – Trouble Administration', and, 'MTG Supported Transactions – POTS Service Test' at http://www.centurylink.com/wholesale/systems/mtg.html for more detail.

Although all the Attributes listed in Appendix A have been implemented, in some instances there is limited behavior or no behavior in the CenturyLink OSS due to OSS limitations.

5.3 Implementation Exclusions

This section defines process exclusions that will not be supported via Electronic Bonding in CenturyLink's OSS. Exclusions are due to the fact that attributes relating to these processes drive limited or no behavior in the current CenturyLink OSS.

5.3.1 Manual Processes

The processes listed below are manual processes because the attributes relating to these processes are not fully supported in CenturyLink's OSS via Electronic Bonding:

5.3.2 Authorization

POTS trouble reporting does not support authorization requests electronically. The attribute AuthorizationList will be accepted on an electronic ticket creation request, and any values sent by the customer will be returned upon receipt of a ticket retrieval request from the customer. However, AuthorizationList will not be used within CenturyLink's OSS, with the assumption that authorization to dispatch is granted. Access hour restrictions will require manual processing. See Section 5.3.4 "Scheduled Dispatch" (below) for further details.

For Design Service trouble reporting, AuthorizationList will be accepted on an electronic ticket creation request, and any values sent by the customer will be returned upon receipt of a ticket retrieval request from the customer. Additionally, AuthorizationList will be used within CenturyLink's OSS and business processes. CenturyLink supports customer authorization requests as AuthorizationList attribute or as AdditionalTroubleInfo. CenturyLink will provide a reply to authorization request in the form of AdditionalTroubleStatusInfo rather than providing AuthorizationList attribute in the AttributeValueChangeNotification.

5.3.3 Escalation

POTS trouble reporting does not support escalation requests electronically. The attribute EscalationList will be accepted on an electronic ticket creation request, and any values sent by the customer will be returned upon receipt of a ticket retrieval request from the customer. However, EscalationList will not be used within CenturyLink's OSS, with the assumption that escalation requests must be made manually and are handled manually through the life of the trouble report.

For Design Service trouble reporting, EscalationList will be accepted on an electronic ticket creation request, and any values sent by the customer will be returned upon receipt of a ticket retrieval request from the customer. Additionally, EscalationList will be used within CenturyLink's OSS and business processes. CenturyLink supports customer escalation requests as EscalationList attribute or as AdditionalTroubleInfo. CenturyLink will provide a reply to escalation request in the form of AdditionalTroubleStatusInfo rather than providing EscalationList attribute in the AttributeValueChangeNotification.

5.3.4 Scheduled Dispatch

For POTS trouble reports, dispatches requiring coordination between the customer and CenturyLink will be handled manually, in accordance with CenturyLink business processes.

For Design Service trouble reports, dispatches requiring coordination between the customer and CenturyLink may be handled electronically. CenturyLink supports customer authorization requests as AuthorizationList attribute or as AdditionalTroubleInfo, although CenturyLink prefers use of the AdditionalTroubleInfo since more information can be exchanged using this

method. CenturyLink will provide a reply to authorization request in the form of AdditionalTroubleStatusInfo rather than providing AuthorizationList attribute in the AttributeValueChangeNotification.

5.3.5 Modifications to Trouble Reports

For POTS trouble reports, modifications to attributes other than PerceivedTroubleSeverity and AdditionalTroubleInfoList will be accepted on an electronic trouble report update request, and any values sent by the customer will be returned upon receipt of a trouble report retrieval request from the customer. Modifications to attributes other than PerceivedTroubleSeverity and AdditionalTroubleInfoList will not be used within CenturyLink OSS.

For Design Service trouble reporting, modifications to attributes including PerceivedTroubleSeverity and AdditionalTroubleInfoList will be accepted on an electronic ticket update request, and any values sent by the customer will be returned upon receipt of a ticket retrieval request from the customer. Additionally, attributes including PerceivedTroubleSeverity and AdditionalTroubleInfoList may be used within CenturyLink's OSS and business processes.

See 'MTG Supported Transactions – Trouble Administration' at http://www.centurylink.com/wholesale/systems/mtg.html for more detail.

5.3.6 Missed Commitments

For POTS trouble reports, if a commitment is missed, the OSS needs a new commitment to create a subsequent report. As a result, trouble report update transaction will not be accepted in this case. CenturyLink handles this manually and negotiates a new commitment with the customer. If a commitment is missed and the customer has requested a trouble report update (e.g. modify, cancel) an error will be returned.

For Design Service trouble reports, no special rules exist.

5.4 Critical Attributes for Flow-Through

The following table lists the critical Attributes for the business processes. It will be used to determine if the trouble report received achieves current flow-through:

Note: Please see MTG Interface Specification (Section 4.1) for specific rules regarding TRFD-based optionality for elements included used in creation of trouble reports.

Also see 'MTG Supported Transactions – Trouble Administration', and, 'MTG Supported Transactions – POTS Service Test' at http://www.centurylink.com/wholesale/systems/mtg.html for more detail.

Attribute	Why Critical	Valid Data
Account Name	**POTS and Design Services:** The Account Name is assigned by CenturyLink during onboarding. CenturyLink requires that this value be sent by the customer for authorization.	The exact value assigned by CenturyLink during onboarding.
Additional Trouble Info List	**POTS and Design Services**: CenturyLink requests a description of the problem and any additional information further defining the trouble to aid trouble resolution (current process). CenturyLink needs information explaining environmental or physical conditions, or special circumstances that may affect resolution of the trouble. **POTS:** In the case of a life threatening situation in Idaho, customer must send information describing the situation. In the case of a hunt group trouble, customer must describe the problem. **Design Service:** CenturyLink requests a description of the problem and any additional information further defining the trouble to aid trouble resolution (current process). CenturyLink needs information explaining environmental or physical	Valid text giving a good description of the problem (in addition to the trouble type) and any important additional information that customer has gathered during their trouble isolation with the end-user of the service. For example, dangerous animal in yard, see neighbor next door, or hearing impaired customer. **POTS:** For a life threatening situation in Idaho, describe the situation, for example, line down in street, open pit in yard, or medical emergency. For series or multi-line hunting, add text describing the type of trouble and any important additional information. Due to CenturyLink OSS limitations, only the first 47 characters are guaranteed to be displayed in CenturyLink's OSS (LMOS) for use by CenturyLink repair personnel. However, the customer may send in more characters without error. **Design Service:** Multiple occurrences of AdditionalTroubleInfoItem are allowed. AdditionalTroubleInfoItem limited to 400 characters.

Attribute	Why Critical	Valid Data
	conditions, or special circumstances that may affect resolution of the trouble.	
A Location Access Address	**POTS and Design Services:** CenturyLink verifies the premises address to ensure correct dispatches. If customer does not send correct address information, incorrect dispatches and charges may result.	**POTS and Design Services:** Valid end-user premises street address.
A Location Access Hours	**POTS:** The Sunday element of the ALocationAccessHours weekmask can be used to specify a four hour appointment for a trouble report requiring dispatch. All other day settings will be ignored. **Design Service:** CenturyLink needs to know the hours that repair technicians can access the premise. **Note:** For UBL 2-Wire analog circuits, the Sunday element of the ALocationAccessHours weekmask can be used to specify a four hour appointment for a trouble report requiring dispatch.	**POTS:** Standard week mask syntax. **Design Service:** Send a single LocationAccessHoursItem for each day that has access hours. The DaysOfWeek section within the LocationAccessHoursItem should contain only one day with "true", and remaining six days with "false" Only the current, previous, and next day will be stored in CenturyLink's OSS (WFA), relative to the day the trouble report was created. **NOTE:** See MTG Interface Specification (Section 5.1) for XML example.
A Location Access Person	**POTS:** Currently, CenturyLink is not able to process this information in LMOS because the customer Contact Person is used instead. However, CenturyLink expects customer to send valid data.	**POTS:** Valid individual or center name and valid phone number. Only the first 10 characters of the phone number are used (no delimiters).

Attribute	Why Critical	Valid Data
	Design Service: CenturyLink repair personnel may use this information to contact the party associated with the premise.	**Design Service:** Valid individual or center name and valid phone number Only the first 10 characters of the phone number are used (no delimiters).
Managed Object Instance (Service Id component)	**POTS:** CenturyLink expects the line in trouble to be identified correctly to aid trouble resolution. **Design Service:** CenturyLink expects the circuit in trouble to be identified correctly to aid trouble resolution.	**POTS:** TN, for example, 3031234567 or TN plus TER, for example 3031234567TER12345 **Design Service:** See Appendix S, Managed Object Instance Formats for valid unbundled loop and unbundled switch circuit formats.
Manager Contact Person	**POTS and Design Service:** CenturyLink needs contact name and phone number to prevent further service delays when a telephone call must be made to customer. If customer does not send valid data, CenturyLink cannot respond appropriately and it may impact outage duration.	**POTS and Design Service:** Valid individual or center name and valid phone number. Only the first 10 characters of the phone number are used (no delimiters).
Network Id	CenturyLink assigns a Network Id during onboarding and requires that the assigned value be sent by the customer for authorization.	The exact value assigned by CenturyLink during onboarding.
Perceived Trouble Severity	**POTS and Design Service:** CenturyLink requests information about the trouble severity to understand the perceived impact of the trouble on the affected TN/Circuit.	**POTS and Design Service:** ATIS-defined values
Preferred Priority	**POTS:** CenturyLink receives “life threatening” value for Idaho lines and denotes this in the LMOS Narrative to identify to the flow-through process that immediate	**POTS:** ATIS-defined values

Attribute	Why Critical	Valid Data
	attention should be given to this trouble ticket. If customer does not send this value, CenturyLink cannot respond appropriately. In general , this attribute defines the urgency with which the manager/requestor requires resolution of the problem **Design Service:** In general , this attribute defines the urgency with which the manager/requestor requires resolution of the problem	 **Design Service:** ATIS-defined values
Repeat Report	**POTS:** Indicates if there has been an activity on the Managed Object (TN) within the last 30 days. This information is used within CenturyLink's trouble resolution processes. **Design Service**: N/A	**POTS:** ATIS-defined values **Design Service**: N/A
Trouble Clearance Person	**POTS and Design Service:** CenturyLink needs clearance name and phone number to identify who within customer's organization has requested cancellation or is replying to CenturyLink's request to close a trouble ticket.	**POTS and Design Service:** Valid individual or center name and valid phone number. Only the first 10 characters of the phone number are used (no delimiters).
Trouble Type	**POTS and Design Service:** CenturyLink uses this information is used within its trouble resolution processes. If customer sends a trouble Type that is inappropriate for the type of service, the create transaction will fail. This edit is based on the Customer Type.	**POTS and Design Service:** Standard values per the non-applicable (invalid) trouble type lists. See Appendix J, M, and P for details. **POTS:** For series or multi-line hunting when exact TN or TER in trouble is known, use the specific trouble type for the situation, if it can be identified. If the type of trouble cannot be identified, use 1118 for Hunting Not

Attribute	Why Critical	Valid Data
		Working. For series or multi-line hunting when exact TN or TER in trouble is not known, always use 1118 for Hunting Not Working.

