tmforum

**Frameworx 12
Product Conformance
Certification Report**

ISPM Servicos de Informatica LTDA

NetVision V3.7

January 2013

Table of Contents

List of Tables

List of Figures

1   Introduction

1.1   Executive Summary

This document provides details of ISPM's self-assessment and TM Forum's Conformance Assessment of **ISPM Servicos de Informatica LTDA (ISPM) NetVision** product, against the following Frameworx 12 components:

- Business Process Framework Version 12

- Information Framework Version 12

The assessment included a review of:

- The methodology approach to product modeling and Product Lifecycle Management (PLM) against the TM Forum's Business Process Framework Release 12 according to the specific processes submitted in scope for the Assessment.

- Conformance to the Information Framework Release 12 Domains/Aggregate Business Entities according to the specific ABEs submitted in scope for the Assessment.

2   Product Functionality/Capability Overview

2.1   ISPM NetVision Version 3.7 – Product Overview

NetVision, from ISPM, is a complete range of OSS service assurance solutions delivering superior customer experience and SLA compliance.

It is a modular solution, tailored to the needs of Communication Service Providers (CSPs) and IT managers. Users can select individual models or choose to deploy the complete solution. It integrates seamlessly with legacy tools, providing a cost-effective upgrade to deliver full visibility and control of network events and operations.

NetVision is designed to provide a comprehensive solution for the over-the-top management of ICT services, based on compliance to eTOM and ITIL standards.

It is a complete software platform optimised for the management of telecommunications, networks and IT services. NetVision delivers superior service assurance by the presentation of clear and accurate information about performance, capacity, availability and service delivery.

It's a real-time world and customers demand proactive support, management and optimisation. With NetVision, you can achieve outstanding customer experience, while reducing costs and creating new revenue opportunities.
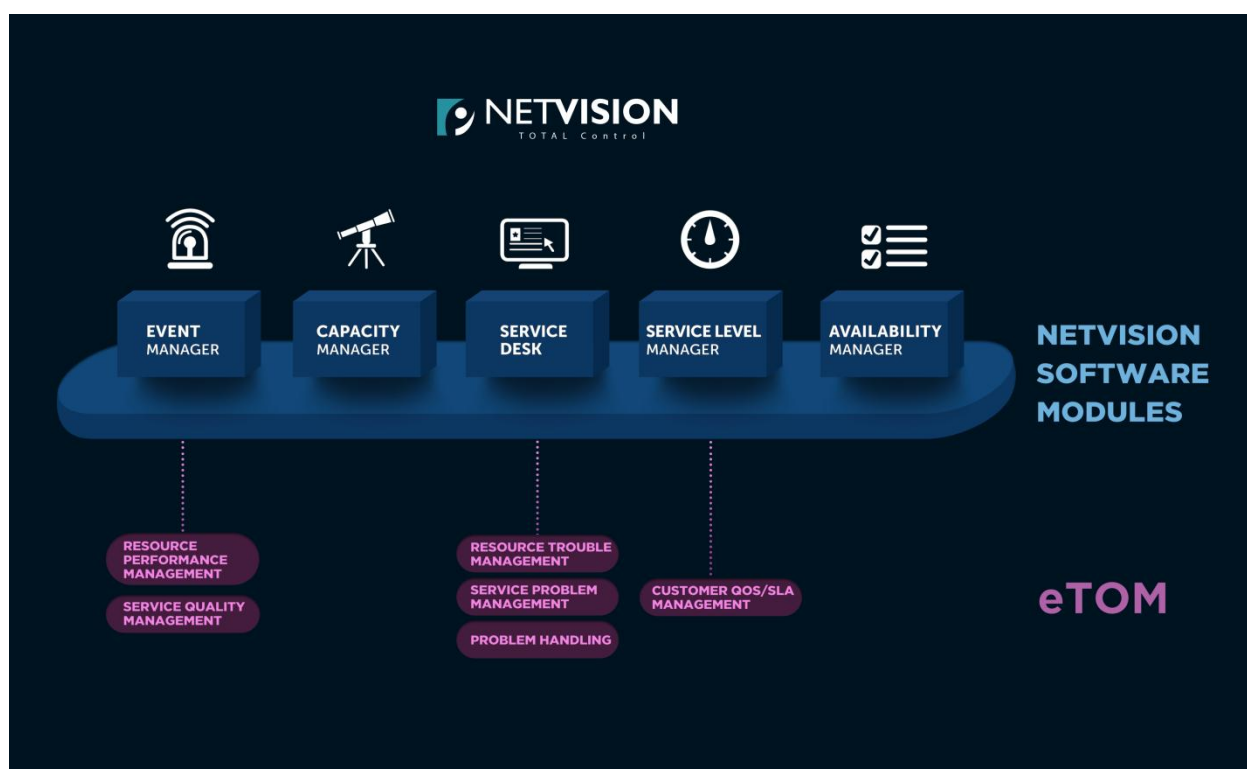
Figure 2.1 – NetVision V3.7 Software Modules

3 Business Process Framework Assessment Overview

3.1 Mapping Technique Employed

Business Process Framework L3 descriptions are analyzed by looking for implied tasks. (This is similar to how process decomposition can use Semantic Analysis). Each eTOM process is supported by descriptive text. In many cases, each process is aligned and mapped to appropriate company documentation references solution, methodology or modeling material.

The eTOM L3 descriptions are analyzed by looking for implied tasks. Color coded text as highlighted below is used as part of the process mapping whereby highlighted text indicates the level of support for a Level 3 process implied task:

- GREEN is used to highlight key words or key statements that are fully supported
- YELLOW is used to highlight key words/key statements that are partially supported
- GREY is used to highlight key words/key statements that are not supported
- No highlighting is used for words/statements that are irrelevant, just for reference or needed to complete the sentence.

Manual and Automated Support
It is important to determine whether the implied task is supported by manual steps, automated steps, or a combination of both. In this document, "A", "M", or "AM" is used for each task to indicate that the step or steps is/are automated (A), manual (M), or both (AM).

TM Forum Note 1: When process mappings are presented against Level 4 processes, the mappings are provided against the text in the "Mandatory" field for the process. In the event of the Mandatory field not being used, the process mappings are in that case be provided against the Level 4 Brief/Extended descriptions.

TM Forum Note 2: Note that if a Level 3 process has not been decomposed to Level 4 processes in the Business Process Framework, in such cases the process mapping support is provided against the Level 4 process descriptions (Brief & Extended).

3.2   Business Process Framework - Level 2 Process Scope

The following figure represents the Business Process Framework Level 2 processes that were presented in scope for the assessment, and the textual callouts represent the components of the ISPM NetVision that were assessed and support the corresponding eTOM processes according to the results in Chapter 6 Frameworx Conformance.
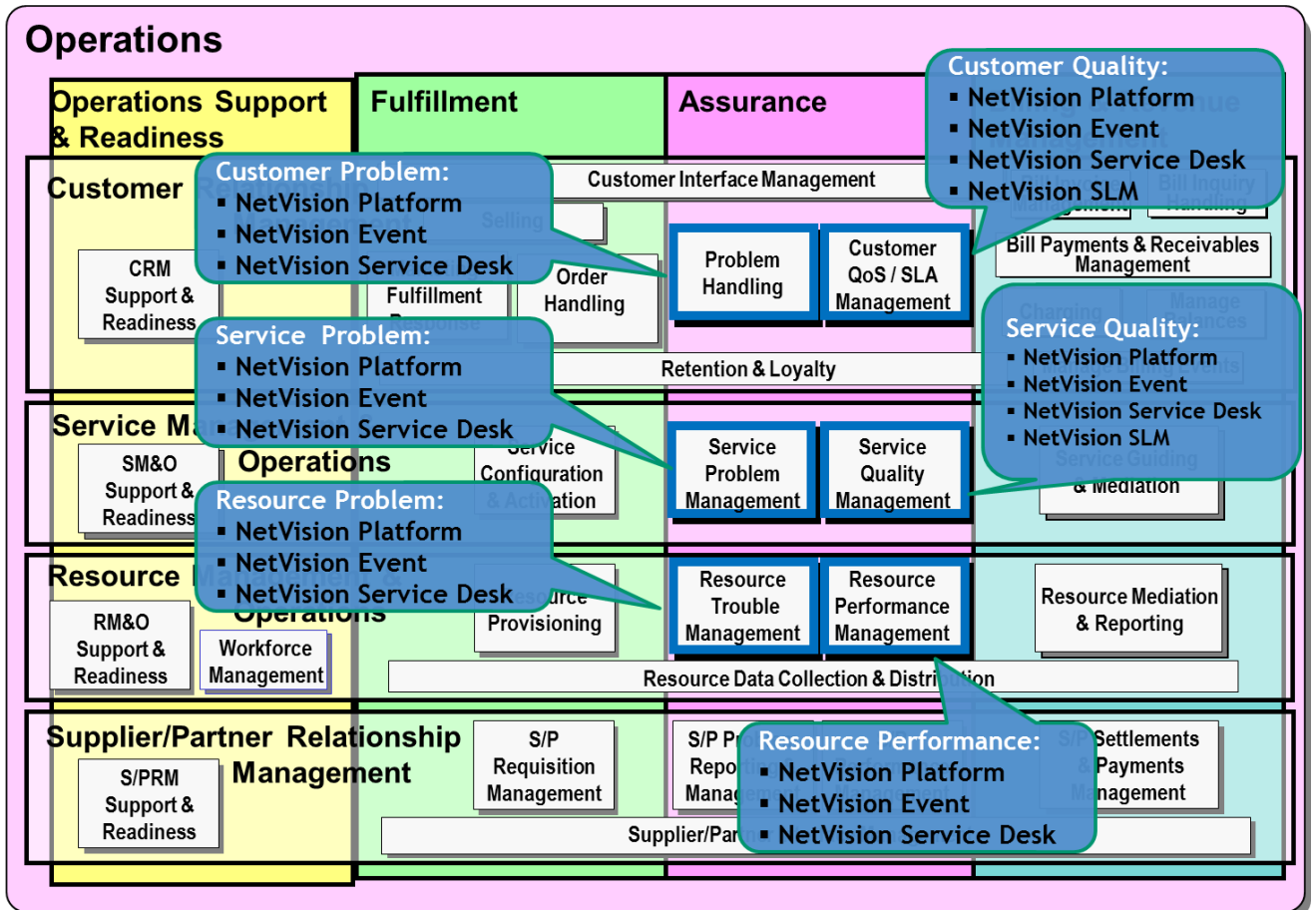
Figure 3.1 - Business Process Framework: Level 2 process coverage for NetVision V3.7 Assessment

