

Appendix 5

Operational Support Systems Verification Test Plan

DRAFT

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Revision XX

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REVISION HISTORY

Revision Number	Revision Date	Revision Description	Revised by

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1.0 DOCUMENT PURPOSE

This Operational Support Systems (OSS) Verification Test Plan is divided into two main parts. The first part (Sections 1 – 8) defines and documents the overall test methodology and approach that will be used in the verification and validation for the OSS that support the General Services Administration (GSA) Networx contract. As part of a software lifecycle and in relationship to specific testing needs, the test process includes defining test scope, objectives, and assumptions.

The second part of this document (Attachments 1 – 6) includes the test cases specified in the Networx Enterprise Request for Proposal (RFP). The GSA Networx OSS Verification Test Plan is subject to required document review, approval, and change control procedures, as well as Government approval. This is a living document and subject to revisions.

Qwest will complete the OSS Verification Testing process within 60 calendar days of Notice to Proceed (NTP) or within 60 calendar days after Government approval of this test plan, whichever is later, as required in Section C.3.9.2.2 and in accordance with Section E of the RFP.

2.0 SCOPE

This Networx OSS Verification Test Plan describes the approach to providing OSS verification, and covers the types of testing performed on OSS software releases. The processes by which changes to the OSS are managed in partnership with GSA are captured in Appendix 6, OSS Change Management Plan.

Qwest commits to completing verification testing before accepting service orders. Qwest will support the Government and ordering Agency in observing or having a representative observe all or any part of the verification testing.

3.0 PROJECT OVERVIEW

The Qwest OSS is made up of a front-end customer portal, Qwest Control Networx Portal, and supporting systems used to order, provision, inventory, invoice, monitor services, and generate reports in support of the GSA Networx contract. Testing of the OSS must ensure that these functions can be verified end-to-end.

4.0 TEST OBJECTIVES

Test execution provides the opportunity to identify and correct errors that could impact production processes, and the ability of Government users to conduct business according to the requirements of the GSA Networx contract. Specific objectives for the tests are to:

1. Verify that the contracted requirements identified have been met and that the OSS performs as required.
2. Ensure that the application operates and functions as described in the requirements that will be tested.
3. Ensure the application supports end-user task performance and workflow.
4. Ensure that the application does not crash or behave incorrectly as the result of an error.
5. Verify that the application correctly interfaces with the necessary data sources.
6. Identify at an early date any system performance issues that may exist.

5.0 ASSUMPTIONS

This section describes the assumptions made in planning the test activities, estimating the test effort, and deriving the test schedule(s).

1. Development and test personnel are provided by the Qwest Information Technology (IT) organization.

2. Testers will have access to any existing test processes and work products.
3. Entrance criteria have been completed by Qwest and approved by Government personnel.
4. Testing will be performed during normal business hours, 8:00 a.m. to 5:00 p.m. Monday-Friday, Eastern Time (ET).
5. Testing will be based on the availability of Government personnel participating in the tests.
6. Qwest will maintain and support test environments for the duration of the test period.
7. Test schedules will reflect adequate time for testing and retesting and will be reviewed by Qwest and the Government.
8. The test environment will be available when needed and mirrors the production environment.
9. C&A testing may be performed during the same period as OSS verification testing.

6.0 DEPENDENCIES

This section describes the dependencies upon which the testing effort is based.

1. Entrance criteria documents are delivered in accordance with the approved project schedule, to allow extraction of information for the execution of test cases.
2. A freeze on the scope and definition of test cases is imperative prior to the test cycle.
3. Testing requirements are available on the dates identified in the Testing Project Schedule.

- Detailed testing actions and expected results for test cases are defined, and the Government has approved the detailed test cases.

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7.0 STRATEGY

The following table summarizes the core processes described within the OSS Verification Test Plan. Each step of the verification plan is detailed with goals and overall approach in the following sections.

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8.0 TESTING OSS CHANGES

Retesting with the Government to ensure functionality is part of this Verification Test Plan process. Qwest will comply with all retesting requirements and will make certain that the Government can ensure functionality of any impacted interface. Specifically, Qwest will inform the Government at least 30 calendar days in advance when OSS changes are planned and when maintenance changes are required. Qwest will manage and control OSS changes, and incorporate Government review and approval of the retesting in the process. All Government training, as required by the results of changes to the OSS, including training content development and delivery, will be coordinated by the Qwest Networx Training Manager. Please see Appendix 6, OSS Change Management Plan, Section 4.5, Verification Testing, and Section 4.6, Retraining, for additional details.

Attachment 1

Test Case #1

Service Order Test

Test Objective

Demonstrate that an authorized Government user can place an order using Internet-secure access, electronic mail, or electronic file transfer and that the order populates the fields in the contractor's ordering system in a way that meets requirements of J.12.1, Ordering Data Elements. Test Case #1 will apply to all services being offered under the Qwest proposal.

Requirements

- User registration C.3.5.1.3.1.1.3 received by Qwest, results in properly established user credentials and access privileges.
- Order data received in the format identified by J.12.1, Unit 1 – 3.

Functional Specifications to be Validated

- Data entry in the Qwest Control Networx Portal by Qwest personnel or Government personnel.
- Order data will be input via Internet-secure access.
- Order data can be received via paper, electronic mail, or electronic file transfer.
- Individual data elements entered will be validated against individual field attributes, rules, and parameters.

Attachment 2

Test Case #2

Acknowledge Service Order Test

Test Objective

Using Internet-secure access, electronic mail, or electronic file transfer, the contractor demonstrates that its ordering system can provide Order Receipt Acknowledgements and Service Order Completion Notices (SOCNs) containing the data elements specified in Attachments J.12.2.1, Order Receipt Acknowledgement (ORA), and J.12.2.5, SOCN.