5.5 Error Conditions

5.5.1 Customer Process for Error Conditions or No Response

If an activity returns an error response or no response, the customer may attempt to re-send the transaction. If the subsequent transaction also returns an error response, the customer may handle the activity manually. If an error response indicates a correctable activity, the customer will provide the correction and re-send. If a correction to the error is uncertain, the customer may contact the CenturyLink EB Single Point of Contact/Service Center for clarification of the error response.

See 'MTG Supported Transactions – Trouble Administration', and, 'MTG Supported Transactions – POTS Service Test' at http://www.centurylink.com/wholesale/systems/mtg.html for details of possible error conditions.

6 Production Availability

6.1 CenturyLink Maintenance Ticket Gateway (MTG)

MTG hours of operation is listed on the Wholesale Systems Web site under Change Management Process (CMP) OSS Hours of Availability: http://www.centurylink.com/wholesale/cmp/ossHours.html

The following are the CenturyLink host ticketing system Hours of Operation. These are the hours that CenturyLink's internal OSSs for trouble administration are available.

Note: If requests are received for a CenturyLink OSS during the scheduled downtime then an error response will be sent to the customer. You should wait until the downtime has expired before sending another transaction.

6.1.1 LMOS

Central Region - AZ, CO, ID, MT, NM, UT, WY (Mountain Time)

00:15 to 01:15 (daily maintenance window)

Eastern Region - IA, NE, MN, ND, SD (Mountain Time)

23:15 to 00:15 (daily maintenance window)

Western Region - OR, WA (Mountain Time)

01:15 to 02:15 (daily maintenance window)

6.1.2 WFA/C

Central Region - AZ, CO, ID, MT, NM, UT, WY (Mountain Time)

22:00 Saturday through 06:00 Sunday

Eastern Region - IA, NE, MN, ND, SD (Central Time)

22:00 Saturday through 06:00 Sunday

Western Region - OR, WA (Pacific Time)

Maintenance Window: 2nd and 4th weekends 2200 to 0600
1st, 3rd and 5th weekends 2200 to 2300 Saturday

7 Recovery Procedures

7.1 Off-Nominal Status

7.1.1 CenturyLink Process

Off-Nominal Status is an error state in which the software/hardware is capable of recovery on its own. Transaction errors may occur, but no intervention is required. The CenturyLink EB Single Point of Contact/Service Center will not contact the customer.

7.2 Electronic Recovery and Late Bonding

7.2.1 CenturyLink Process

It is to the advantage of both the customers and CenturyLink to maintain the electronic data flow for the life of an EB ticket. Minor errors (Off-Nominal Status) should be overcome, and data flow should continue as before without the need for any manual intervention or manual communication between the customers and CenturyLink. Each EB ticket shall remain electronically bonded.

A system failure could result in the permanent loss of data flow on existing EB tickets. Once the system is restored, communication between customers and CenturyLink may be needed to assess the need for manual intervention to fully recover to a Nominal Status.

7.2.2 Manual to Electronic Recovery – Late Bonding

POTS: If a trouble report is created manually, it remains manual for the life of the trouble report.

Design Service: If trouble is detected on CenturyLink equipment, or if a customer calls in a trouble report (usually due to a Gateway disruption), a Work Center Technician may manually enter a trouble ticket into the appropriate OSS region.

If a customer submits a request to open a trouble ticket on CenturyLink equipment that has had a trouble ticket opened manually, the CenturyLink Gateway (MTG) will return an error stating that a trouble ticket already exists for that equipment (e.g. Circuit, TN).

The response returned on the Create request is a ‘TroubleReportAlreadyExists’ error, including the Trouble Report ID. (See ‘MTG Supported Transactions – Trouble Administration’ at http://www.centurylink.com/wholesale/systems/mtg.html for details).

7.2.3 Customer Process – Late Bonding

Customer may send a Retrieve Trouble Report transaction on any manually created trouble reports that the customer wishes to electronically bond. CenturyLink will return the trouble ticket information, including a comment stating "THIS TROUBLE REPORT HAS BEEN CONVERTED TO AN ELECTRONIC TICKET!" The trouble ticket is now electronically bonded and it is expected that the normal Work Center EB processes will be followed from that point on (authorization/closeout requests and responses, text messages, Status Changes, Retrieve, Modify, etc.).

For manually created tickets that have been closed, no Late Bond ability exists. Close out details must be pursued manually.

7.3 MTG Single Point of Contact

In order to manage technical contact between CenturyLink and the customer, a single point of contact is needed.

CLEC/IXC customers should call the Wholesale Systems Help Desk (WSHD) 888-796-9102. The WSHD will assign out a ticket and assign it to the appropriate SME team.

Appendix A: Attribute Definitions

This section includes the Definition for POTS and Design Services for each attribute.

See documents at http://www.centurylink.com/wholesale/systems/mtg.html for details regarding whether the attribute is optional or mandatory.

A Location Access Address

Definition for POTS and Design Service: End-user premises street address. This is the address for which the A Location Access Hours attribute values apply.

A Location Access Hours

Definition for POTS: The A Location Access Hours attribute defines the specific hours for each day of the week during which access to the A location is available.

Within the ALocationAccessHours element, customer shall send a LocationAccessHoursItem for each day for which they are providing access hours. The DaysOfWeek section within the LocationAccessHoursItem should contain only one day with “true”, and remaining six days with “false”

Arranging premises access due to access restrictions is a manual process.

Definition for Design Service: CenturyLink OSS limitation of three days, one access interval per day. Time is specified in the customer’s (end user’s) local time based on the customer’s address.

Within the ALocationAccessHours element, customer shall send a LocationAccessHoursItem for each day for which they are providing access hours. The DaysOfWeek section within the LocationAccessHoursItem should contain only one day with “true”, and remaining six days with “false” Only the current, previous, and next day will be stored in CenturyLink’s OSS (WFA), relative to the day the trouble report was created.

A Location Access Person

Definition for POTS: The A Location Access Person attribute enables the manager to specify the details of the person at the A location. Not supported in CenturyLink OSS due to business process agreements and OSS limitations. The customer’s contact information will be used in the CenturyLink OSS as primary customer contact per agreement.

Definition for Design Service: The A Location Access Person attribute enables the manager to specify the details of the person at the A location. CenturyLink OSS supports Name (20 characters) and telephone number (10 digits).

Activity Duration

Definition for POTS: This Attribute is not applicable for POTS.

Definition for Design Service: This attribute is returned by CenturyLink when the trouble report is cleared.

The Activity Duration attribute indicates time spent on billable and nonbillable activities. It is possible to indicate the total billable or nonbillable time spent on a group of activities. May contain duration (day, hour, min, sec, msec) for activities NoAccess, DelayedMaintenance, and Dispatch, and whether billable.

Additional Trouble Information List

Definition for POTS: The Additional Trouble Information List attribute further describes the trouble being reported. The manager can only add information, but not remove it. Due to CenturyLink OSS limitations, only the first 47 characters are guaranteed to be displayed in CenturyLink's OSS (LMOS) for use by CenturyLink repair personnel. However, the customer may send in more characters without error. CenturyLink uses the aLocationAccessAddress, managedObjectInstance, preferredPriority, repeatReport, troubleType, and tspPriority attributes to derive the information that is stored in its 55 characters. The information sent by the customer in this attribute should not repeat information derived by CenturyLink from these customer supplied attributes but further describe the trouble using CenturyLink's standard abbreviations, where applicable. (See 'MTG Supported Transactions – Trouble Administration' at http://www.centurylink.com/wholesale/systems/mtg.html for details.) For Trouble Reports on Idaho lines, if the customer sends the attribute preferredPriority with a value of "life threatening," then the customer is required to send further information about the situation in the Additional Trouble Information List attribute. If an add or modify is performed, the new customer information will overlay the old customer information. A joint Dispatch Out (DPO) field meet can be requested by populating the Additional Trouble Information List attribute with "DPO Joint Meet" and include date and time (e.g., DPO Joint Meet 07/21/04 3 p.m.). You may also request a joint Dispatch In (DPI) central office meet by populating the Additional Trouble Information List with "DPI Joint Meet" and include date and time (e.g., DPI Joint Meet 07/21/04 3 p.m.). To request a joint meet, you must submit your request no later than 3 p.m. local time the day before the joint meet.

A trouble ticket for IP CENTREX can be submitted by populating the Additional Trouble Information List attribute with "IPCTX" and the telephone number of the line(s) experiencing difficulty.

Definition for Design Service:

The Additional Trouble Information List attribute further describes the trouble being reported. The manager can only add information, but not remove it. Multiple occurrences of AdditionalTroubleInfoItem are allowed. AdditionalTroubleInfoItem limited to 400 characters.

Additional Trouble Status Information

Definition for POTS: For all status changes, a comment describing the status change is returned in this attribute. If the status change is due to the initial MLT test, a concise MLT result description may be returned. If CenturyLink needs to send comments to the customer at any time, then those comments are returned in this Attribute. (See 'MTG Supported Transactions – Trouble Administration' at http://www.centurylink.com/wholesale/systems/mtg.html for details.)

Definition for Design Service: For all status changes, a comment describing the status change is returned in this attribute. CenturyLink supports up to 256 characters.

Agent Contact Person

Definition for POTS and Design Service: The responsible CenturyLink Work Center name and phone number are returned when the trouble report is created, and when the trouble report is retrieved.

Authorization List

Definition for POTS: The Authorization List attribute identifies whether authorization is granted or denied by the manager. It also specifies the type of activities that are authorized, and optionally the authorizing person, and the time of authorization.