The following diagram identifies the number of Level 3 processes that were submitted for assessment, for each Level 2 process that was submitted in scope for the Assessment.
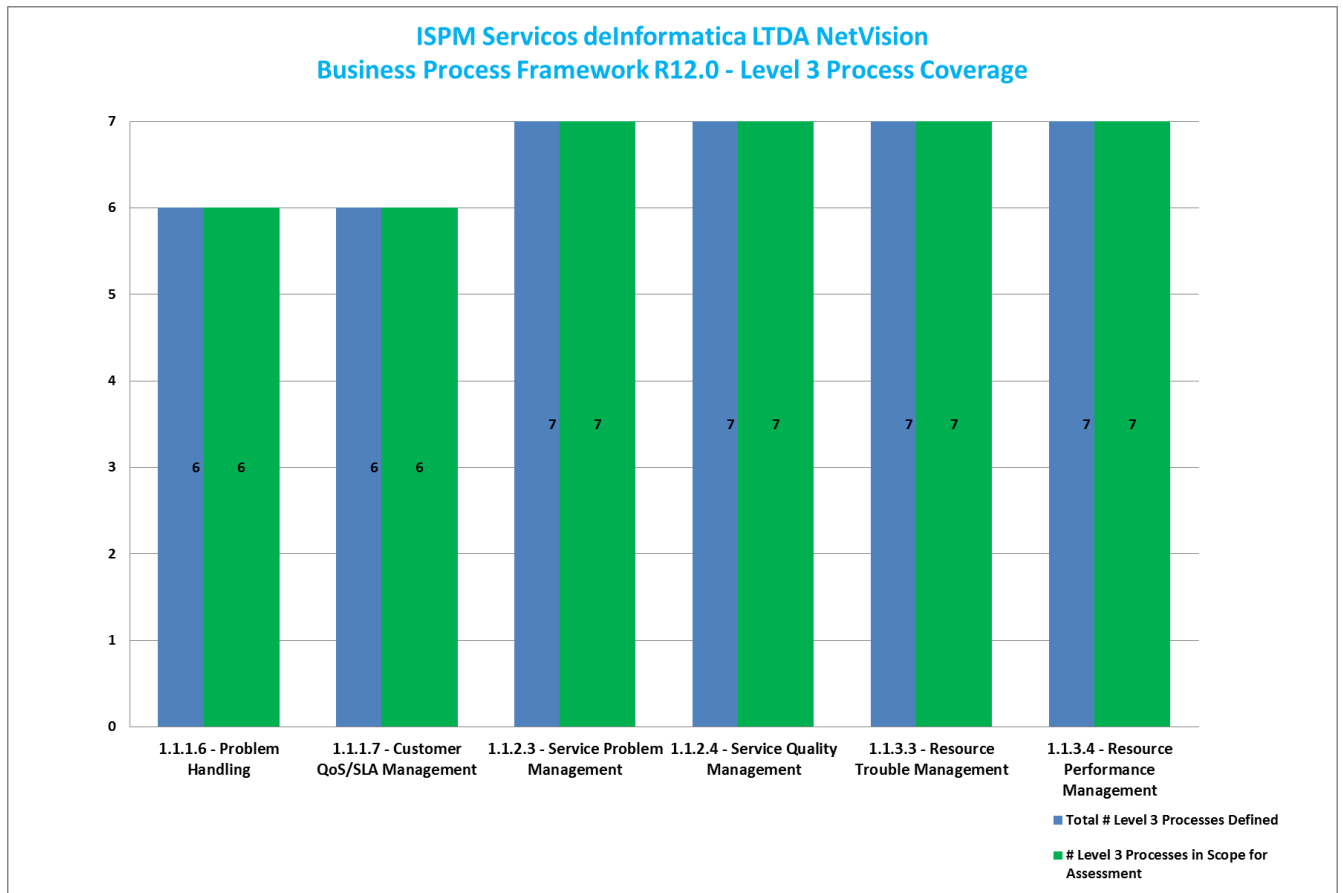
Figure 3.2 - Level 3 process coverage for ISPM NetVision V3.7 Assessment

3.3   Product Scope

The diagram in Figure 3.3 represents the ISPM NetVision and how it is mapped to the Business Process Framework processes that were assessed as part of this Frameworx Conformance Assessment.
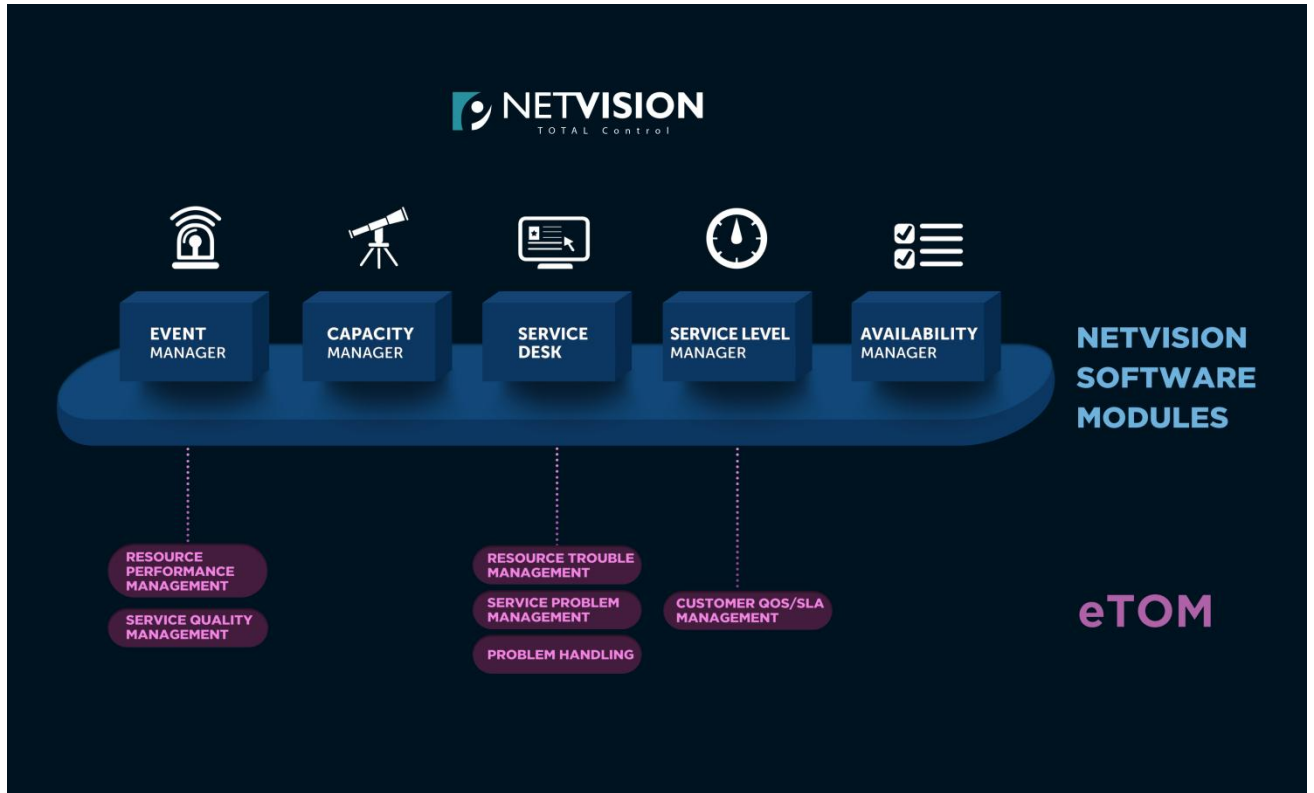
Figure 3.3 - NetVision V3.7 Product Footprint with Scope for eTOM Assessment

tmforum

4   Business Process Framework – Process Mapping Descriptions

This section provides the Process Mapping output from ISPM's Self-Assessment which was reviewed by TM Forum Subject Matter Experts alongside supporting documentation for the ISPM NetVision.

4.1   Level 1: 1.1.1 - Customer Relationship Management

4.1.1   Level 2: 1.1.1.6 - Problem Handling - Mapping Details

4.1.1.1 Level 3: 1.1.1.6.1 - Isolate Customer Problem

LEVEL 3 PROCESS MAPPING DETAILS
1.1.1.6.1 - Isolate Customer Problem

Brief Description

Identify the root cause of the customer problem. **AM**

Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Customer Problem defined in the NetVision Process Guide (NPG, item 3, pg 6) and treated by Diagnostics step on the flow (NPG, item 3.6.2, pg 10).

Extended description

The purpose of the Isolate Customer Problem processes is to identify the root cause of the customer problem. The responsibilities of these processes include, but are not limited to: **AM (**NPG, item 3.6.2, pg 10)

· Verifying whether the customer is using the purchased product offering correctly; and **AM (**NPG, item 3.6.2.3.1, UC2.1, pg 12)

· Performing diagnostics based on the customer provided information to determine whether the root cause of the customer problem is linked to the underlying services. **AM (**NPG, item 3.6.2.3.1, UC2.1, pg 12)

The Isolate Customer Problem processes will make the results of the root cause analysis available to other processes. The Isolate Customer Problem processes will update open customer problem report, as required during the assessment, and when the root cause has been identified. **A (**NPG, item 3.6.2.3.2, UC2.2, pg 13)

The Isolate Customer Problem processes will notify the Track & Manage Customer Problem processes when the analysis is complete. **A (**NPG, item 3.6.2.3.3, UC2.3, pg 14) *All notifications are made by the workflow process as needed.*

4.1.1.2 Level 3: 1.1.1.6.2 - Report Customer Problem

LEVEL 3 PROCESS MAPPING DETAILS
1.1.1.6.2 - Report Customer Problem

Brief Description

Monitor the status of customer problem reports, provide notifications of any changes and provide management reports. **AM**

Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Customer Problem defined in the NetVision Process Guide (NPG, item 3, pg 6) and treated by Reports step on the flow (NPG, item 3.6.6, pg 23).

Extended description

The objective of the Report Customer Problem processes is to monitor the status of customer problem reports, provide notifications of any changes and provide management reports. **A (**NPG, item 3.6.6, pg 23)

These processes are responsible for continuously monitoring the status of customer problem reports and managing notifications to processes and other parties registered to receive notifications of any status changes. Notification lists are managed and maintained by the Support Problem Handling processes. **AM (**NPG, item 3.6.6, pg 23)

These processes record, analyze and assess the customer problem report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall Problem Handling process. **AM (**NPG, item 3.6.6, pg 23)

These specialized summaries could be creation of specific reports required by customers and/or other specific audiences. These processes will make the necessary reports about the problem that occurred, the root cause and the activities carried out for recovery of normal operation. **A (**NPG, item 3.6.6, pg 23)

4.1.1.3 Level 3: 1.1.1.6.3 - Track & Manage Customer Problem

LEVEL 3 PROCESS MAPPING DETAILS
1.1.1.6.3 - Track & Manage Customer Problem

Brief Description

Ensure that recovery activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open customer problem reports in jeopardy. **AM**

Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Customer Problem defined in the NetVision Process Guide (NPG, item 3, pg

6) and treated by Track Issue step on the flow (NPG, item 3.6.3, pg 15).