Qwest commits to completing Verification Testing before accepting service orders. Additionally, Qwest will indicate successful completion of Verification Testing by delivering a SOCN within one business day. If required by the Government, Qwest will rerun tests, in whole or in part, to verify that the services delivered to Agencies meet contractual requirements.

Qwest will support Government and ordering Agencies in observing or having a representative observe all or any part of the Verification Testing. Qwest will deliver the SOCN within one business day after all of the components of the service are fully implemented, testing is completed, and service is ready for use.

Requirements

- User registration C.3.5.1.3.1.1.3 received by Qwest, results in properly established user credentials and access privileges
- Order data received in the format identified by J.12.1, Unit 1 – 3
- Order data from Test Case #1 saved and submitted for processing

Functional Specifications to be Validated

- Order data from Test Case #1 sends the following acknowledgements:

1. ORA J.12.2.1
 2. SOCN J.12.2.5
- Government receives order acknowledgements

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Change Requests

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Attachment 3

Test Case #3

Acceptance of bulk orders for each type of order in Test Case #1 (Table E.3.1, Test Case #3)

Test Objective

This test enables the Government to verify that bulk service orders can be entered successfully under a single Agency service request number through the Qwest Control Network Portal. This test supports the Internet-secure access functions of direct ordering defined in Section C.3.5.1.2.2, ID Number 9, populates Qwest's ordering database according to J.12.1, and provides a single instance of each of the following: ORA, Service Order Confirmation (SOC), Firm Order Commitment Notice (FOC), and SOCN and service order number in accordance with Section C.3.5.1.2.2. Additionally the test will verify acceptance of a bulk order for each type of order entered in Test Case #1.

Requirements

- User registration C.3.5.1.3.1.1.3 received by Qwest results in properly established user credentials and access privileges.
- Order data received in the format identified by J.12.1, Unit 1–3.
- Bulk order accepted for each type of service ordered in Test Case #1 under a single Agency Service Request Number (ASRN).
- Single instance provided of each notification.

Functional Specifications to be Validated

- Data entry in the Qwest Control Network Portal by Qwest personnel or Government personnel.
- Order data will be input via Internet-secure access.

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Attachment 4

Test Case #4

Inventory of Services Test (Table E.3.1, Test Case #4)

Test Objective

This test enables the Government to verify that the Qwest Control Network Portal manages the inventory of services consistent with the orders entered. This test supports the Internet-secure access functions required for Network inventory according to the requirements defined in C.3.8.2.3., C.3.8.2.4, and C.3.8.2.5 of the Network RFP.

Requirements

- Qwest's adherence to Record Elements – User Registration for Ordering (RFP Section C.3.5.1.3.1.1.3) results in properly set up user credentials and access privileges.
- Service orders submitted under Test Case #1
- Test Case #3 SOCN received triggers Network DB population of inventory.

Functional Specifications to be Validated

- Data entry in the Qwest Control Network Portal by Qwest personnel or Government personnel.
- Navigation to inventory reporting tool

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Change Requests

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Attachment 5

Test Case #5

Billing System Test (Table E.3.1., Test Case #5)

Test Objective

This test enables the Government to verify that an invoice file and a detail billing file will correspond to the respective orders input through the Qwest Control Network Portal. This test supports the requirements of Sections C.3.6.1.2.2, C.3.6.1.2.3, C.2.6.1.2.4, and C.3.6.1.3.2.2 of the Network RFP and outputs data in the record formats defined in J.12.4, J.12.4.1, and J.12.4.2. The test demonstrates that the billing system produces an invoice file and a detail billing file that correspond to Test Case #1 and Test Case #3 and generates invoices that are accurate.

Requirements

- Qwest's adherence to Record Elements – User Registration for Ordering (RFP Section C.3.5.1.3.1.1.3) results in properly established user credentials and access privileges.
- Order data received in the format identified by J.12.1, Unit 1 – 3.
- Order data from Test Case #1
- SOCN and ORA Acknowledgement for Test Case #1 and Test Case #3

Functional Specifications to be Validated

- Data entry in the Qwest Control Network Portal by Qwest personnel or Government personnel.
- Navigation to Billing Management tab.
- Comparison of orders to invoice, resulting in correlation of ordered services and invoiced items.

- Production of an accurate billing invoice and detail billing files and assignment in a manner that is consistent with Agency Hierarchy Code (AHC), according to the requirements in J.12.4.1.
- Production of an accurate detail billing file and assignment in a manner that is consistent with the AHC, according to the requirements in J.12.4.2.

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Attachment 6

Test Case #6

Electronic Access Test (Table E.3-1, Test Case #6)

Test Objective

This Test demonstrates that OSS identifies and authenticates each user, that each user can only access information that they are authorized to access, and that the OSS meets Networkx security requirements.

Requirements

- Qwest's adherence to Record Elements – User Registration for Ordering (RFP Section C.3.5.1.3.1.1.3) results in properly established user credentials and access privileges.
- Qwest will set up initial access via the Qwest Control Networkx Portal Administration function for the GSA Designated Agency Representative (DAR), Agency DAR, and Agency users with various levels of access. GSA may direct Qwest on configuring user administration privileges at their option.

Functional Specifications to be Validated

- Access and data entry in the Qwest Control Networkx Portal by Qwest personnel or Government personnel.
- Denial of access tests executed and recorded by comparison of expected access levels against the outcome of physical attempts for access at all levels of users.
- Three different tests of user access as detailed in **Figure A5-2** to validate access based on user credentials.

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