The customer shall send an AuthorizationItem section for each authorization Type which is being either granted or denied; with that one Type (being granted or denied) having a value of true, and the remaining Types having a value of false. (See MTG Interface Specification (Section 5) for example)

This attribute is not used within CenturyLink's trouble resolution processes for POTS trouble.

Definition for Design Service: Used to indicate authorization for After Hours Repair, Test, Dispatch, No Access, and Delayed Maintenance for request, approve, and deny.

Called Number

Definition for POTS: The Called Number attribute specifies the number being called at the time of trouble detection.

Definition for Design Service: This attribute is not used within CenturyLink's trouble resolution processes for Design Service trouble.

Cancel Requested By Manager

Definition for POTS and Design Service: The Cancel Requested By Manager attribute is a Boolean that indicates whether the manager has initiated the process to cancel a trouble report. When set to 'true', the manager has requested that the trouble report be cancelled.

Close Out Narrative

Definition for POTS: The Close Out Narrative attribute specifies additional information about the problem resolution. This field provides a place for the person who resolved the problem to document any additional information regarding the trouble report closure.

The disposition code (a number) and its associated text description, and the cause code (a number) and its associated text description entered when the trouble report is closed are returned.

Definition for Design Service: The Close Out Narrative attribute specifies additional information about the problem resolution. This field provides a place for the person who resolved the problem to document any additional information regarding the trouble report closure.

Commitment Time

Definition for POTS: The OSS generated commitment time returned by CenturyLink when the trouble report is created. CenturyLink provides a value when a trouble report is created, but may update the value later. The commitment time attribute is provided with each event notification.

Definition for Design Service: The OSS generated commitment time returned by CenturyLink when the trouble report is created. CenturyLink provides a value when a trouble report is created, but may update the value later.

Commitment Time Request

Definition for POTS and Design Service : The Commitment Time Request attribute indicates the trouble cleared time requested by the customer.

Customer Trouble Ticket Number

Definition for POTS Design Service: The Customer Trouble Ticket Number attribute contains the customer's internal trouble ticket number.

Escalation List

Definition for POTS and Design Service: The Escalation List attribute indicates whether escalation is requested by the customer. It also specifies the person requesting the escalation, the escalation time, and optionally specifies the level of escalation.

Maintenance Service Charge

Definition for POTS: The Maintenance Service Charge attribute indicates whether the customer will be charged for repairs performed on the service. The disposition code entered when the trouble report is closed is used to set the Maintenance Service Charge, which is then returned. (See Appendix L for details.)

Definition for Design Service: The Maintenance Service Charge attribute indicates whether the customer will be charged for repairs performed on the service. The value is set to either Yes or No by the technician when the trouble report is cleared.

Managed Object Access Hours

Definition for POTS: The Managed Object Access Hours attribute defines the specific hours for each day of the week during which access to the managed object (TN) is available. This attribute is not applicable for POTS. CenturyLink believes this is not an issue because currently a technician monitors a line to see if the line is in use. Work is not performed until the line is not in use.

Definition for Design Service: The Managed Object Access Hours attribute defines the specific hours for each day of the week during which access to the managed object (circuit) is available. CenturyLink OSS limitation of three days, one access interval per day. Within the ManagedObjectAccessHours element, customer shall send a ManagedObjectAccessHoursItem for each day for which they are providing access hours. The DaysOfWeek section within the ManagedObjectAccessHoursItem should contain only one day with “true”, and remaining six days with “false” Only the current, previous, and next day will be stored in CenturyLink’s OSS (WFA), relative to the day the trouble report was created.

Managed Object Instance

Definition for POTS: This contains the telephone number, Network Id, and Account Name for the trouble being reported.

Definition for Design Service: This contains the Circuit Id, Network Id, and Account Name for the trouble being reported.

Manager Contact Person

Definition for POTS: The contact name and phone number for the primary customer contact.

Only the first 10 characters of the phone number are used (no delimiters).

Definition for Design Service: The contact name and phone number for the primary customer contact. CenturyLink supports Name (up to 20 characters) and telephone number (only the first 10 characters of the phone number are used (no delimiters)).

Outage Duration

Definition for POTS: This value is returned when the trouble report is *closed*, calculated as restoredTime less receivedTime.

Definition for Design Service: This value is returned when the trouble report is *cleared*, calculated as RestoredTime – ReceivedTime - NoAccessDuration – DelayedMaintDuration

Perceived Trouble Severity

Definition for POTS: This attribute allows the manager to indicate the effect of the trouble on the managed object being reported. If a modify is performed, the severity can only be changed to a more significant impairment. For example, if it was originally set to Service Impairment (2), then it can be modified to Out of Service (0). If it was originally set to Out of Service (0), then it cannot be modified.

Definition for Design Service: This attribute allows the manager to indicate the effect of the trouble on the circuit being reported.

Preferred Priority

Definition for POTS: The Preferred Priority attribute defines the urgency with which the manager requires resolution of the problem. The customer is required to send Preferred Priority (value = 4) to indicate a “life threatening” situation for Idaho lines.

Definition for Design Service: The Preferred Priority attribute defines the urgency with which the manager requires resolution of the problem.

Received Time

Definition for POTS and Design Service: The Received Time attribute indicates the date and time when a trouble report was entered. The CenturyLink system generates the value of this Attribute, which is returned when the trouble report is created.

Repeat Report

Definition for POTS: The Repeat Report attribute code value indicates whether there has been a provisioning/installation or a trouble activity on the managed object in the recent past (within the last 30 days).

Repeat Report is used to identify if there is recent service order and/or trouble report activity, defined as:

Unspecified (0)

Recent Installation (1) - Trouble is being reporting within 30 days of service Installation (based on service order activity).

Repeat (2) - Repeats are customer trouble reports received within 30 days of the last case of trouble closed on the same telephone number.

Recent Installation and Repeat (3) – Conditions for both Recent Installation and Repeat are met.

Chronic (4) - Three trouble reports received within a 30 day timeframe.

Recent Installation and Chronic (5) - Conditions for both Recent Installation and Chronic are met.

Definition for Design Service: Same as POTS. Stored in the OSS.

Restored Time

Definition for POTS: The Restored Time attribute indicates when the trouble was resolved. This value is returned when the trouble report is *closed*.

Definition for Design Service: The Restored Time attribute indicates when the trouble was resolved. This value is returned when the trouble report is *cleared*.

Target Object Name

Definition for POTS and Design Service: This contains the Trouble Report Id, Network Id, and Account Name for the trouble report.

Trouble Clearance Person

Definition for POTS: The customer person name and phone number that requested the cancellation of a trouble report. Only the first 10 characters of the phone number are used (no delimiters).

Definition for Design Service: The customer person name and phone number that either requested the cancellation of a trouble report, or replied to a CenturyLink request to close a trouble report. Only the first 10 characters of the phone number are used (no delimiters).

Trouble Found

Definition for POTS: The Trouble Found attribute specifies an enumerated code value (per the ATIS Trouble Administration standard), which identifies the problem resolved. Trouble Found is returned when the trouble report is *closed*. (See Appendix O for details.)

Definition for Design Service: The Trouble Found attribute specifies an enumerated code value (per the ATIS Trouble Administration standard), which identifies the problem resolved. Trouble Found is returned when the trouble report is *cleared*. (See Appendix O for details.)

Trouble Report Format Identifier

Definition for POTS and Design Service: Based on the type of service, indicates the attributes to be included on the trouble report. Supported values: 1, 2, or 3 (See MTG Interface Specification – Section 4.1).

Trouble Report Identifier

Definition for POTS: The CenturyLink Trouble Report Identifier that is generated by the host system is returned to the customer when the trouble report is created.

Format for POTS: nnnnnnn (e.g., 0123456)

Definition for Design Service: The CenturyLink Trouble Report Identifier that is generated by the host system is returned to the customer when the trouble report is created.

Format for Design Service: AAnnnnnn (e.g., SC123456)

Trouble Report State

Definition for POTS and Design Service: The Trouble Report State attribute specifies an enumerated code value (per the ATIS Trouble Administration standard), which indicates the current state of a trouble report. (See Appendix G.)

Trouble Report Status

Definition for POTS and Design Service: The Trouble Report Status attribute specifies an enumerated code value (per the ATIS Trouble Administration standard), which indicates the current status of a trouble report. (See Appendix H.)

Trouble Report Status Time

Definition for POTS and Design Service: The Trouble Report Status Time attribute identifies the last time at which the Trouble Report Status attribute was known to be changed.

Trouble Report Status Window

Definition for POTS and Design Service: The trouble Report StatusWindow attribute specifies an interval of time within which the customer wishes to be notified of the status of a trouble report (Treated as informational only).

Trouble Type

Definition for POTS: The Trouble Type attribute identifies the category of trouble that is being reported. CenturyLink has identified specific trouble types that are not applicable trouble types for (POTS). In this case, CenturyLink will not create an electronic trouble report for these trouble types and will return an Invalid Attribute Value error. (See Appendix M for details.)

Definition for Design Service: The Trouble Type attribute identifies the category of trouble that is being reported. CenturyLink has identified specific trouble types that are not applicable trouble types for Design Service. In this case, CenturyLink will not create an electronic trouble report for these trouble types and will return an Invalid Attribute Value error. (See Appendix P for details.)

TSP Priority

Definition for POTS and Design Service: The Telecommunication Service Priority (TSP) Priority attribute conveys TSP codes if applicable between the manager and the agent. Comprised of a 2 character, pattern value="[E0-5][0-5]". Left character represents service provisioning priority and right character represents restoration priority for service.

Appendix B - MTG Supported Transactions – Trouble Administration

Detailed information about Trouble Administration transactions that are supported in Maintenance Ticketing Gateway (MTG) can be found in the 'MTG Supported Transactions – Trouble Administration' document located at http://www.centurylink.com/wholesale/systems/mtg.html

Appendix C - MTG Supported Transactions – POTS Service Test

Detailed information about POTS Service Test transactions that are supported in Maintenance Ticketing Gateway (MTG) can be found in the 'MTG Supported Transactions – POTS Service Test' document located at http://www.centurylink.com/wholesale/systems/mtg.html

Appendix D - Fallback Error Conditions

Fall Back Report Errors: This section lists the fall back errors as defined by ATIS. Note: There are no Fallback Errors for the POTS Service Test functions.