Extended description

The purpose of the Track & Manage Customer Problem processes is to ensure that recovery activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open customer problem reports in jeopardy. Responsibilities of these processes include, but are not limited to *AM (NPG, item 3.6.3, pg 15 and covered by all flow in described on NPG, item 3, pg 6)*

· Scheduling, assigning and coordinating tracking any recovery activities, and any repair and restoration activities delegated to other processes; *AM (NPG, item 3.6.3.3.1, pg 16 and covered by all flow in described on NPG, item 3, pg 6)*

· Generating the respective service trouble report creation request(s) to Create Service Trouble Report based on specific customer problem reports; *A (NPG, item 3.6.3, pg 15 – NPG, item 3.6.1, pg 8 and covered by all flow in described on NPG, item 3, pg 6*

· Undertake necessary tracking of the execution progress;

· Modifying information in an existing customer problem report based on assignments;

· Modifying the customer problem report status; *AM (NPG, item 3.6.3, pg 15 and covered by all flow in described on NPG, item 3, pg 6) Implemented by updating the ticket workflow in itself.*

· Canceling a customer problem report when the specific problem was related to an incorrect customer problem report; and *AM (NPG, item 3.6.3.3.1, pg 16 and covered by all flow in described on NPG, item 3, pg 6)*

· Monitoring the jeopardy status of open customer problem reports, and escalating customer problem reports as necessary. **AM (**NPG, item 3.6.3, pg 16 and covered by all flow in described on NPG, item 3, pg 6) *Implemented by updating the ticket workflow in itself and* NPG, item 3.6.3.3.1, Step 4 of UC3.1.

Note that some specific product and/or service components may be owned and managed by suppliers/partners. In these cases the Track & Manage Customer Problem process is responsible for initiating requests, through S/P Problem Reporting & Management processes for restoration and recovery by the supplier/partner of the specific service components. These processes will co-ordinate all the actions necessary in order to guarantee that all tasks are finis)hed at the appropriate time and in the appropriate sequence. The Track & Manage Customer Problem processes will also inform the Close Customer Problem processes by modifying the customer problem report status to cleared when the customer problem has been resolved. *AM (NPG, item 3.6.3.3.1, pg 16 and covered by all flow in described on NPG, item 3, pg 6) Implemented by updating the ticket workflow in itself. The hanlding of suppliers/partens is provided by the UC4.3, step 5 and 6 on NPG,*

item 3.6.4.3.3.

4.1.1.4 Level 3: 1.1.1.6.4 - Close Customer Problem Report

LEVEL 3 PROCESS MAPPING DETAILS
1.1.1.6.4 - Close Customer Problem Report

Brief Description

Ensure that a problem affecting the customer is solved. **AM**

Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Customer Problem defined in the NetVision Process Guide (NPG, item 3, pg 6) and treated by Close Issue step on the flow (NPG, item 3.6.5, pg 21).

Extended description

The purpose of the Close Customer Problem Report processes is to close a customer problem report when the problem affecting the customer is solved. These processes are also responsible for possibly contacting the customer to inquire about the customer's satisfaction with resolution of the problem. These processes monitor the status of all open customer problem reports and recognize that a customer problem report is ready to be closed when the status is changed to cleared. **AM (***NPG, item 3.6.5, pg 21)*

4.1.1.5 Level 3: 1.1.1.6.5 - Create Customer Problem Report

LEVEL 3 PROCESS MAPPING DETAILS
1.1.1.6.5 - Create Customer Problem Report

Brief Description

This process creates a new Customer Problem Report. **AM** *(NPG, item 3.6.1, pg 8)*

Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Customer Problem defined in the NetVision Process Guide (NPG, item 3, pg 6) and treated by Report Issue step on the flow (NPG, item 3.6.1, pg 8).

Extended description

The objective of the Create Customer Problem Report process is to create a new customer problem report. **AM** *(NPG, item 3.6.1, pg 8)*

A new customer problem report may be created as a result of customer contacts indicating a problem with their purchased product offerings or, at the request of analysis undertaken by other processes in the CRM or SM&O horizontal process layers, which detect a failure or

degradation which may be impacting customers. *AM (NPG, item 3.6.1.3.1, pg 9)*

These processes are responsible for capturing all the necessary customer information to be included in the new Customer Problem Report. *AM (NPG, item 3.6.1.3.2, pg 10)*

4.1.1.6 Level 3: 1.1.1.6.6 - Correct & Recover Customer Problem

LEVEL 3 PROCESS MAPPING DETAILS
1.1.1.6.6 - Correct & Recover Customer Problem

Brief Description

Restore the service to a normal operational state as efficiently as possible. *AM*

Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Customer Problem defined in the NetVision Process Guide (NPG, item 3, pg 6) and treated by Corrections step on the flow (NPG, item 3.6.4, pg 17).

Extended description

The objective of the Correct & Recover Customer Problem processes is to restore the purchased product offerings to a normal operational state as efficiently as possible. Depending on the nature of the specific reported failure, or incorrect operation, of the purchased product offering these processes may possibly lead to: *AM (NPG, item 3.6.4, pg 17)*

· Educational interaction with the customer to ensure correct usage of the purchased facilities; *AM (NPG, item 3.6.4.3.1, UC4.1, pg 17)*

· Re-assessment of the customers needs and withdrawal, upgrade, renewal of the purchased product offerings; *M (NPG, item 3.6.4.3.1, UC4.1, pg 18)*

· Requests for activities to be undertaken by other processes in the CRM process layer; or *M (NPG, item 3.6.4.3.1, UC4.1, pg 18)*

· Identification that restorative activities need to be undertaken in the SM&O processes. *M (NPG, item 3.6.4.3.3, UC4.3, pg 20)*

They will also report successful restoration of normal service operation, restoration through temporary work-arounds or an unsuccessful attempt at restoration to Track & Manage Customer Problem through updates to the associated customer problem report. *M (NPG, item 3.6.4.3.1, UC4.2, pg 19)*

4.1.1.7 Supporting Evidence References (Works Cited)

- ▪ NPG – Netvision V3 - Process Guide [EN] v1.3.docx

- NPD – Netvision V3 - Product Description [EN] v1.1.docx

4.1.1.8 Level 2: 1.1.1.6 - Problem Handling - Scores

Table 4.1 - Level 2: 1.1.1.6 - Problem Handling - Scores

Level 3 Process	Level 4 Process	L4/L3 Process Score
Level 2: 1.1.1.6 - Problem Handling [6/6]		
1.1.1.6.1 - Isolate Customer Problem		**5**
	1.1.1.6.1.1 - Verify Product Configuration	1
	1.1.1.6.1.2 - Perform Specific Customer Problem Diagnostics	1
	1.1.1.6.1.3 - Perform Specific Customer Problem Tests	1
	1.1.1.6.1.4 - Notify T&M Root Cause Customer Problem	1
1.1.1.6.2 - Report Customer Problem		**5**
	1.1.1.6.2.1 - Monitor Customer Problem	1
	1.1.1.6.2.2 - Distribute Customer Problem Notifications	1
	1.1.1.6.2.3 - Distribute Customer Problem Management Reports & Summaries	1
	1.1.1.6.2.4 - Notify Customer Problem	1
	1.1.1.6.2.5 - Issue Customer Problem Management Summaries	1
	1.1.1.6.2.6 - Generate Customer Problem Management Reports	1
1.1.1.6.3 - Track & Manage Customer Problem		**5**
	1.1.1.6.3.1 - Coordinate Customer Problem	1
	1.1.1.6.3.2 - Cancel Customer Problem	1
	1.1.1.6.3.3 - Escalate/End Customer Problem	1
	1.1.1.6.3.4 - Monitor Customer Problem Jeopardy Status	1
1.1.1.6.4 - Close Customer Problem Report		**5**
	1.1.1.6.4.1 - Contact Customer for Feedback	1
1.1.1.6.5 - Create Customer Problem Report		**5**
1.1.1.6.6 - Correct & Recover Customer Problem		**5**
	1.1.1.6.6.1 - Manage Product Restoration	1
	1.1.1.6.6.2 - Report Product Restoration Results	1

4.1.2   Level 2: 1.1.1.7 - Customer QoS/SLA Management [6/6] - Mapping Details

4.1.2.1 Level 3: 1.1.1.7.1 - Assess Customer QoS/SLA Performance

LEVEL 3 PROCESS MAPPING DETAILS 1.1.1.7.1 - Assess Customer QoS/SLA Performance

Brief Description

Manage the overall assessment of the customer QoS/SLA performance

AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8), Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11) trough the process called Customer Quality defined in the NetVision Process Guide (NPG, item 8, pg 87) and treated by Monitor Quality step on the flow (NPG, item 8.6.1, pg 89).

Extended Description

The purpose of the Assess Customer QoS/SLA Performance processes is to manage the overall assessment of the customer QoS/SLA performance. *AM (NPG, item 8.6.1.1, pg 89 and NPD, item 2.4, pg11)*

These processes are responsible for ensuring that the QoS received by the customer meets the contractual obligations agreed with the customer. They check that the QoS data that they receive from other processes and entities meets the required QoS thresholds and they alert other processes and entities if this is not the case. *AM (NPG, item 8.6.1.4.1, UC1.1, pg 90*

These processes are responsible for collecting service and resource performance information analyzed and reported by the Report Service Quality Performance and Report Resource Performance processes, and converting it into a form suitable for determining whether the contractual obligations with the customer are being met. The actual reporting of the results of the assessments is managed in the Report Customer QoS Performance processes. *AM (NPG, item 8.6.1.5.1, pg 90)*

They are responsible for maintaining an overview of the quality of the customer's purchased product offering, and for carrying out QoS performance reviews with the customer, as well as for undertaking any preparatory and/or follow-up steps with other processes/entities in conjunction with such reviews *AM (NPG, item 8.6.1.4.1, UC1.1 steps 4-5, pg 90)*

4.1.2.2 Level 3: 1.1.1.7.2 - Manage QoS/SLA Violation

LEVEL 3 PROCESS MAPPING DETAILS 1.1.1.7.2 - Manage QoS/SLA Violation

Brief Description

Ensure that the customer and the relevant internal processes are informed of service quality degradations and violations and that action is undertaken to resolve the degradation or violation

AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8), Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11) through the process called Customer Quality defined in the NetVision Process Guide (NPG, item 8, pg 87) and treated by Monitor Quality step on the

flow (NPG, item 8.6.1, pg 89).