Code	Error
0	Circuit/TN Mismatch - Circuit/TN not found or invalid Circuit/TN
1	Create in progress
2	Failed Circuit Ownership Validation
3	Invalid State Code
4	Invalid Segment
5	Leading Zeros
6	New Service Pending
7	Circuit Disconnected
8	Invalid Company Assigning Code
9	Invalid Circuit Format

Appendix E - References to Other Documents

This document is intended to contain a list of all publications and release dates for all documents referenced in this Implementation Guideline document.

References

ATIS Standard "XML Schema Interface for Fault Management (Trouble Administration)," ATIS-0300003.2010, an industry standard for exchange of trouble ticket information

ATIS- 0300079 –tML Transport Profile: This document recommends a Transport Profile Specification to support the Telecommunications Markup Language (tML) Framework. The intent is to facilitate the interchange of XML formatted business transactions between service requestor and service provider. MTG does not implement every detail of the transport profile, but does use many of the asynchronous concepts described within the guidelines.

XML POTS Service Test ATIS-0300002.2009, "XML Schema Interface for POTS Service Test." This standard provides an XML schema information model for POTS Service Test based on ATIS-0300262.2007 and an XML schema interface for POTS Service Test function specified in the same ANSI standard.

Additional reference documents can be found at http://www.centurylink.com/wholesale/systems/mtg.html including:

- MTG Interface Specification
- MTG Supported Transactions – Trouble Administration
- MTG Supported Transactions – POTS Service Test

Appendix F – Abbreviations for Problem Descriptions

Standard Abbreviations for Problem Descriptions

ABBREVIATIONS	MEANING
AAB	ALL ACCESS BUSY
ACC	ACCESS
ADL	ADDITIONAL
ADV	ADVISED
ALCLS	ALL CALLS
ALIT	ALI (AUTOMATIC LINE TEST)
ALL ONES	GETTING ALL ONES
ALM	ALARM
ALPHS	ALL PHONES
ANA TST	ANALOG TEST LINE
ANI TMOUT	ANI TIMEOUT
APT	APARTMENT
ASAP	AS SOON AS POSSIBLE
ASW	AERIAL SERVICE WIRE
/T	AT TIMES OR INTERMITTANT
CLEC/IXCN	CLEC/IXCENTION
B4	BEFORE
BAD BAL	BAD BALANCE
BAD ERL	BAD ERL
BAD FREQ	DOES NOT PASS FREQ RESPONSE
BAD LVLS	LEVELS OUT OF LIMITS
BDR	BELL DOESN'T RING
BDR EXT	BELL DOES NOT RING2
BIPOL ERR	BIPOLAR VIOLATIONS
BO	BUSINESS OFFICE
BR	BELL RINGS
BRAA	BELL RINGS AFTER ANSWERED
BRCA	BELL RINGS CAN'T ANSWER
BRKN	BROKEN
BRWD	BELL RINGS WHILE DIALING
BSW	BURIED SERVICE WIRE
BUS	BUSINESS
BUSY	BUSY
BSY	ALWAYS BUSY/CANNOT BE CALLED BUSY
BSY TRIPS	RINGS THEN GOES BUSY
C/RUN CSU	CANNOT RUN TO CSU
C/RUN OSU	CANNOT RUN TO OSU
CALL RET	CALL RETURN NOT WORKING
CANCEL	CANCEL
CANT MEET	CANNOT MEET
CBC	CAN'T BE CALLED

ABBREVIATIONS	MEANING
CBDT	CAN'T BREAK DIAL TONE
CBDT	CAN'T BREAK DIAL TONE
CBH	CAN'T BE HEARD
CBR	CAN'T BE REACHED
CBS	CANNOT BE SIGNALLED
CC 700	CANNOT CALL 700
CC 800/888	CANNOT CALL 800/888
CC 900	CANNOT CALL 900
CC 911	CANNOT CALL 911
CC DA	CANNOT CALL DA
CC LD	CANNOT CALL LONG DISTANCE
CC LLD	CANNOT CALL INTERLATA TOLL
CC TRACE	CALL TRACE NOT WORKING
CCE	CUSTOMER CHECKED EQUIPMENT
CCF	CAN'T CALL FORWARD
CCO	CAN'T CALL OUT
CD	COMPLETION DATE
CF	CALL FORWARDING
CFBL	CALL FORWARDING BUSY LINE
CFDA	CALL FORWARDING DON'T ANSWER
CFWN	CALL FORWARDING WRONG NUMBER
CH	CAN'T HEAR
CHK	CHECK
CHNG	CHANGE
CID	CALLER ID
CKD	CIRCUIT DEAD/DEAD AT CIRCUIT
CKT DOWN	CIRCUIT DOWN
CKT FAIL	FAILING CIRCUIT
CKT SZD	SEIZURE ON CIRCUIT
CL BLK	CALL BLOCKING NOT WORKING
CL RET BLK	CALLER RETURN BLOCK NOT WORKING
CL XFER	CALL TRANSFER PROBLEM
CLB4	CALL BEFORE
CLD	CALLED
CLICKING	CLICKING
CLIPPING	CLIPPING
CLR	CALLER
CNTX	CENTREX
COMM	COMMITMENT
CONV	CONVERSATION
CPH	CALLING PARTY HOLD
CPIW	CUSTOMER PROVIDED INSIDE WIRE
CPU	CALL PICK UP
CR	CALL REJECT
CRC	CAN'T RELEASE CIRCUIT
CRDA	CANNOT RECEIVE DATA

ABBREVIATIONS	MEANING
CRT	CATHODE RAY TUBE
CSDA	CANNOT SEND DATA
CSO	CANNOT SIGNAL
CUT CABLE	CUT CABLE
CUT OFF	CUT OFF
CW	CALL WAITING
CWD	CALL WAITING DELUXE
CXX	NEW OR ADDING INFORMATION
2DY	TODAY
DAMAGE	DAMAGE
DATA EQUIP	DATA EQUIPMENT
DATA SET	DATA SET
DD	DUE DATE
DEAD PC	CANNOT ACTIVATE PC
DEL	DELAY
DIAL BLK	REPEAT DIAL BLOCK NOT WORKING
DIE	DISCONNECT IN ERROR
DIG TST	DIGITAL TEST LINE
DISC	DISCONNECT
DISP	DISPATCH
DISTANT	DISTANT
DL TMOUT	PARTIAL DIAL TIMEOUT
DMARC	DEMARCATION POINT
DROP OUTS	DROPOUTS
DT	DIAL TONE
DTAD	DIAL TONE AFTER DIALING
DTWT	DIAL TONE WHILE TALKING
ECO	ECHO
EQUIP	EQUIPMENT
ERR	ERRORS
EST	ESTIMATE
ETIR	EVERY TIME IT RAINS
EXT	EXTENSION
FAC ALM	FACILITY ALARM
FADE IN/OUT	FADES IN AND OUT
FADES	FADING
FEAT	FEATURES
FEAT BRK	CUSTOM CALL FEATURES DO NOT WORK
FLS PULSE	FALSE KEY PULSE
FRI	FRIDAY
FRM ERR	FRAME ERRORS
FRM ERR/H	FRAME ERRORS HICAP
FRM SLPS	FRAME SLIPS
FSR	FALSE RINGS
FST BSY	FAST BUSY
GBI	GETS BUSY IN

ABBREVIATIONS	MEANING
GCO	GETS CUT OFF
GRBL	GARBLED
GRBL DATA	GARBLED DATA
GRND	GROUND
GRND HUM	GROUND HUM
GWN	GETS WRONG NUMBER
HAE	HARMONIC DISTORTION
HAZARD	HAZARD
HI ROLL	HIGH END ROLLOFF
HI/DRY	HIGH AND DRY
HICAPDOWN	HICAP DOWN
HID	HIGH DISTORTION
HIL	HIGH LEVELS
HIS	HISTORICAL REPORTS
HITS	MULTIPLE SHORT DURATION HIT
HOL	HOLLOW
HOOL	HEARS OTHERS ON LINE
HOT LVL	HOT LEVELS
HTG	HUNTING
HUM ON LN	HUM ON LINE
HUNG UP	HUNG UP
IMP NSY	IMPULSE NOISE
IN FAIL	HIGH RATE INCOMPLETE INCOMING
IN LPBK	CIRCUIT IN LOOPBACK
IN OK	INCOMING OK
INF	INFORMATION
INFO	INFORMATION
INSP	INSPECT
INV DATA	INVALID DATA
IW	INSIDE WIRE
JITTER	PHASE JITTER
LBO	LIGHT BURNED OUT
LCR	LAST CALL RETURN
LD	LONG DISTANCE
LINE LOSS	LINE LOSS
LOC	LOCATION
LOL	LOW LEVELS
LONG LVL	LONG LEVELS
LOOSE JK	LOOSE JACK
LOUD	LOUD
LOW ROLL	LOW END ROLLOFF
LOW SF	LOW SF
LOW SIG	LOSS EPSCS OR SWITCHED
LTR	LOST TIME REPORT
LXD	LINE CROSSED
MEM	MEMORY

ABBREVIATIONS	MEANING
MIS PULSE	MISPLACED START PULSE
MISC	MISCELLANEOUS
MISS COMM	MISSED COMMITMENT
MKBSY	MAKE BUSY
MODEM	MODEM
MON	MONDAY
MONT CKT	MONITOR CIRCUIT
MSC	MAINTENANCE OF SERVICE CHARGE
MUT DIG	MUTILATED DIGIT GROUP
#	NUMBER
#CHG	NUMBER CHANGED
ND EQLZD	NEEDS EQUALIZED
NDT	NO DIAL TONE
NDT ORDER	NEW SERVICE NOT WORKING
NDT/T	NO DIAL TONE AT TIMES
NI	NETWORK INTERFACE
NO ANI	ANI FAILURE
NO ANSBK	NO ANSWER BACK
NO CONT	NO CONTINUITY
NO CXR	NO CARRIER
NO D CHNL	D CHANNEL DOWN
NO LPBK	NO LOOP BACK
NO NTWK	NETWORK FAILURE
NO POLL	NOT POLLING
NO PULSE	NO KEY PULSE
NO REG	NO REGISTER
NO RESP	NO RESPONSE
NO SF	NO SF
NO SYNC	LOSS OF SYNC
NRNA	NO RING NO ANSWER
NSY	NOISY
NSY EPS	NOISE EPSCS OR SWITCHED SERVICES
NSY/T	INTERMITTENT NOISE
NTR	CANNOT TRANSMIT CANNOT RECEIVE
NWNK	NO WINK START
OD	OUT OF ORDER
OG OK	OUTGOING OK
OHOP	ONLY HAS ONE PHONE
OO FRM	OUT OF FRAME
OO SPEC	OUT OF SPECIFICATION
OOS	OUT OF SERVICE
OPEN	OPEN
OPEN EPSC	OPEN EPSCS OR SWITCHED SERVICES
OPENDMARC	OPEN TO DEMARC
OUT FAIL	OUTGOING FAILURE AFTER WINK
OVERSEAS	CANNOT CALL OVERSEAS