Extended Description

The purpose of the Manage QoS/SLA Violation processes is to ensure that the customer and the relevant internal processes are informed of service quality degradations and violations and that action is undertaken to resolve the degradation or violation. *AM (NPG, item 8.6.1.4.1, UC1.1 steps 5, pg 90)*

They analyze all the information related to a QoS/SLA degradation or violation and take the appropriate actions when a soft threshold is crossed or the agreed QoS is violated. *AM (NPG, item 8.6.1.4.1, UC1.1 steps 1-3, pg 90)*

They follow up the actions to ensure that the customer is satisfied with the resolution of the problem. They ensure that the customer is informed of any planned maintenance or other scheduled events likely to impact delivery of the customer's service. *AM (NPG, item 8.6.1.4.1, UC1.1 steps 6, pg 90)*

4.1.2.3 Level 3: 1.1.1.7.3 - Report Customer QoS Performance

LEVEL 3 PROCESS MAPPING DETAILS
1.1.1.7.3 - Report Customer QoS Performance

Brief Description

Report on the customer's QoS/SLA performance

AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8), Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11) trough the process called Customer Quality defined in the NetVision Process Guide (NPG, item 8, pg 87) and treated by Track & Report step on the flow (NPG, item 8.6.6, pg 99).

Extended Description

The objective of the Report Customer QoS Performance processes is to monitor the status of customer QoS performance degradation reports, provide notifications of any changes and provide management reports. *AM (NPG, item 8.6.6.1, pg 99)*

These processes are responsible for continuously monitoring the status of customer QoS performance degradation reports and managing notifications to other processes and to other parties, including customers, registered to receive notifications of any status changes. Notification lists are managed and maintained by the Support Customer QoS/SLA Management processes. *AM (NPG, item 8.6.6.3.1, UC6.1, pg 100)*

These processes record, analyze and assess the customer QoS performance degradation report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall Customer QoS/SLA Management process. These specialized summaries could be specific reports required by specific audiences and/or customers. *AM (NPG, item 8.6.6.3.2, UC6.2, pg 101)*

These processes also report any identified constraints that can affect customer related quality standards to other processes. These constraints may include specific resource failures, capacity

shortages due to unexpected demand peaks, etc. *AM (NPG, item 8.6.6.3.1, UC6.1, pg 100)*

4.1.2.4 Level 3: 1.1.1.7.4 - Create Customer QoS Performance Degradation Report

LEVEL 3 PROCESS MAPPING DETAILS
1.1.1.7.4 - Create Customer QoS Performance Degradation Report

Brief Description

Create a new customer QoS performance degradation report
AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8), Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11) trough the process called Customer Quality defined in the NetVision Process Guide (NPG, item 8, pg 87) and treated by Create Issue step on the flow (NPG, item 8.6.2, pg 91).

Extended Description

The objective of the Create Customer QoS Performance Degradation Report process is to create a new customer QoS performance degradation report, modify existing customer QoS performance degradation reports, and request cancellation of existing customer QoS performance degradation reports. *AM (NPG, item 8.6.2.3.1, UC2.1, pg 92 and NPG, item 8.6.6.3.1, UC6.1 step 4, pg 100)*

A new customer QoS performance degradation report may be created as a result of specific customer initiated QoS performance degradation notifications, or at the request of analysis undertaken by other CRM, or SM&O processes which detect that some form of deterioration or failure has occurred requiring an assessment of the performance of the specific customer purchased product offering.If the customer QoS performance degradation report is created as a result of a notification from customers or as a result of a request from other processes, the Create Customer QoS Performance Degradation Report processes are responsible for converting the received information into a form suitable for the Customer QoS/SLA Management processes, and for requesting additional information if required. *AM (NPG, item 8.6.2.3.1, UC2.1, pg 92)*

4.1.2.5 Level 3: 1.1.1.7.5 - Track & Manage Customer QoS Performance Resolution

LEVEL 3 PROCESS MAPPING DETAILS
1.1.1.7.5 - Track & Manage Customer QoS Performance Resolution

Brief Description

Efficiently assign, coordinate and track specific customer purchased product offering related performance analysis, restoration and improvement activities, and escalate any open customer QoS performance degradation reports in jeopardy.
AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8), Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11) trough the process called

Customer Quality defined in the NetVision Process Guide (NPG, item 8, pg 87) and treated by Track & Report step on the flow (NPG, item 8.6.6, pg 99).

Extended Description

The objective of the Track & Manage Customer QoS Performance Resolution processes is to efficiently assign, coordinate and track specific customer purchased product offering related performance analysis, restoration and improvement activities, and escalate any open customer QoS performance degradation reports in jeopardy. Responsibilities of these processes include, but are not limited to: *AM (NPG, item 8.6.6.1, pg 99 and NPG, item 8.6.6.2, pg 99)*

· Adding additional information to an open customer QoS performance degradation report based on the first-in and on-going analysis; *AM (NPG, item 8.6.3.3.1, pg 94)*

· Scheduling, assigning and coordinating analysis and specific customer QoS performance restoration activities and/or repair activities delegated to other processes; *AM (NPG, item 8.6.3.3.1, pg 94 for all analysis process and NPG, item 8.6.6.3.1, pg 100 for management of delegated activities such as escalation)*

· Generating the respective service trouble report creation request(s) to Create Service Trouble Report based on specific customer QoS performance degradation reports where analysis the root cause is related to services; *AM (NPG, item 8.6.4.3.1, UC4.1 step 4 pg 96 to provide the assigning of technical staff to fix the violation with all information collected and step 5 to open a related ticket to a supplier involved, if necessary)*

· Modifying information in an existing customer QoS performance degradation report based on assignments; *AM (NPG, item 8.6.6.3.1, UC6.1, pg 100)*

· Modifying the customer QoS performance degradation report status; *AM (NPG, item 8.6.6.1, pg 99* Thus, this step ensures that information from reports generated automatically is kept up to date*)*

· Canceling a customer QoS performance degradation report when the specific request was related to a false performance event; and *AM (NPG, item 8.6.6.3.1, UC6.1 step 4, pg 100)*

· Monitoring the jeopardy status of open customer QoS performance degradation reports, and escalating customer QoS performance degradation reports as necessary. *AM (NPG, item 8.6.6.3.1, UC6.1 step 5, pg 100)*

Note that some specific product and/or service components may be owned and managed by suppliers/partners. In these cases the Track & Manage Customer QoS Performance Resolution process is responsible for initiating requests, through S/P Performance Management for resolution by the supplier/partner of the specific service components. *AM (NPG, item 8.6.4.3.1, UC4.1 step 5, pg 96)*

These processes will co-ordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence. *AM (NPG, item 8.6.6, pg 100 to monitor and guarantee right handling of activities)*

The Track & Manage Customer QoS Performance Resolution processes will also inform the Close Customer QoS Performance Degradation Report processes by modifying the customer QoS performance degradation report status to cleared when the specific customer purchased product

offering performance quality issues have been resolved. *AM (NPG, item 8.6.6.3.1, UC6.1 step 4, pg 100)*

4.1.2.6 Level 3: 1.1.1.7.6 - Close Customer QoS Performance Degradati on Report

LEVEL 3 PROCESS MAPPING DETAILS
1.1.1.7.6 - Close Customer QoS Performance Degradation Report

Brief Description

Close a customer QoS performance degradation report when the performance of the customer purchased product offerings has been resolved

AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8), Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11) trough the process called Customer Quality defined in the NetVision Process Guide (NPG, item 8, pg 87) and treated by Close Issue step on the flow (NPG, item 8.6.5, pg 97).

Extended Description

The objective of the Close Customer QoS Performance Degradation Report processes is to close a customer QoS performance degradation report when the performance of the customer purchased product offerings has been resolved. *AM (NPG, item 8.6.5.1, pg 97)*

These processes monitor the status of all open customer QoS performance degradation reports, and recognize that a customer QoS performance degradation report is ready to be closed when the status is changed to cleared. *AM (NPG, item 8.6.5.3.1, pg 98)*

4.1.2.7 Supporting Evidence References (Works Cited)

- NPG – Netvision V3 - Process Guide [EN] v5.0.docx
- NPD – Netvision V3 - Product Description [EN] v1.1.docx

4.1.2.8 Level 2: 1.1.1.7 - Customer QoS/SLA Management [6/6] - Scores

Table 4.2 - Level 2: 1.1.1.7 - Customer QoS/SLA Management [6/6] - Scores

Level 2: 1.1.1.7 - Customer QoS/SLA Management [6/6]		
Level 3 Process	**Level 4 Process**	**L4/L3 Process Score**
1.1.1.7.1 - Assess Customer QoS/SLA Performance		**5**
	1.1.1.7.1.1 - Collect QoS Information	1
	1.1.1.7.1.2 - Convert QoS Information	1
	1.1.1.7.1.3 - Check QoS Thresholds Met	1
	1.1.1.7.1.4 - Maintain Overview of Product Offering Quality	1
	1.1.1.7.1.5 - Prepare/Follow-up for Performance Reviews	1

1.1.1.7.1.6 - Carry Out Performance Reviews	1
1.1.1.7.2 - Manage QoS/SLA Violation	**5**
1.1.1.7.2.1 - Analyze QoS Violation	1
1.1.1.7.2.2 - Take QoS Violation Action	1
1.1.1.7.2.3 - Follow-up QoS Violation Action	1
1.1.1.7.2.4 - Inform Cuustomer on QoS Impacts	1
1.1.1.7.3 - Report Customer QoS Performance	**4.34**
1.1.1.7.3.1 - Monitor Customer QoS Report Status	0.5
1.1.1.7.3.2 - Notify Changes on Customer QoS Report Status	1
1.1.1.7.3.3 - Distribute Customer QoS/SLA Management Reports & Summaries	0.5
1.1.1.7.4 - Create Customer QoS Performance Degradation Report	**4.67**
1.1.1.7.4.1 - Create Customer QoS Report	0.5
1.1.1.7.4.2 - Modify Customer QoS Report	1
1.1.1.7.4.3 - Requst Cancellation of Customer QoS Report	1
1.1.1.7.5 - Track & Manage Customer QoS Performance Resolution	**4.5**
1.1.1.7.5.1 - Update Customer QoS Report with Analysis Results	1
1.1.1.7.5.2 - Co-ordinate Customer QoS Analysis, Restoratin & Repair	0.5
1.1.1.7.5.4 - Modify Customer QoS Report Information	0.5
1.1.1.7.5.5 - Modify Customer QoS Report Status	1
1.1.1.7.5.6 - Cancel Customer QoS Report	1
1.1.1.7.5.7 - Escalate/End Customer QoS Report	0.5
1.1.1.7.5.8 - Engage External Product Suppliers	0.5
1.1.1.7.5.9 - Clear Customer QoS Report Status	1
1.1.1.7.6 - Close Customer QoS Performance Degradation Report	**5**

4.2   Level 1: 1.1.2 - Service Management & Operations

4.2.1   Level 2: 1.1.2.3 - Service Problem Management [7/7]- Mapping Details

4.2.1.1 Level 3: 1.1.2.3.1 - Create Service Trouble Report

LEVEL 3 PROCESS MAPPING DETAILS
1.1.2.3.1 – Create Service Trouble Report

Brief Description

Create a new service trouble report. **AM** *Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Service Problem defined in the NetVision Process Guide (NPG, item 6, pg 27) and treated by Create Issue step on the flow (NPG, item 6.6.2, pg 31).*

Extended description

The objective of the Create Service Trouble Report process is to create a new service

trouble report. **AM** *(NPG, item 6.6.2, pg 31)*

A new service trouble report may be created as a result of service alarm event notification analysis, and subsequent creation of new service alarm event records, undertaken by the Survey & Analyze Service Problem processes, or at the request of analysis undertaken by other processes in the CRM (in particular a Customer Problem Report can generate one or more Service Trouble Reports), RM&O, SM&O or S/PRM layers which detect that some form of failure has occurred for which service restoration activity is required to restore normal operation. **AM** *(NPG, item 6.6.1, pg 29 and NPG, item 6.6.2, pg 31)*

If the service trouble report is created as a result of a notification or request from processes other than the Survey & Analyze Service Problem processes, the Create Service Trouble Report processes are responsible for converting the received information into a form suitable for the Service Problem Management processes, and for requested additional information if required. **AM** *(NPG, item 6.6.2.3.1, pg 32)*

These processes will make estimates of the time to restore service which will be included in the new service trouble report so that other processes can gain access to this information. **AM** *(NPG, item 6.6.2.3.2, pg 33)*

4.2.1.2 Level 3: 1.1.2.3.2 - Diagnose Service Problem

LEVEL 3 PROCESS MAPPING DETAILS
1.1.2.3.2 - Diagnose Service Problem

Brief Description

Identify the root cause of the specific service problem **AM** *Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) through the process called Service Problem defined in the NetVision Process Guide (NPG, item 6, pg 27) and treated by Diagnostics step on the flow (NPG, item 6.6.3, pg 34).*

Extended description

The objective of the Diagnose Service Problem processes is to identify the root cause of the specific service problem. These processes are invoked by the Track & Manage Service Problem processes. *AM (NPG, item 6.6.3, pg 34)*

The responsibilities of these processes include, but are not limited to:

· Verifying whether the service configuration matches the appropriate product features; *AM (NPG, item 6.6.3.3.1, UC3.1, pg 35)*

· Performing diagnostics against the specific services; *AM (NPG, item 6.6.3.3.2, UC3.2, pg 36)*

· Running tests against the specific services; **AM** (*NPG, item 6.6.3.3.2, UC3.2, pg 36*)

· Starting and stopping audits against specific services; and

· Scheduling routine testing of the specific services.**AM** (*NPG, item 6.6.3.3.2, UC3.2, pg 36*) *Powered by workflow execution.*

The Diagnose Service Problem processes will make the results of the root cause analysis available to other processes. The Diagnose Service Problem processes will update the open service trouble report, as required during the assessment, and when the root cause has been identified. **AM** (*NPG, item 6.6.3.3.3, UC3.3, pg 37*)

When the process is complete the Diagnose Service Problem processes will notify the Track & Manage Service Problem processes. **AM** (*NPG, item 6.6.3.3.3, UC3.3, pg 37*). *Since the diagnose is an status of the workflow, the last three steps of the UC3.3 will set the next status. All notifications are made by the workflow process as needed.* Vide NPG 6.4 to the process flow and interactions.

4.2.1.3 Level 3: 1.1.2.3.3 - Correct & Resolve Service Problem

LEVEL 3 PROCESS MAPPING DETAILS
1.1.2.3.3 - Correct & Resolve Service Problem

Brief Description

Restore the service to a normal operational state as efficiently as possible **AM** *Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Service Problem defined in the NetVision Process Guide (NPG, item 6, pg 27) and treated by Corrections step on the flow (NPG, item 6.6.4, pg 38).*

Extended description

The objective of the Correct & Resolve Service Problem processes is to restore the service to a normal operational state as efficiently as possible. **AM** (*NPG, item 6.6.4, pg 38*)

Based on the nature of the service failure leading to the associated service alarm event notification, automatic restoration procedures might be triggered. Manual restoration activity is assigned to the Correct & Resolve Service Problem processes from the Track & Manage Service Problem processes. **AM** (*NPG, item 6.6.4, pg 38*)

Depending on the nature of the specific service failure, these processes may possibly re-assign services or re-configure service parameters. **AM** (*NPG, item 6.6.4.3.1, pg 39*)

For large service failures requiring extensive re-assignment and/or re-configuration activity to restore normal operation, these processes will attempt to implement work-arounds to recover the specific service operation. In these circumstances, recovery of normal operation may require

invocation of the Support Service Problem Management processes. **AM (***NPG, item 6.6.4.3.2, pg 40)*

They will also report successful restoration of normal service operation, restoration through temporary work-arounds or an unsuccessful attempt at service restoration to Track & Manage Service Problem through updates to the associated service trouble report. **AM (***NPG, item 6.6.4.3.3, pg 4)*

4.2.1.4 Level 3: 1.1.2.3.4 - Track & Manage Service Problem

LEVEL 3 PROCESS MAPPING DETAILS
1.1.2.3.4 - Track & Manage Service Problem

Brief Description

Ensure that testing, repair and restoration activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open service trouble reports in jeopardy **AM** *Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Service Problem defined in the NetVision Process Guide (NPG, item 6, pg 27) and treated by Track Issue & Report step on the flow (NPG, item 6.6.6, pg 44).*

Extended description

The purpose of the Track & Manage Service Problem processes is to ensure that testing, repair and restoration activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open service trouble reports in jeopardy. **AM** *(NPG, item 6.6.6, pg 44 - - NPG, item 6.6.6.3, pg 45 and others steps, see below)*

Responsibilities of these processes include, but are not limited to:

· Initiating first-in testing using automated remote testing capabilities;

· Adding additional information to an open service trouble report based on the first-in testing;

AM *(NPG, item 6.6.3.3.2, pg 36)*

· Scheduling, assigning and coordinating repair and restoration activities; **AM** *(NPG, item 6.6, pg 29: All workflow steps for this purpose)*

· Generating the respective resource trouble report creation request(s) to Create Resource Trouble Report based on specific service trouble reports; **AM** *(NPG, item 6.6.3.3.3, UC4.3, step 4, pg 41)*

· Initiate any final testing to confirm clearance of the service problem; **AM** *(NPG, item 6.6.6.3.1, pg 45)*

· Undertake necessary tracking of the execution progress; **A** *(NPG, item 6.6, pg 29: All workflow*

steps for this purpose)

· Modifying information in an existing service trouble report based on assignments; **AM** *(NPG, item 6.6, pg 29: All workflow steps for this purpose)*

· Modifying the service trouble report status; **AM** *(NPG, item 6.6, pg 29: All workflow steps for this purpose)*

· Canceling a service trouble report when the specific problem was related to a false service alarm event; and **AM** *(NPG, item 6.6.6.3.1, pg 45)*

· Monitoring the jeopardy status of open service trouble reports, and escalating service trouble reports as necessary. **AM** *(NPG, item 6.6, pg 29: All workflow steps for this purpose)*

Note that some specific resource components may be owned and managed by suppliers/partners. In these cases the Track & Manage Service Problem process is responsible for initiating requests, through S/P Problem Reporting & Management processes for restoration and recovery by the supplier/partner of the specific resource components. **AM** *(NPG, item 6.6.4.3.3, UC4.3 Step 5, pg 41 and NPG, item 6.6, pg 29: All workflow steps for this purpose)*

These processes will co-ordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence. **AM** *(NPG, item 6.6, pg 29: All workflow steps for this purpose)*

The Track & Manage Service Problem processes are responsible for engaging external suppliers/partners in correction and recovery activities when: **AM** *(NPG, item 6.6.4.3.3, UC4.3 Step 5, pg 41 and NPG, item 6.6, pg 29: All workflow steps for this purpose)*

· higher level expertise and/or higher level support is required to resolve the service problem, (which may be automatic in the case of highest priority service problems); **AM** *(NPG, item 6.6, pg 29: All workflow steps for this purpose)*

· the specific service has been purchased from an external supplier (as in an interconnect service); or

· the specific service is delivered by an external partner.

AM *(NPG, item 6.6.4.3.3, UC4.3 Step 5, pg 41 and NPG, item 6.6, pg 29: All workflow steps for this purpose)*

Where the engagement with an external supplier/partner is for purchased or delivered services, as the case may be, the tracking and management of the supplier/partner problem resolution activity is actually performed by the S/P Problem Reporting & Management processes, with the Track & Manage Service Problem processes relegated to an overall coordination role. The Track & Manage Service Problem processes will also inform the Close Service Problem processes by modifying the service trouble report status to cleared when the service problem has been resolved. **AM** *(NPG, item 6.6.4.3.3, UC4.3 Step 5, pg 41 and NPG, item 6.6, pg 29: All workflow steps for this purpose)*

4.2.1.5 Level 3: 1.1.2.3.5 - Report Service Problem

LEVEL 3 PROCESS MAPPING DETAILS
1.1.2.3.5 - Report Service Problem

Brief Description

Monitor the status of service trouble reports, provide notifications of any changes and provide management reports **AM** *Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Service Problem defined in the NetVision Process Guide (NPG, item 6, pg 27) and treated by Track Issue & Report step on the flow (NPG, item 6.6.6, pg 44).*

Extended description

The objective of the Report Service Problem processes is to monitor the status of service trouble reports, provide notifications of any changes and provide management reports. **A** *(NPG, item 6.6.6, pg 44)*

These processes are responsible for continuously monitoring the status of service trouble reports and managing notifications to processes and other parties registered to receive notifications of any status changes, for example, Service Quality Management and Customer QoS/SLA Management processes. Notification lists are managed and maintained by the Support Service Problem Management processes. **AM** *(NPG, item 6.6.6.3.1, pg 45 and NPG, item 6.6.1.4.1, pg 30)*

These processes record, analyze and assess the service trouble report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall Service Problem Management process. These specialized summaries could be specific reports required by specific audiences. **A** *(NPG, item 6.6, pg 29: All workflow steps for this purpose)*

These processes will make the necessary reports about the problem that occurred, the root cause and the activities carried out for restoration. **A** *(NPG, item 6.6, pg 29: All workflow steps for this purpose)*

4.2.1.6 Level 3: 1.1.2.3.6 - Close Service Trouble Report

LEVEL 3 PROCESS MAPPING DETAILS
1.1.2.3.6 - Close Service Trouble Report

Brief Description

Close a service trouble report when the service problem has been resolved

AM *Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Service Problem defined in the NetVision Process Guide (NPG, item 6, pg 27) and treated by Close Issue step on the flow (NPG, item 6.6.5, pg 42).*

Extended description

The objective of the Close Service Trouble Report processes is to close a service trouble report when the service problem has been resolved.