ABBREVIATIONS	MEANING
PERM SIG	PERMANENT SIGNAL
PH	PHONE
PHYS	PHYSICAL
PLZ	PLEASE
PRC DEAD	PROCESSOR DEAD
PRN	HIGH SPEED PRINTER
PROT	PROTECTOR
PTY	PARTY
PTYLN	PARTY LINE
QTD	QUOTED
RCF	REMOTE CALL FORWARDING
REQ ASSIST	REQUEST TEST ASSIST
REQ DISP	REQUEST DISPATCH
RES	RESIDENCE
RLS	RELEASE
RLS CKTEC	RELEASE CKT REQUESTED BY EC
RLS CKTIC	RELEASE CKT REQUESTED BY IC
RLS FACEC	RELEASE FACILITY REQUESTED BY EC
RLS FACIC	RELEASE FACILITY REQUESTED BY IC
RMV	REMOVE
RNA	RING NO ANSWER
RNA CKL	CANNOT RAISE A CIRCUIT LOCATION
RNTRBL	OTHER RING TROUBLE
RO CKT	RECORDING ON CIRCUIT
ROH	RECEIVER OFF HOOK
ROL	RECORDING ON LINE OR INTERCEPT
ROUTINE	REQUEST FOR ROUTINE
RPR	REPAIR
RPT DIAL	REPEAT DIAL NOT WORKING
RPTD	REPORTED
RPTR	REPEATED REPORT
RTF	ROUTINE TEST FAILURE
RVY RPT	RECOVERY REPORT
SAT	SATURDAY
SC8/30	SPEED CALLING 8 OR 30
SFTWR ALM	SOFTWARE GROUP ALARM
SGD ERR	STATION GROUP DESIGNATION DIGIT FAILURE
SIG ERR	SIGNALING NETWORK FAILURE INCOMING
SLIP	SLIP
SLOW RESP	SLOW RESPONSE
SO	ORDER WORK
SOL	STATIC ON LINE
STAT	STATUS
STK SNDR	STUCK SENDER
STRMR	STREAMER
SUN	SUNDAY

ABBREVIATIONS	MEANING
SUP	SUPERVISION/IMPROPER SUPERVISION
SUPV	SUPERVISOR
SWITCH	SWITCH OR TRUNK RELATED
SYS	SYSTEM
T1 ERRS	DEGRADATION OF T1.5
TAG LINE	LINES NEED TAGGING
TC	TRANSFER OF CALLS
THURS	THURSDAY
TIC	TROUBLE ISOLATION CHARGE
TKT	TICKET
TN	TELEPHONE NUMBER
TRACE BLK	CALL TRACE BLOCK NOT WORKING
TRAN	TRANSMISSION
TRBL	TROUBLE
TRK BLKD	TRUNK BLOCKED FAR END
TTY	TTY SET
VIDO EQUIP	VIDEO EQUIPMENT
VM	VOICE MESSAGE
VOIC EQUIP	VOICE EQUIPMENT
3WC	THREE WAY CALLING
W/O	WITHOUT
WATS FSR	OUT WATS RINGING IN
WED	WEDNESDAY
WKG	WORKING
XFER	TRANSFER
XMD	CROSS MODULATION
XTLK	CROSS TALK
XTR DIGIT	EXTRA DIGIT
XTR PULSE	EXTRA PULSE

APPENDIX G - TROUBLE STATE Mapping

ATIS - Trouble State Description	ATIS Code
Queued	0*
OpenActive	1
Deferred	2
Cleared	3
Closed	4
Disabled	5*

*Not supported in MTG

Queued: The Trouble Report (TR) is queued in the SP's gateway until a trouble report is created in its OSS(s).

OpenActive: Repair and administrative activities (excluding screening) have been initiated.

Deferred: Corrective action on the TR has been suspended; the duration timer has been stopped by CenturyLink.

Cleared: Trouble has been corrected, awaiting closure; awaiting verification for closure from the Customer.

Closed: The TR had been closed and trouble history will be noted; no further action will be performed; the customer may or may not have authorized the closure.

Disabled: The gateway is inoperative/unavailable for traffic.

APPENDIX H - TROUBLE STATUS Mapping

ATIS Definition	Enumerated Value from ATIS
screening	1
testing	2
dispatchedIn	3
dispatchedOut	4
preassignedOut	5
bulkDispatchedOut	6
startRepair	7
pendingTest	8
pendingDispatch	9
requestRepair	10
referMtceCenter	11
referVendor	12
noAccessOther	13
startNoAccess	14
stopNoAccess	15
startDelayedMtce	16
stopDelayedMtce	17
troubleEscalated	18
craftDispatched	19
temporaryOK	20
cableFailure	21
originatingEquipFailure	22
backOrder	23
clearedCustNotAdvised	24
clearedCustAdvised	25
clearedAwaltingCustVerification	26
closedOut	27
closedOutByCustReq	28
closedOutCustVerified	29
closedOutCustDenied	30
canceledPendingWorkInProgress	31
canceledPendingTestCompletion	32
canceledPendingDispatchCompl	33
techOnSite	34
techLeftSite	35

APPENDIX I – Valid State/Status Combinations for POTS

FunctionCode	Function Message	ASNI State	ANSI Status
BDO	Bulk Dispatched Out, Report one of several routed to a Technician	1	6
BKO	Back Order, Not completed because equipment is back ordered	2	23
CAF	Cable Failure	1	21
CCA	Cleared: Customer Advised, Service has been restored and customer advised	3	25
CLO	Closed, Report is closed in system and no longer electronically bonded	4	27
CNA	Cleared: Customer Advised, Service has been restored and customer advised	3	25
DPI	Dispatched In	1	3
DPO	Dispatched Out	1	4
HLD	Hold, Report is on hold pending further action	2	16
NAO	No Access Other, Technician had no access to TELCO equipment in order to restore service	2	13
NAS	No Access Subscriber, Outside tech had no access to customer premises	2	14
PAO	Preassigned Out	1	5
PD2	Pending Dispatch	1	9
PD3	Pending Dispatch	1	9
PD4	Pending Dispatch	1	9
PD5	Pending Dispatch	1	9
PDB	Pending Dispatch	1	9
PDC	Pending Dispatch	1	9
PDF	Pending Dispatch	1	9
PDG	Pending Dispatch	1	9
PDI	Pending Dispatch	1	9
PDM	Pending Dispatch	1	9
PDO	Pending Dispatch	1	9
PDS	Pending Dispatch	1	9
PDT	Pending Test, Report is pending test by a screener	1	8
PS	Pending Screen	1	1
PSH	Pending Screen	1	1
PSM	Pending Screen	1	1
PUT	Pending Screen	1	1
RBC	Referred to Business Center, SAB (Send Alternate Bureau) status cannot be used manually	1	11

RCC	Returned To Control Center, SAB (Send Alternate Bureau) status cannot be used manually	1	11
ROP	Referred to Alternate Bureau	1	11
RRC	Referred To Remote Maintenance Administration and Traffic System, SAB (Send Alternate Bureau) status cannot be used manually	1	11
RSC	Referred To Switching Control Center, SAB (Send Alternate Bureau) status cannot be used manually	1	11
RSS	Referred To Special Service Center, SAB (Send Alternate Bureau) status cannot be used manually	1	11
TMK	Temporary OK, Service is restored but is temporary	3	20
TSM	Tested, Report has been tested by a screener	1	2
TST	Tested, Report has been tested by a screener	1	2

APPENDIX J - Trouble Types

Trouble Type	TA Code
NoDialToneGroup	0100
NoDialTone	0101
SlowDialTone	0102
CircuitDead	0103
CanNotCallOutGroup	0200
CanNotCallOut	0201
CanNotBreakDialTone	0203
DialToneAfterDialing	0204
HighandDry	0205
CanNotRaise	0206
AllAccessBusy	0207
canNotCallOut2	0208
CanNotCallLongDistance	0209
CanNotCallOverseas	0210
SpeedCall	0211
cannotCall911	0212
cannotCall700	0213
cannotCall800/888	0214
cannotCall900	0215
CannotCallDA	0216
CannotCallInterLATAToll	0217
CanNotBeCalledGroup	0300
CanNotBeCalled	0301
CanNotBeCalledBusy	0302
DoNotGetCalled	0303
CanNotTripRing	0304
FalseRings	0305
DoNotAnswer	0306
ReachRecording	0307
CanNotRaiseAStation	0308
CanNotRaiseAdrop	0309
CanNotRaiseACircuitLocation	0310
RingNoAnswer	0311
Reorder	0312
AlwaysBusy	0313
BellDoesNotRing	0314
bellDoesNotRing2	0315
BellRingsCannotAnswer	0316
bellRingsAfterAnswer	0317
noRingNoAnswer	0318

Trouble Type	TA Code
otherRingTrouble	0319
receivesCallsForWrongNumber	0320
recordingOnLine	0321
ringsThenGoesBusy	0322
canNotBeHeardGroup	0400
canNotBeHeard	0401
canNotHear	0402
fading	0403
distant	0404
reachedWrongNumberGroup	0500
reachedWrongNumber	0501
circuitOperationGroup	0600
open	0601
falseDisconnect	0602
grounded	0603
canNotBeSignalled	0604
canNotSignal	0605
permanentSignal	0606
improperSupervision	0607
supervision	0608
canNotMeet	0609
canNotReleaseCircuit	0610
hungUp	0611
noWinkStart	0612
noSF	0613
lowSF	0614
noContinuity	0615
openToDEMARC	0617
noRingGenerator	0618
badERL	0619
echo	0620
hollow	0621
circuitDead	0622
circuitDown	0623
failingCircuit	0624
noSignal	0625
seizureOnCircuit	0626
lossEPSCSorSwitched	0627
monitorCircuit	0628
newServiceNotWorking	0629
openEPSCSorSwitchedServices	0630
otherVoiceDescribeAdditInfo	0631