These processes monitor the status of all open service trouble reports, and recognize that a service trouble report is ready to be closed when the status is changed to cleared.

AM *(NPG, item 6.6.5.3.1, pg 43).*

4.2.1.7 Level 3: 1.1.2.3.7 - Survey & Analyze Service Problem

LEVEL 3 PROCESS MAPPING DETAILS
1.1.2.3.7 - Survey & Analyze Service Problem

Brief Description

Monitor service alarm event notifications and manage service alarm event records in real-time **AM** *Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8) and Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Service Problem defined in the NetVision Process Guide (NPG, item 6, pg 27) and treated by Survey & Analyze step on the flow (NPG, item 6.6.1, pg 29).*

Extended description

The objective of the Survey & Analyze Service Problem processes is to monitor service alarm event notifications and manage service alarm event records in real-time. **AM** *(NPG, item 6.6.1, pg 29)*

Responsibilities of the Survey & Analyze Service Problem processes include, but are not limited to:

· Detecting and collecting service alarm event notifications; **A** *(NPG, item 6.6.1.3, pg 29 and NPD, item 2.1, pg 8)*

· Initiating and managing service alarm event records; **A** *(NPG, item 6.6.1.3, pg 29 and NPD, item 2.1, pg 8)*

· Performing service alarm event notification localization analysis;

· Correlating and filtering service alarm event records; **A** *(NPG, item 6.6.1.3, pg 29 and NPD, item 2.1, pg 8)*

· Reporting service alarm event record status changes to other processes; **AM** *(NPG, item 6.6.1.4.1, pg 30) Trought the creating of a new Service Problem ticket and starting the workflow. Also, the Netvision Event Management Module does the updates of all tickets associated with an event providing the update for all other processes (NPD, item 2.1, pg 8.*

· Managing service alarm event record jeopardy conditions. **AM** *(NPG, item 6.6.1.4.1, pg 30* and covered by all flow in described on NPG, item 6, pg 27.*The Netvision Event Management Module does the updates of all tickets associated with an event providing the update for all other processes (NPD, item 2.1, pg 8). All workflow steps for this purpose)*

Service alarm event notification analysis encompasses the identification of the service alarm event in terms of reporting entity and nature of the service alarm event. It will then analyze the service alarm events based on a number of criteria and then suppress redundant, transient or implied service alarm events by means of filtering and correlation. It includes the notification of new service alarm event records, or status changes of previously reported service alarm event records, as well as abatement messages when service alarm event records have been cleared. **AM** *(NPG, item 6.6.1, pg 29)*

The analysis will correlate service alarm event notifications to planned outage notifications to remove false service alarm event notifications arising as a result of the planned outage activity.

AM *(NPG, item 6.6.2.3.2, UC2.2, step 5 to check manually the outage and remove false alarms) and (NPD, item 2.1.3, with the feature Grid Monitoring that prevents the generation of events for planned outage services and resources).*

These processes may determine that a service alarm event notification may represent a customer impacting condition. In these circumstances this process is responsible for indicating a potential customer problem to the Problem Handling processes. As a part of this indication this process is responsible for identifying the impacted deployed product instances associated with the service instances presenting alarm event notifications and passing this information to the Problem Handling processes.

AM (NPG, item 6.6.3.3.1, UC3.1, to verify the services associated with the event and customers impacted) and (NPG, item 6.6.3.3.1, UC3.2 to verify all service problem scenario). All event correlations with services are provided by the Event Module (NPD, item 2.1, pg 8).

A *(NPG, item 6.6.1.3, pg 29 to start the workflow. NPG, item 6.6.2.3.2, UC2.2, step 4 to check outgage and NPD, item 2.1, pg 8 with the event data configuration to handle correlation for false alarms.)*

Service alarm event record correlation and filtering encompasses the correlation of redundant,

transient or implied service alarm event notifications with a specific "root cause" service alarm event notification and associated service alarm event record. **A** *(NPG, item 6.6.1.3, pg 29 and NPD, item 2.1, pg 8)*

The Survey & Analyze Service Problem processes might trigger a well-defined action based on specific service alarm event notification information as well as the non-arrival of service alarm event notification information after a specific time interval has elapsed.

These processes are also responsible for monitoring and triggering the appropriate action when a service alarm event record is not cleared within a pre-defined period of time. **AM** *(NPG, item 6.6.1.4.1, pg 30) Trough the creating of a new Service Problem ticket and starting the workflow.*

4.2.1.8 Supporting Evidence References (Works Cited)

- NPG – Netvision V3 - Process Guide [EN] v2.2.docx
- NPD – Netvision V3 - Product Description [EN] v1.1.docx

4.2.1.9 Level 2: 1.1.2.3 - Service Problem Management - Scores

Table 4.3 - Level 2: 1.1.2.3 - Service Problem Management - Scores

Level 2: 1.1.2.3 - Service Problem Management [7/7]		
Level 3 Process	**Level 4 Process**	**L4/L3 Process Score**
1.1.2.3.1 - Create Service Trouble Report		**5**
	1.1.2.3.1.1 - Generate Service Problem	1
	1.1.2.3.1.2 - Convert Report To Service Problem Format	1
	1.1.2.3.1.3 - Estimate Time For Restoring Service	1
1.1.2.3.2 - Diagnose Service Problem		**5**
	1.1.2.3.2.1 - Verify Service Configuration	1
	1.1.2.3.2.2 - Perform Specific Service Problem Diagnostics	1
	1.1.2.3.2.3 - Perform Specific Service Problem Tests	1
	1.1.2.3.2.4 - Schedule Routine Service Problem Tests	1
	1.1.2.3.2.5 - Stop And Start Audit On Services	1
	1.1.2.3.2.6 - Notify T&M Root Cause Service Problem	1
1.1.2.3.3 - Correct & Resolve Service Problem		**5**
	1.1.2.3.3.1 - Reassign / Reconfigure Failed Service	1
	1.1.2.3.3.2 - Manage Service Restoration	1
	1.1.2.3.3.3 - Implement Service Problem Work Arounds	1
	1.1.2.3.3.4 - Invoke Support Service Problem Management Processes	1
1.1.2.3.4 - Track & Manage Service Problem		**5**
	1.1.2.3.4.1 - Coordinate Service Problem	1

1.1.2.3.4.2 - Perform First in Service Testing	1
1.1.2.3.4.3 - Cancel Service Problem	1
1.1.2.3.4.4 - Escalate/End Service Problem	1
1.1.2.3.4.5 - Perform Final Service Test	1
1.1.2.3.5 - Report Service Problem	**5**
1.1.2.3.5.1 - Monitor Service Problem	1
1.1.2.3.5.2 - Distribute Service Problem Notifications	1
1.1.2.3.5.3 - Distribute Service Problem Management Reports & Summaries	1
1.1.2.3.6 - Close Service Trouble Report	**5**
1.1.2.3.7 - Survey & Analyze Service Problem	**4.8**
1.1.2.3.7.1 - Manage Service Alarm Event Notifications	0.5
1.1.2.3.7.2 - Filter Service Alarm Event Notifications	1
1.1.2.3.7.3 - Correlate Service Alarm Event Notifications	1
1.1.2.3.7.4 - Abate Service Alarm Event Records	1
1.1.2.3.7.5 - Trigger Defined Service Alarm Action	1

4.2.2   Level 2: 1.1.2.4 - Service Quality Management [7/7] - Mapping Details

4.2.2.1 Level 3: 1.1.2.4.1 - Monitor Service Quality

LEVEL 3 PROCESS MAPPING DETAILS
1.1.2.4.1 - Monitor Service Quality

Brief Description

Monitor received service quality information and undertake first-in detection
AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8), Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11) trough the process called Service Quality defined in the NetVision Process Guide (NPG, item 9, pg 103) and treated by Monitor Quality step on the flow (NPG, item 9.6.1, pg 105).

Extended Description

The objective of the Monitor Service Quality processes is to monitor received service quality information and undertake first-in detection. *AM (NPG, item 9.6.1, pg 105)*

The responsibilities of the processes include, but are not limited to:

· Undertake the role of first in detection and collection by monitoring and logging the received specific service performance quality data; *AM (NPG, item 9.6.1.4.1, UC1.1 steps 1-3, pg 106)*

· Comparing the received specific service performance quality data to performance quality standards set for each specific service (available from the Service Inventory); *AM (NPG, item 9.6.1.5.1, pg 107 and NPG, item 9.6.1.4.1, UC1.1 steps 1-3, pg 106)*

· Assessing and recording received specific service performance quality data which is within tolerance limits for performance quality standards, and for which continuous monitoring and measuring of performance is required; *AM (NPG, item 9.6.1.4.1, UC1.1 steps 1-3, pg 106 and NPG, item*

9.6.1.5.1, pg 107)

· Recording the results of the continuous monitoring for reporting through the Report Service Quality Performance processes; *AM (NPG, item 9.6.1.5.1, pg 107 and NPG, item 9.6.3.4.1, pg 112)*

· Detect performance quality threshold violations which represent specific service failures due to abnormal performance; *AM (NPG, item 9.6.1.4.1, pg 106, steps 1 to 3 and NPG, item 9.6.1.5.1, pg 107) Powered by NetVision Event Module – Performance Events (NPD, item 2.1, pg 8)*

· Pass information about specific service failures due to performance quality threshold violations to Service Problem Management to manage any necessary restoration activity as determined by that process; *AM (NPG, item 9.6.1.4.1, pg 106, step 6 and NPD, item 2.1, pg 8)*

· Pass information about potential specific customer SLA/QoS performance degradations arising from specific service quality performance degradations (using knowledge about service to purchased product offering linkages) to Problem Handling to manage any necessary restoration activity as determined by that process; *AM (NPG, item 9.6.1.4.1, pg 106, step 5 and NPD, item 2.1, pg 8)*

· Detect performance degradation for specific services which provide early warning of potential issues; *AM (NPG, item 9.6.1.4.1, UC1.1 steps 1-3 and 6, pg 106)*

· Forward service performance degradation notifications to other Service Quality Management processes, which manage activities to restore normal specific service performance quality; and *AM (NPG, item 9.6.1.4.1, UC1.1 step 7, pg 106)*

· Log specific service performance quality degradation and violation details within the repository in the Manage Service Inventory processes to ensure historical records are available to support the needs of other processes. *A (NPG, item 9.6.1.5.1, pg 107)*

The processes also perform automated service testing using simulated calls simulating standard user behavior, and collect data related to service usage which may supply information to other processes (i.e. marketing, service cost, etc) and identify abnormal usage by the service users (i.e. bad passwords, terminal configurations, etc). *AM (NPG, item 9.6.1.4.1, UC1.1 step 4, pg 106)*

4.2.2.2 Level 3: 1.1.2.4.2 - Analyze Service Quality

LEVEL 3 PROCESS MAPPING DETAILS
1.1.2.4.2 - Analyze Service Quality

Brief Description

Analyze and evaluate the service quality performance of specific services
AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8), Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11) trough the process called Service Quality defined in the NetVision Process Guide (NPG, item 9, pg 103) and treated by Analyze step on the flow (NPG, item 9.6.3, pg 110) .

Extended Description

The purpose of the Analyze Service Quality processes is to analyze the information received from

the Monitor Service Quality process to evaluate the service quality performance of specific services. **AM** *(NPG, item 9.6.3, pg 110)*

Using the data from Monitor Service Quality, these processes will correlate events in order to filter repetitive alarms and failure events that do not affect the quality delivered, and they will calculate key service quality indicators, (such as Mean Time Between Failures and other chronic problems). **A** *(NPG, item 9.6.3.4.1, pg 112 and NPG, item 9.6.3,4,3, pg 112)*

The responsibilities of the processes include, but are not limited to:

·   Undertaking analysis as required on specific service performance information received from the Monitor Service Quality processes; **AM** *(NPG, item 9.6.3.3.1, pg 111)*

·   Initiating, modifying and cancelling continuous performance data collection schedules for specific services required to analyze specific service performance. These schedules are established through requests sent to the Enable Service Quality Management processes. **AM** *(NPG, item 9.6.2.3.1, pg 109 and NPG, item 9.6.1.4.1, pg 109 and NPD, item 2.1.3, pg 8 for data collection handling)*

·   Determining the root causes of specific service performance degradations and violations; **AM** *(NPG, item 9.6.3.3.1, pg 111, steps 1-6)*

·   Recording the results of the analysis and intermediate updates in the Service Inventory for historical analysis and for use as required by other processes; and **AM** *(NPG, item 9.6.3.4.2, pg 112)*

·   Undertaking specific detailed analysis (if the original requested came from Customer QoS/SLA Management processes) to discover the root cause of customer QoS performance degradations that may be arising due to interactions between service instances, without any specific service instance having an unacceptable performance in its own right. **AM** *(NPG, item 9.6.3.3.1, pg 111, UC3.1)*

4.2.2.3 Level 3: 1.1.2.4.3 - Improve Service Quality

LEVEL 3 PROCESS MAPPING DETAILS
1.1.2.4.3 - Improve Service Quality

Brief Description

Restore the service quality to a normal operational state as efficiently as possible.
AM *Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8), Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11) trough the process called Service Quality defined in the NetVision Process Guide (NPG, item 9, pg 103) and treated by Resolution step on the flow (NPG, item 9.6.4, pg 113).*

Extended Description

The objective of the Improve Service Quality processes is to restore the service quality to a normal operational state as efficiently as possible. **AM** *(NPG, item 9.6.4, pg 113)*

These processes follow service improvement plans specified by the supplier/partner, or use service improvement plans developed by the service provider. Where appropriate service improvement

plans are not available these processes are responsible for developing appropriate service improvement plans. *AM (NPG, item 9.6.4.3.1, pg 114, steps 1-5 using the plan created by the NPG, item 9.6.3.3.1, UC3.1 step 7, pg 111)*

Where activity to improve service quality performance is likely to impact other in-use specific services, this process is responsible for providing appropriate notification of the improvement proposal and ensuring authorization is received to proceed with the service improvement plan. When the service improvement activity is about to commence, these processes are responsible for notifying when service improvement activity is commencing and when it is completed. *AM (NPG, item 9.6.4.3.1, pg 114, steps 4-6 doing all notifications needed through the creation of related tickets for the processes and activities involved)*

Based on the information determined within the Analyze Service Quality processes and the nature of the specific service degradation, these processes may possibly re-assign services or re-configure service parameters. *AM (NPG, item 9.6.4.3.1, pg 114, step 4 and NPG, item 9.6.6.3.1, pg 118 step 5 for re-assign and re-reconfigure activities)*

4.2.2.4 Level 3: 1.1.2.4.4 - Report Service Quality Performance

LEVEL 3 PROCESS MAPPING DETAILS
1.1.2.4.4 - Report Service Quality Performance

Brief Description

Monitor the status of service performance degradation reports, provide notifications of any changes and provide management reports

AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8), Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11) trough the process called Service Quality defined in the NetVision Process Guide (NPG, item 9, pg 103) and treated by Track & Report step on the flow (NPG, item 9.6.6, pg 117).

Extended Description

The objective of the Report Service Quality Performance processes is to monitor the status of service performance degradation reports, provide notifications of any changes and provide management reports. *AM (NPG, item 9.6.6, pg 117)*

These processes are responsible for continuously monitoring the status of service performance degradation reports and managing notifications to other processes in the SM&O and other process layers, and to other parties registered to receive notifications of any status changes. Notification lists are managed and maintained by the Enable Service Quality Management processes. *AM (NPG, item 9.6.6.3.2, pg 119 and NPG, item 9.6.3.4.2, pg 112)*

These processes record, analyze and assess the service performance degradation report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall Service Quality Management process. These specialized summaries could be specific reports required by specific audiences. *AM (NPG, item 9.6.6.3.2, pg 119)*

These processes also report any identified constraints that can affect service quality standards to

other processes. These constraints may include specific resource failures, capacity shortages due to unexpected demand peaks, etc. ***AM*** *(NPG, item 9.6.6.3.1, pg 118 and NPG, item 9.6.3.4.1, pg 112)*

4.2.2.5 Level 3: 1.1.2.4.5 - Create Service Performance Degradation Report

LEVEL 3 PROCESS MAPPING DETAILS

1.1.2.4.5 - Create Service Performance Degradation Report

Brief Description

Create a new service performance degradation report.

AM *Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8) , Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11) trough the process called Service Quality defined in the NetVision Process Guide (NPG, item 9, pg 103) and treated by Create Issue step on the flow (NPG, item 9.6.2, pg 108 .*

Extended Description

The objective of the Create Service Performance Degradation Report process is to create a new service performance degradation report, modify existing service performance degradation reports, and request cancellation of existing service performance degradation reports. ***AM*** *(NPG, item 9.6.2, pg 108 and NPG, item 9.6.6.3.1, UC6.1 step 4)*

A new service performance degradation report may be created as a result of specific service performance notifications undertaken by the Monitor Service Performance processes, or at the request of analysis undertaken by other CRM, SM&O or RM&O processes which detect that some form of deterioration or failure has occurred requires an assessment of the specific service performance. ***AM*** *(NPG, item 9.6.1.4.1, pg 106, step 7 and NPG, item 9.6.2.3.1, pg 109)*

If the service performance degradation report is created as a result of a notification or request from processes other than Monitor Service Performance processes, the Create Service Performance Degradation Report processes are responsible for converting the received information into a form suitable for the Service Performance Management processes, and for requesting additional information if required.

AM *(NPG, item 9.6.2.3.1, pg 109)*

4.2.2.6 Level 3: 1.1.2.4.6 - Track & Manage Service Quality Performance Resolution

LEVEL 3 PROCESS MAPPING DETAILS

1.1.2.4.6 - Track & Manage Service Quality Performance Resolution

Brief Description

Efficiently assign, coordinate and track specific service performance analysis, restoration and improvement activities, and escalate any open service performance degradation reports in jeopardy.

AM *Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8), Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11)   trough the process called Service*

Quality defined in the NetVision Process Guide (NPG, item 9, pg 103) and treated by Track & Report step on the flow (NPG, item 9.6.6, pg 117.

Extended Description

The objective of the Track & Manage Service Quality Performance Resolution processes is to efficiently assign, coordinate and track specific service performance analysis, restoration and improvement activities, and escalate any open service performance degradation reports in jeopardy. *M (NPG, item 9.6.6.3.1, pg 118, UC6.1)*

Responsibilities of these processes include, but are not limited to:

· Adding additional information to an open service performance degradation report based on the first-in and on-going analysis; *AM (NPG, item 9.6.6.3.1, pg 118 and NPG, item 9.6.3.1, pg 110)*

· Scheduling, assigning and coordinating analysis and specific service performance restoration activities and/or repair activities delegated to other processes; *AM (NPG, item 9.6.6.3.1, pg 118 and NPG, item 9.6.4.1, pg 113 that execute the resolution activities delegation and NPG, item 9.6.5.3.1, step 7, pg 116 that assure the management of the related tickets created to handle all activities)*

· Generating the respective resource trouble report creation request(s) to Create Resource Trouble Report based on specific service performance degradation reports where analysis the root cause is related to resources; *AM (NPG, item 9.6.4.3.1, pg 114, UC 4.1 step 5)*

· Modifying information in an existing service performance degradation report based on assignments;

· Modifying the service performance degradation report status;

AM (NPG, item 9.6.6.1, pg 117: Thus, this step ensures that information from reports generated automatically is kept up to date*).*

· Canceling a service performance degradation report when the specific request was related to a false service failure event; and *AM (NPG, item 9.6.6.3.1, pg 118, UC 6.1 step 4)*

· Monitoring the jeopardy status of open service performance degradation reports, and escalating service performance degradation reports as necessary. *AM (NPG, item 9.6.6.1, pg 117 for monitoring tasks and NPG, item 9.6.6.3.1, pg 118, UC 6.1 step 5 for escalation.)*

Note that some specific resource components may be owned and managed by suppliers/partners. In these cases the Track & Manage Service Quality Performance process is responsible for initiating requests, through S/P Performance Management for resolution by the supplier/partner of the specific resource components. *AM (NPG, item 9.6.4.3.1, pg 114, UC 4.1 step 6)*

These processes will co-ordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence. *AM (NPG, item 9.6.6.3.1, pg 118, UC 6.1 step 6)*

The Track & Manage Service Quality Performance Resolution processes will also inform the Close Service Performance Degradation Report processes by modifying the service performance degradation report status to cleared when the specific service performance quality issues have been

resolved. *AM (NPG, item 9.6.6.3.1, pg 118, UC 6.1 step 4)*

4.2.2.7 Level 3: 1.1.2.4.7 - Close Service Performance Degradation Report

LEVEL 3 PROCESS MAPPING DETAILS 1.1.2.4.7 - Close Service Performance Degradation Report
Brief Description Close a service performance degradation report when the service performance has been resolved *AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8), Netvision Service Desk Module (NPD, item 2.3, pg 10) and NetVision SLM Module (NPD, item 2.4, pg 11) trough the process called Service Quality defined in the NetVision Process Guide (NPG, item 9, pg 103) and treated by Close Issue step on the flow (NPG, item 9.6.5, pg 115).* **Extended Description** The objective of the Close Service Performance Degradation Report processes is to close a service performance degradation report when the service performance has been resolved. These processes monitor the status of all open service performance degradation reports, and recognize that a service performance degradation report is ready to be closed when the status is changed to cleared. *AM (NPG, item 9.6.5.3.1, pg 116)*