Trouble Type	TA Code
trunkBlockedFarend	0632
badBalance	0633
highRateIncompleteIncoming	0634
outgoingFailureAfterWink	0635
cutOffsGroup	0700
cutOff	0701
noiseProblemGroup	0800
intermittentNoise	0801
noisy	0802
foreignTone	0803
clipping	0804
crossTalk	0805
staticOnLine	0806
groundHum	0807
hearsOtherOnLine	0808
humOnLine	0809
clicking	0810
noiseEPSCSorSwitchedServices	0811
levelTroublesGroup	0900
lowLevels	0901
highLevels	0902
longLevels	0903
hotLevels	0904
highEndRollOff	0905
lowEndRollOff	0906
needsEqualized	0907
lineLoss	0908
doesNotPassFreqResponse	0909
levelsOutOfLimits	0910
miscellaneousTroublesGroup	1000
carrierDown	1002
recordingOnCircuit	1010
outwatsRingingIn	1012
remoteAccess	1013
multipleShortDurationHit	1016
networkFailure	1022
memoryServiceProblemGroup	1100
picTrouble	1101
callTransferProblem	1102
callWaitingProblem	1103
customCallFeature	1104
threeWayCalling	1105

Trouble Type	TA Code
callTraceNotWorking	1106
callTraceBlockNotWorking	1107
repeatDialNotWorking	1108
repeatDialBlockNotWorking	1109
callReturnNotWorking	1110
calledReturnBlockNotWorking	1111
callerIdentificationNotWorking	1112
callBlockingNotWorking	1113
voiceMessagingServicesProblem	1114
callForwardingNotWorking	1115
callForwardingBusyLineNotWorking	1116
callForwardingNoAnswerNotWorking	1117
huntingNotWorking	1118
selectiveCallForwardingNotWorking	1119
cannotSetupUniqueRingID	1120
callerIDBlockNotWorkingPerLine	1121
callerIDBlockNotWorkingPerCall	1122
cannotRemoveBlockingOnASingleCall	1123
dataTroubleGroup	1200
canNotReceiveData	1201
canNotSendData	1202
canNotTransmitCanNotReceive	1203
noReceive	1204
noResponse	1205
delay	1206
noCarrier	1212
errors	1224
garbledData	1225
invalidData	1226
slowResponse	1228
otherDataDescribeAdditInfo	1229
wireBrokSetBrokePoleDown	1415
otherCaseGroup	1500
callTransferProblem	1501
callWaitingProblem	1502
customCallFeatureDoNotWork	1503
information	1504
threeWayCallingProblem	1505
orderWork	1506
recovery	1600
recoveryReport	1601

APPENDIX K - POTS Disposition Code to Trouble Found

Disposition Code	Definition	T1.227 Code	Trouble Found Definition
01	Public Segment - Applies To All Troubles Outside The Phone		
0110	External Components not listed below	24	Public Service Coin Set
0111	Coin/Coinless Housing	24	Public Service Coin Set
0112	Rotary/TT Dial	24	Public Service Coin Set
0114	Loud button assembly	24	Public Service Coin Set
0115	Handset/Handset cord	24	Public Service Coin Set
0117	Switch-hook/Cradle/Intl Ckt	24	Public Service Coin Set
0119	Instruction Card/Number plate	24	Public Service Coin Set
0150	Enclosure misc. components	24	Public Service Coin Set
0151	Glass	24	Public Service Coin Set
0152	Lights	24	Public Service Coin Set
0154	Shelf	24	Public Service Coin Set
0155	Enclosure	24	Public Service Coin Set
0156	Power	24	Public Service Coin Set
0158	Directory	24	Public Service Coin Set
0159	Signage	24	Public Service Coin Set
0160	Miscellaneous Assemblies	24	Public Service Coin Set
0168	TDD Unit	24	Public Service Coin Set
0170	Clean Equipment	24	Public Service Coin Set
0171	Preventive Maintenance/Routine NTF	24	Public Service Coin Set
02	Public Segment - Applies To All Troubles Inside The Phone		
	Set Internal/Shelf/Book		
0210	Set internal components not listed below	24	Public Service Coin Set
0211	Chassis	24	Public Service Coin Set
0212	Coin chute	24	Public Service Coin Set
0213	Escrow/Hopper/Relay Assembly	24	Public Service Coin Set
0216	Full Coin Box	24	Public Service Coin Set
0217	Signal Unit/Totalizer	24	Public Service Coin Set
0219	Validator	24	Public Service Coin Set
0231	Software/Reprogram	24	Public Service Coin Set
0232	Bcustomerery/Power/Transformer	24	Public Service Coin Set
0233	PCB (Printed Circuit Board)	24	Public Service Coin Set
0234	Card Reader Assembly	24	Public Service Coin Set
0237	LCD Display	24	Public Service Coin Set
0240	Coin Collection Misc.	24	Public Service Coin Set
0246	Prevent Full Box	24	Public Service Coin Set
0247	Tripped Box, Box not Seated	24	Public Service Coin Set
	Miscellaneous		
0290	Other Miscellaneous	24	Public Service Coin Set

Disposition Code	Definition	T1.227 Code	Trouble Found Definition
0291	Foreign coin grabber	24	Public Service Coin Set
0292	Tel-Cart bcustomerery	24	Public Service Coin Set
0293	Lock or key	24	Public Service Coin Set
0294	Coin on ledge	24	Public Service Coin Set
0295	Box not open, not seated	24	Public Service Coin Set
0296	String cutter	24	Public Service Coin Set
0297	Telecart circuitry	24	Public Service Coin Set
0298	Board/Card - Inmate Service	24	Public Service Coin Set
0299	Conduit	24	Public Service Coin Set
03	Regulated Station Wiring		
0331	Simple Network terminating Wire- for coin phone and/or wire between terminal and demarc	19	Station Wiring
0341	Network Interface, Registration Jack, NCTE	16	Station Product Terminal
0371	Protection	30	Protective Connecting Arrangement
0381	Drop or BSW bad, replaced or repaired	44	Outside Wire
0382	*Broadband drop replaced or repaired	44	Outside Wire
0383	Buried Service Wire bad, placed temp Drop on Grnd	44	Outside Wire
0385	Temp Drop On Grnd damaged; replaced or repaired	44	Outside Wire
0387	Temp Drop On Grnd, cut over to permanent BSW	44	Outside Wire
04	Outside Plant		
	Cable Not Repaired		
0401	Pair Transferred/Cut to clear	5	Facility
0402	Bridge tap removed/Cut dead ahead	5	Facility
0403	Pair transposed	5	Facility
	Copper Cable		
0410	Intermittent/Came clear	1	Came Clear
0411	Fault in sheath, conductor or pair	5	Facility
0421	Splice case, closure	5	Facility
0431	Terminal, Cross Box, GAI	5	Facility
0434	Encap plant; unable to clear; laid temp drop	5	Facility
0441	Rural, Open or Urban wire	5	Facility
0461	Analog pair gain system	46	Outside Plant Equipment
0471	Digital pair gain system	46	Outside Plant Equipment
	Associated Trouble		
0481	All pole, guy, anchor, trench or other miscellaneous trouble	46	Outside Plant Equipment
	Fiber Optic Cable		
0483	Buried or aerial fiber optic cable	47	Outside Plant Fiber Optic
	Broadband		

Disposition Code	Definition	T1.227 Code	Trouble Found Definition
0492	Hut, replacing broadband cards	46	Outside Plant Equipment
0493	ONU-COAX power associated trouble	46	Outside Plant Equipment
0494	ONU-Fiber	47	Outside Plant Fiber Optic
0495	ONU-Protection	46	Outside Plant Equipment
05	Central Office		
	Central Office Equipment		
0505	Wireless port into to Wireline	9	Information
0509	Wireless port out to Wireless	9	Information
0510	Other/Came clear	1	Came Clear
0511	Common equipment processor	2	Central Office
0512	Common equipment peripheral	2	Central Office
0513	Line Equipment	2	Central Office
0514	Billing Equipment	2	Central Office
0515	Trunk, includes calling party hold	6	Central Office Facility
0516	Trunk, Customer/IEC	6	Central Office Facility
0518	Held by traffic	2	Central Office
0519	SS7 network failure	35	Service Node
	Central Office Translations		
0520	Other	3	Switch Trouble
0521	Software customer error	3	Switch Trouble
0522	Parameter error	3	Switch Trouble
0523	Translations Questionairres (TQs) and ASRs	3	Switch Trouble
0524	Routing	3	Switch Trouble
0525	Marketing Centrex forms	3	Switch Trouble
0526	Other marketing forms	3	Switch Trouble
0527	CenturyLink translations letters	3	Switch Trouble
0528	Trunking software	3	Switch Trouble
0529	Special Requests	3	Switch Trouble
	Distributing Frames		
0530	Other/Came Clear	1	Came Clear
0531	Cross-Connect missing	50	CO Equipment Frames
0532	Cross-Connect broken	50	CO Equipment Frames
0533	Cross-Connect work error	50	CO Equipment Frames
0534	Intercept work error (EM only)	50	CO Equipment Frames
0535	Protection/reversing device/coils	50	CO Equipment Frames
0536	Improper connection	50	CO Equipment Frames
0537	Cross-Connect document error	50	CO Equipment Frames
0538	Request for Assistance	50	CO Equipment Frames
0539	Customer change request/Not ready	50	CO Equipment Frames
	Line Translations		
0540	Other/Came clear	1	Came Clear
0541	RCMAC work error	3	Switch Trouble
0542	Flowthrough system error	3	Switch Trouble
0543	Inaccurate missing work document: HPS	3	Switch Trouble

Disposition Code	Definition	T1.227 Code	Trouble Found Definition
0544	Inaccurate missing work document: SBS	3	Switch Trouble
0545	Inaccurate missing work document: BGS	3	Switch Trouble
0546	Inaccurate missing work document: Other MU	3	Switch Trouble
0547	Inaccurate missing work document: LPC/MPAC	3	Switch Trouble
0548	Inaccurate missing work document: CDAC/BDAC/BCSC	3	Switch Trouble
0549	Inaccurate missing work document: Network Tech	3	Switch Trouble
	Power		
0550	Other/Came clear	1	Came Clear
0551	DC Power Equipment	2	Central Office
0552	AC Power Equipment	2	Central Office
0554	Standby Emergency Power	2	Central Office
	Miscellaneous		
0560	Other/Came clear	1	Came Clear
0561	Subscriber line carrier	46	Outside Plant Equipment
0562	Line testing equipment	51	CO Concentrator
0563	Concentrator	51	CO Concentrator
0564	Range extender	2	Central Office
0565	Carrier system	46	Outside Plant Equipment
	Special Services Equipment		
0570	Other/Came clear	1	Came Clear
0571	Design	2	Central Office
0573	Carrier channel	2	Central Office
0574	Signaling	35	Service Node
0575	Repeater	2	Central Office
	Radio System		
0580	Other/Came Clear	1	Came Clear
0581	Maritime	2	Central Office
0582	Ship to Shore	2	Central Office
0583	G2 Control	2	Central Office
0584	Enhanced Mobile Telephone Service control	2	Central Office
0585	Enhanced Mobile Telephone Service/B	2	Central Office
0586	Telephone Mobile Radio Service manual	2	Central Office
0587	Telephone Mobile Radio Service aitp, atoc	2	Central Office
0588	Advanced Mobile Phone System	2	Central Office
	Data Base for Driven Services		
0590	Other/Came clear	1	Came Clear
0591	Calling Card Services (ABS-LIDB)	3	Switch Trouble
0592	Automatic Intercept System	3	Switch Trouble
0593	Expanded 911 Service	3	Switch Trouble
0596	800 Data Base	3	Switch Trouble

Disposition Code	Definition	T1.227 Code	Trouble Found Definition
0597	700 Services	3	Switch Trouble
0598	Expanded 800 Service	3	Switch Trouble
0599	Dial it Services	3	Switch Trouble
06	Customer Action/Public Services/Customer Use Of Equipment		
0611	Receiver Off Hook (ROH)	25	customer Operation Instructions
0612	Calling Party Hold (CPH)	25	customer Operation Instructions
0613	User Dialing Wrong	25	customer Operation Instructions
0615	Foreign or Bent Coins/Objects, Pennies	25	customer Operation Instructions
0616	Canadian	25	customer Operation Instructions
0617	Remove for Remodeling	25	customer Operation Instructions
0618	Can't Be Called (On Outgoing Only)	25	customer Operation Instructions
0619	Line Is In Use	25	customer Operation Instructions
0690	Service Order Activity	9	Information
	Customer Action/All Classes Of Service/Non-Dispatched		
0620	Service Order	9	Information
0640	Suspended or Disconnected	9	Information
0650	Cancel Report	42	Cancel Excluded
0651	Request to Cancel	42	Cancel Excluded
0660	Not Currently in Trouble	9	Information
0661	Customer Requests Information	9	Information
07	Test OK, Verify OK		
0701	Verified OK with Customer	26	Tested OK, Verified OK
0702	Customer does not answer (DA)	23	Test OK
0703	Central Office Overload	23	Test OK
0704	*Broadband TOK	23	Test OK
0710	Operator report TOK	23	Test OK
0720	PRED report TOK non-dispatched	23	Test OK
0747	Test OK via front end close out	23	Test OK
0751	TOK, verified OK with Customer	26	Tested OK, Verified OK
0752	TOK, Customer does not answer	23	Test OK
08	Found OK In		
0810	Test made - No Trouble Found	27	CO Facility Tested, Found OK
	Data Base for Data Base Driven Services		
0880	Other C. O. based services	27	CO Facility Tested, Found

Disposition Code	Definition	T1.227 Code	Trouble Found Definition
			OK
0891	Calling Card Services	27	CO Facility Tested, Found OK
0892	Automatic Intercept Services	27	CO Facility Tested, Found OK
0893	Expanded 911 Service	27	CO Facility Tested, Found OK
0897	700 Services	27	CO Facility Tested, Found OK
0898	Expanded 800 Service	27	CO Facility Tested, Found OK
0899	Dial It Service	27	CO Facility Tested, Found OK
09	Found OK Out		
0910	Dispatched and Found OK	13	No Trouble Found
0920	*Broadband dispatched and found OK	13	No Trouble Found
0950	Unable to isolate trouble In or Out because of no access to demarc/protector	13	No Trouble Found
0970	Public Services Trouble reported and found OK	13	No Trouble Found
10	Referred Out		
1001	CenturyLink Toll Cable Cut/Damaged	29	Referred Out to Other Department
1002	other outside CenturyLink	29	Referred Out to Other Department
1005	Move drop, deliver/place drop	29	Referred Out to Other Department
1006	Other non-network within CenturyLink	29	Referred Out to Other Department
1015	Fiber to Premise (FTTP)	29	Referred Out to Other Department
1016	VOIP	29	Referred Out to Other Department
11	Non-Telco Plant		
	Non-CenturyLink, dispatched out		
1150	Wires down, broken poles, etc., that are other than CenturyLink plant or equipment, and a dispatch was required to make this determination	9	Information
	Non-CenturyLink, not dispatched		
1151	Wires down, broken poles, etc., that are other than CenturyLink plant or equipment, and a dispatch was not required to make the determination	9	Information
12	Trouble Beyond The Network Interface		
1210	Customer has a maintenance contract and	31	CPE customer Responsibility

Disposition Code	Definition	T1.227 Code	Trouble Found Definition
	CenturyLink does not bill		
1211	*Linebacker Coverage of non-standard inside wire	31	CPE customer Responsibility
1220	Customer has trouble beyond the NI and CenturyLink does not bill	31	CPE customer Responsibility
1230	Customer does not have a maintenance contract, or has only WMR, and we bill Trouble Isolation Charge (TIC).	31	CPE customer Responsibility
1231	Idaho non-complex customer and/or Iowa customer where CenturyLink does not bill	31	CPE customer Responsibility
1240	Customer does not have any maintenance contract and CenturyLink bills both TIC and Time & Materials	31	CPE customer Responsibility
1250	Customer does not have a maintenance contract and CenturyLink bills Trip Charge and Time & Materials	31	CPE customer Responsibility
1260	Carrier/End-user Trouble where CenturyLink bills TIC and possibly Time & Materials	31	CPE customer Responsibility
13	Miscellaneous Non-Dispatched Reports For Non-CenturyLink Trouble		
1310	CPE Trouble	31	CPE customer Responsibility
1320	Reported by Other	31	CPE customer Responsibility
1330	Test Assist	9	Information
1340	Carrier Trouble	8	Interexchange Carrier
1341	Carrier/CenturyLink ISP Referral	8	Interexchange Carrier
1350	Carrier /ISP Trouble Report	8	Interexchange Carrier
1370	Customer Instructions	25	customer Operation Instructions

APPENDIX L - Disposition Code to Maintenance Service Charge

Disposition Code	Definition	MSC
1230	Customer does not have a maintenance contract, or has only WMR, and CenturyLink bills Trouble Isolation Charge (TIC)	Y
1240	Customer does not have any maintenance contract and CenturyLink bills both TIC and Time & Materials	Y
1250	Customer does not have a maintenance contract and CenturyLink bills Trip Charge and Time & Materials	Y
1260	Carrier/End-user Trouble where CenturyLink bills TIC and possibly Time & Materials	Y

APPENDIX M - Non-Applicable Trouble Types for POTS

Trouble Type	TA Code	Extra Rules
cutCable	0616	
(miscellaneousTroublesGroup)		
hiCapDown	1001	
biPolarViolations	1003	
frameErrorsHiCap	1004	
outofFrame	1005	
lossOfSync	1006	
frameSlips	1007	
noLoopBack	1008	
canNotLoopbackDEMARC	1009	
linesNeedTagging	1011	
other	1014	
alarm	1015	
frameErrors	1017	
facilityAlarm	1018	
softwareGroupAlarm	1019	
dChannelDown	1020	
degadationOfT1.5	1021	
(dataTroubleGroup)		
impulseNoise	1207	
phaseJitter	1208	
harmonicDistortion	1209	
highDistortion	1210	
noDataLoopback	1211	
notPolling	1213	
dataFramingErrors	1214	
dropOuts	1215	
hits	1216	
noAnswerBack	1217	
streamer	1218	
outOfSpecification	1219	
canNotRunToCSU	1220	
canNotRunToOSU	1221	
deadDataCircuit	1222	
circuitInLoopback	1223	
crossModulation	1227	
gettingAllOnes	1230	
slip	1231	

Trouble Type	TA Code	Extra Rules
stationTroubleGroup	1300	
voiceEquipment	1301	
dataEquipment	1302	
videoEquipment	1303	
otherEquipment	1304	
stationWiring	1305	N/A for all states except Colorado, Minnesota, and Oregon.
physicalTroubleGroup	1400	
lightBurnedOut	1401	
dataset	1402	
ttySet	1403	
highSpeedPrinter	1404	
ALI	1406	
canNotActivatePC	1407	
modem	1408	
cathodeRayTube	1409	
looseJack	1410	N/A for all states except Colorado, Minnesota, and Oregon.
OffHook	1411	
processorDead	1413	
NoRegister	1416	
stuckSender	1417	
otherStationTrouble	1418	
(otherCaseGroup)		
releaseCktRequestedByIC	1507	
releaseCktRequestedByEC	1508	
releaseFacilityRequestedByIC	1509	
releaseFacilityRequestedByEC	1510	
requestForRoutine	1511	
release	1512	
requestMonitorOfCircuit	1514	
routineTestFailure	1515	
lostTimeReport	1516	
historicalReports	1517	
switchOrTrunkRelated	1518	

Trouble Type	TA Code	Extra Rules
requestTestAssist	1519	
analogTestLine	1520	
digitalTestLine	1521	
manualInterventionRequested	1522	
switchedNetworkGroup	1700	
aNITimeout	1701	
extraDigit	1702	
extraPulse	1703	
falseKeyPulse	1704	
misplacedStartPulse	1705	
mutilatedDigitGroup	1706	
noKeyPulse	1707	
partialDialTimeout	1708	
signalingNetworkFailureIncoming	1709	
stationGroupDesignationDigitFailure	1710	
aNI Problem	1711	
oSPSEqualAccessSignaling	1712	
missingANI	1713	
vacantCodeAnnouncement	1714	
invalidDigit	1715	
highandWet	1716	
payPhoneProblemsGroup	1800	
noCoinReturn	1801	
coinStuck	1802	
cannotDepositCoin	1803	
coinsFallThrough	1804	
coinsDoNotRegister	1805	
payPhoneDamage	1806	

APPENDIX N – Valid State/Status Combinations for Design Service

FunctionCode	Function Message	ASNI State	ANSI Status
CAN	Cancel Trouble Ticket	4	27
CLD	Closed	4	27
CUS	Information to Customer	1	34
DMC	Delayed Maintenance Cancel	1	17
DME	Delayed Maintenance End	1	17
DMS	Delayed Maintenance Start	2	16
EBC	Electronic Bonding Confirmation	4	27
EBD	Electronic Bonding Deny	2	16
EBF	Electronic Bonding Failure	1	30
EBV	Electronic Bonding Verification	3	26
EBX	EBV timer request expired	3	26
HDC	Hand-off to Central Office	1	3
HDD	Hand-off to Dispatch	1	4
HDF	Hand-off to Facility	1	11
NAC	No Access Cancel	1	15
NAE	No Access Expired	1	15
NAS	No Access Start	2	14
RST	Restored	4	27

APPENDIX O - Trouble Found Codes

Trouble Found	ATIS 227 Code
pending	0
cameClear	1
centralOffice	2
switchTrouble	3
customerProvidedEquipment	4
facility	5
centralOfficeFacility	6
ICfacility	7
interexchangeCarrier	8
information	9
nonplanClassified	10
nonplanClassifiedIC	11
nonplanClassifiedEA	12
noTroubleFound	13
station	14
stationProductData	15
stationProductTerminal	16
stationProductVideo	17
stationProductVoice	18
stationWiring	19
otherStationEquipment	20
foundOKStation	21
servingBureau	22
testOK	23
publicServicesCoinSet	24
customerOperatingInstructions	25
testedOKVerifiedOK	26
coFacilityTestedFoundOK	27
outsideFacilityTestedFoundOK	28
referredOutToOtherDept	29
protectiveConnectiveArrang	30
cpeCustomerResponsibility	31
preService	32
preServiceIC	33
preServiceEA	34
serviceNode	35
data	36
customerReferredToVendor	37
exchangeAccess	38
international	39

Trouble Found	ATIS 227 Code
otherProvidedAccess	40
existingReport	41
cancelExclude	42

Appendix P - Non-Applicable Trouble Types for Design Service

Trouble Type	TA Code
(stationTroubleGroup)	
voiceEquipment	1301
dataEquipment	1302
videoEquipment	1303
otherEquipment	1304
(physicalTroubleGroup)	
lightBurnedOut	1401
dataset	1402
ttySet	1403
highSpeedPrinter	1404
canNotActivatePC	1407
modem	1408
cathodeRayTube	1409
physicalProblem	1412
processorDead	1413
noRegister	1416
stuckSender	1417
otherStationTrouble	1418
(otherCaseGroup)	
manualInterventionRequested	1522
recovery	1600
recoveryReport	1601
payPhoneProblemsGroup	1800
noCoinReturn	1801
coinStuck	1802
cannotDepositCoin	1803
coinsFallThrough	1804
coinsDoNotRegister	1805
payPhoneDamage	1806

Appendix Q - Applicable Trouble Types for Local Number Portability (LNP)

Trouble Type	TA Code
CanNotCallOut	0201
canNotCallOut2	0208
CanNotBeCalled	0301
CanNotRaiseAStation	0308
receivesCallsForWrongNumber	0320

Appendix R - Glossary/Acronyms

Acronyms either used in this document or useful for discussions about this document are listed below.

Acronym	Definition
ACSE	Association Control Service Element
ANSI	American National Standards Institute
AVC	Attribute Value Change
BAS	Business Application Services
CLEC	Certified Local Exchange Carrier
CME	Conformant Management Entity
CTR	Customer Trouble Reporting
CUG	Closed User Group
DCS	Data Communications Services
DES CBC	Data Encryption Standard/Cipher Block Chain
DN	Distinguished Name
DTN	Digital Telephone Number
EB	Electronic Bonding
ECIC	Electronic Communications Implementation Committee
EFD	Event Forwarding Discriminator
FU	Functional Units
HTTP(S)	Hyper Text Transport Protocol (Secure Sockets)
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
ISP	International Standardized Profiles
LEC	Local Exchange Carrier
LMOS	Loop Maintenance Operations System
MAPDU	Management Application Protocol Data Unit
MLT	Mechanized Loop Test
MOCS	MTG Supported Transactions
MOI	Managed Object Instance
MORT	Managed Object Referring to Test
NM	Network Management

Acronym	Definition
NSAP	Network Service Access Point
OBF	Ordering and Billing Forum
OID	Object Identifier
OIW	OSI Implementation Workshop
ORT	Operational Readiness Test
OSI	Open Systems Interconnection
OSS	Operations Support Systems
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statements
POI	Point of Interface
POP	Point of Presence
POTS	Plain Old Telephone Service
RDN	Relative Distinguished Name
RMA	Request for Manual Assistance
ROSE	Remote Operations Service Element
ROER	ROSE Error
RORJ	ROSE Error Reject
SAP	Service Access Point
SMFU	System Management Functional Unit
SOAP	Simple Object Access Protocol
SYAD	Systems Administration
TA	Trouble Administration
TACEN	Trouble Administration Configuration Event Notification
tML	telecommunications Markup Language
TMN	Telecommunications Management Network
TR	Telecommunications Local Trouble Report
TRFD	Trouble Report Format Definition
TSAP	Transport Service Access Point
TT	Trouble Ticket
TTR	Telecommunications Trouble Report
W3C	World Wide Web Consortium

Acronym	Definition
WFA/C	Work Force Administration/Control
WSDL	Web Service Description Language
WS-I	Web Services Interoperability Organization
XML	Extensible Markup Language

Appendix S - Managed Object Instance (Service ID component) formats

Sample POTS and Design Service (only unbundled loop and unbundled switch network elements) circuit formats are listed below.

POTS Formats

Telephone Number Format

3031234567

Telephone Number with Terminal Format

3031234567TER12345

Design Service Formats

Unbundled Loop Circuit Formats

24/LXFU/111111/MS (serial numbered)

24/UBFU/111111/MS

24/HCFU/111111/MS

Unbundled Switch Circuit Formats

29/SNNU/303/555/1111 (telephone numbered)

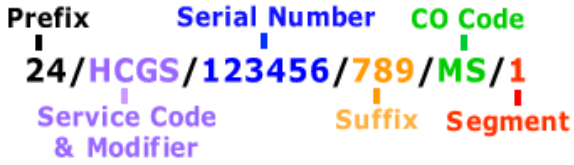
A02/T1/CLSPCOMADS0/CLSPCOMAHJ3 (carrier)

97/PH55IEKEYY/CLSPCOMAHJ3/77/CLSPCOMADS0 (message trunk)

Guide to Circuit ID Formats

The format of each type of circuit ID used in MTG is explained in the table below.

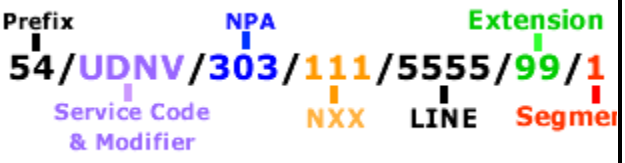
Serial Number Format



Prefix: 1-2 alphanumeric characters. This is an optional field.
Service Code & Modifier: 2-4 alphabetic characters (usually 4). This is a required field.
Serial Number: 1-6 digits. This is a required field.
Suffix: 3 character suffix to the serial number may be required (rarely used).
CO (Company) Code: 2-4 alphabetic characters (usually NW, MS, or PN). This is a required field.
Segment: 1-3 alphanumeric characters. optional for non-multi-point circuits. multi-point segments map to Circuit End Location, e.g. CLK1 = A, CLK2 = B

A Billing Telephone Number (BTN) cannot be used for opening a Trouble Report. The Serial Number Circuit Format must be used.

Telephone Number Format



Prefix: alphanumeric characters. required if it exists (not all telephone number circuits have a prefix)
Service Code & Modifier: 2-4 alphabetic characters (usually 4); This is a required field when specifying a non-DSL telephone numbered circuit.
NPA: 3 digits. This is a required field.
NXX: 3 digits. This is a required field.
Line: 4 digits. This is a required field.
Extension: 1-5 alphanumeric characters. This is an optional field.

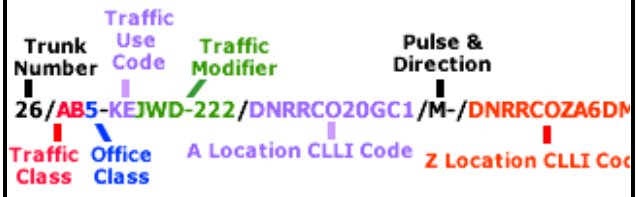
For states: AZ, CO, ID, MT, NM, UT, WY, alphas not accepted; convert D1 to 0001, D2 to 0002, etc.
Segment: 1-3 alphanumeric characters. This is an optional field. rarely used

Carrier Facility Format

Channel Group Number: 1-5 alphanumeric characters. This is a required field.
Facility Type: 1-6 alphanumeric characters. This is a required field. Examples: T1, T1F, T1U, T1UZF, T1Z, T1ZF, T3
A CLLI Code: 8 or 11 alphanumeric characters. This is a required field.
Z CLLI Code: 8 or 11 alphanumeric characters. This is a required field.

All 4 of the above components are required

Message Trunk Format



Trunk Number: 1-4 alphanumeric characters. This is a required field.
Traffic Class: 1-2 alphanumeric characters. This is a required field. A hyphen may be allowed
Office Class: 1-2 alphanumeric characters. This is a required field. A hyphen may be allowed

A separator is not used between the Traffic Class and Office Class
Traffic Use Code: 2 alphanumeric characters. This is a required field. A hyphen may be allowed. No separator between Office class and Traffic Use Code
Traffic Modifier: 1-7 alphanumeric characters. This is an optional field. No separator between

	Traffic Use Code and Traffic Modifier **A CLLI Code:** 8 or 11 alphanumeric characters. This is a required field. **Pulse & Direction:** 2 alphanumeric characters. This is a required field. **Z CLLI Code:** 8 or 11 alphanumeric characters. This is a required field.