4.2.2.8 Supporting Evidence References (Works Cited)

- NPG – Netvision V3 - Process Guide [EN] v6.2.docx
- NPD – Netvision V3 - Product Description [EN] v1.1.docx

4.2.2.9 Level 2: 1.1.2.4 - Service Quality Management - Scores

Table 4.4 - Level 2: 1.1.2.4 - Service Quality Management - Scores

Level 3 Process	Level 4 Process	L4/L3 Process Score
Level 2: 1.1.2.4 - Service Quality Management [7/7]	
1.1.2.4.1 - Monitor Service Quality		**5**
	1.1.2.4.1.1 - Manage Service Performance Quality Data	1
	1.1.2.4.1.2 - Record Service Performance Quality Data	1
	1.1.2.4.1.3 - Correlate Service Performance Event Notifications	1
1.1.2.4.2 - Analyze Service Quality		**4.5**
	1.1.2.4.2.1 - Perform Specific Service Performance Diagnostics	1
	1.1.2.4.22 - Manage Service Performance Data Collection Schedules	0.5

1.1.2.4.3 - Improve Service Quality	**4.7**
1.1.2.4.3.1 - Reassign / Reconfigure Service or Service Parameters	0.5
1.1.2.4.3.2 - Manage Service Improvement Notification and Authorization	1
1.1.2.4.3.3 - Develop Service Improvement Plans	1
1.1.2.4.4 - Report Service Quality Performance	**4.7**
1.1.2.4.4.1 - Monitor Service Performance Degradation Report	1
1.1.2.4.4.2 - Report Constraints to Other Processes	0.5
1.1.2.4.4.3 - Distribute Service Quality Management Reports & Summaries	1
1.1.2.4.5 - Create Service Performance Degradation Report	**4.5**
1.1.2.4.5.1 - Generate Service Performance Degradation Problem	1
1.1.2.4.5.2 - Convert Report To Service Performance Degradation Report Format	0.5
1.1.2.4.6 - Track & Manage Service Quality Performance Resolution	**4.72**
1.1.2.4.6.1 - Coordinate Service Quality	0.5
1.1.2.4.6.2 - Request Service Performance Degradation Report Creation and Update	1
1.1.2.4.6.3 - Update First in Service Testing Results	1
1.1.2.4.6.4 - Cancel Service Performance Degradation Report	1
1.1.2.4.6.5 - Escalate/End Service Performance Degradation Report	0.5
1.1.2.4.6.6 - Clear Service Performance Degradation Report Status	1
1.1.2.4.6.7 - Engage External Service Suppliers	1
1.1.2.4.7 - Close Service Performance Degradation Report	**5**
1.1.2.3.7 - Survey & Analyze Service Problem	**4.8**
1.1.2.3.7.1 - Manage Service Alarm Event Notifications	0.5
1.1.2.3.7.2 - Filter Service Alarm Event Notifications	1
1.1.2.3.7.3 - Correlate Service Alarm Event Notifications	1
1.1.2.3.7.4 - Abate Service Alarm Event Records	1
1.1.2.3.7.5 - Trigger Defined Service Alarm Action	1

4.3   Level 1: 1.1.3 - Resource Management & Operations

4.3.1   Level 2: 1.1.3.3 - Resource Trouble Management [7/7] - Mapping Details

4.3.1.1 Level 3: 1.1.3.3.1 - Survey & Analyze Resource Trouble

LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.3.1 - Survey & Analyze Resource Trouble

Brief Description

Monitor resource alarm event notifications and manage resource alarm event records in real-time

AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8) and Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Resource Problem defined in the NetVision Process Guide (NPG, item 7, pg 49) and treated by Survey

& Analyze step on the flow (NPG, item 7.6.1, pg 51).

Extended description

The objective of the Survey & Analyze Resource Trouble processes is to monitor resource alarm event notifications and manage resource alarm event records in real-time. **AM** *(NPG, item 7.6.1, pg 51)*

Responsibilities of the Survey & Analyze Resource Trouble processes include, but are not limited to:

· Detecting and collecting resource alarm event notifications;   **A** *(NPG, item 7.6.1.3, pg 51 and NPD, item 2.1, pg 8)*

· Initiating and managing resource alarm event records; **A** *(NPG, item 7.6.1.3, pg 51 and NPD, item 2.1, pg 8)*

· Performing resource alarm event notification localization analysis;

· Correlating and filtering resource alarm event records;

· Reporting resource alarm event record status changes to other processes; and **A** *(NPG, item 7.6.1.3, pg 51 and NPD, item 2.1.3, pg 8)*

· Managing resource alarm event record jeopardy conditions. **AM** *(NPG, item 7.6.1.4.1, pg 52)*

Resource alarm event notification analysis encompasses the identification of the resource alarm event in terms of reporting entity and nature of the resource alarm event. It will then analyze the resource alarm events based on a number of criteria and then suppress redundant, transient or implied resource alarm events by means of filtering and correlation. It includes the notification of new resource alarm event records, or status changes of previously reported resource alarm event records, as well as abatement messages when resource alarm event records have been cleared. **AM** *(NPG, item 7.6.1, pg 51)*

The analysis will correlate resource alarm event notifications to planned outage notifications to remove false resource alarm event notifications arising as a result of the planned outage activity. **A** *(NPG, item 7.6.1.3, pg 51 and NPD, item 2.1, pg 8)*

These processes may determine that a resource alarm event notification may represent a service impacting condition. In these circumstances this process is responsible for indicating a potential service problem to the Service Problem Management processes. As a part of this indication this process is responsible for identifying the impacted service instances associated with the resource instances presenting alarm event notifications and passing this information to the Service Problem Management processes. **AM** *(NPG, item 7.6.1.4.1, UC1.1 Step 6, pg 52) Check inside of the Resource Detail if this Resource is associated with any Service by looking in the Resource main information.*

Resource alarm event record correlation and filtering encompasses the correlation of redundant, transient or implied resource alarm event notifications with a specific "root cause" resource alarm event notification and associated resource alarm event record. **A** *(NPG, item 7.6.1.3, pg 51 and*

NPD, item 2.1, pg 8)

The Survey & Analyze Resource Trouble processes might trigger a well-defined action based on specific resource alarm event notification information as well as the non-arrival of resource alarm even notification information after a specific time interval has elapsed. **AM** *(NPG, item 7.6.1.4.1, pg 52. Step 5) The timed notification is implemented by configuring actions triggered by time that changes the color of record in the Service Desk Ticket View.*

These processes are also responsible for monitoring and triggering the appropriate action when a resource alarm event record is not cleared within a pre-defined period of time.
AM *(NPG, item 7.6.1.4.1, pg 52) The timed notification is implemented by configuring actions triggered by time that changes the color of record in the Service Desk Ticket View*

4.3.1.2 Level 3: 1.1.3.3.2 - Localize Resource Trouble

LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.3.2 - Localize Resource Trouble

Brief Description

Identify the root cause of the specific resource trouble
AM *Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) through the process called Resource Problem defined in the NetVision Process Guide (NPG, item 7, pg 49) and treated by Diagnostics step on the flow (NPG, item 7.6.3, pg 56).*

Extended description

The objective of the Localize Resource Trouble processes is to identify the root cause of the specific resource trouble. These processes are invoked by the Track & Manage Resource Trouble processes. **AM (**NPG, item 7.6.3, pg 56)*

The responsibilities of these processes include, but are not limited to:

·   Verifying whether the resource configuration matches the appropriate service features; *AM (NPG, item 7.6.3.3.1, UC3.1, pg 57)*

·   Performing diagnostics against the specific resources;·

·   Running tests against the specific resources;

·   Starting and stopping audits against specific resources; and *AM (NPG, item 7.6.3.3.2, UC3.2, pg 58) Powered by workflow execution.*

·   Scheduling routine testing of the specific resources. *AM (NPG, item 7.6.3.3.3, UC3.3, pg 59)*

The Localize Resource Trouble processes will make the results of the root cause analysis available to other processes. The Localize Resource Trouble processes will update the open resource trouble

report, as required during the assessment, and when the root cause has been identified. *AM (NPG, item 7.6.3, pg 56)*

When the process is complete the Localize Resource Trouble processes will notify the Track & Manage Resource Trouble processes. *AM (NPG, item 7.6.3, pg 56) TheTrack & Manage Resource Trouble will by notified by setting the workflow status to the next value in the sequence: Correction.*

4.3.1.3 Level 3: 1.1.3.3.3 - Correct & Resolve Resource Trouble

LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.3.3 - Correct & Resolve Resource Trouble

Brief Description

Restore or replace resources that have failed as efficiently as possible
AM *Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Resource Problem defined in the NetVision Process Guide (NPG, item 7, pg 49) and treated by Corrections step on the flow (NPG, item 7.6.4, pg 60).*

Extended description

The objective of the Correct & Resolve Resource Trouble processes is to restore or replace resources that have failed as efficiently as possible. *AM(NPG, item 7.6.4, pg 60)*

Based on the nature of the resource failure leading to the associated resource alarm event notification, automatic restoration procedures might be triggered. Manual restoration activity is assigned to the Correct & Resolve Resource Trouble processes from the Track & Manage Resource Trouble processes. *AM(NPG, item 7.6.4, pg 60)*

Depending on the nature of the specific resource failure, these processes may possibly repair or replace the failed unit or specific resource. These processes are also responsible for isolating a unit with a fault and managing the redundant resource units (e.g. hot standby). *AM (NPG, item 7.6.4.3.1, pg 61)*

For large resource failures requiring extensive repair and/or replacement activity to restore normal operation, these processes will attempt to implement work-arounds to recover the specific resource operation. In these circumstances, recover of normal operation may require invocation of the Support Resource Trouble Management processes. *AM (NPG, item 7.6.4.3, pg 61)*

They will also report successful restoration of normal operation, restoration through temporary work-arounds or an unsuccessful attempt at restoration to Track & Manage Resource Trouble through updates to the associated resource trouble report. *AM (NPG, item 7.6.4.3.3, pg 63)*

tm f⚡rum

4.3.1.4 Level 3: 1.1.3.3.4 - Track & Manage Resource Trouble

LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.3.4 - Track & Manage Resource Trouble

Brief Description

Ensure testing, repair and restoration activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open resource trouble reports in jeopardy **AM** *Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Resource Problem defined in the NetVision Process Guide (NPG, item 7, pg 49) and treated by Track Issue & Report step on the flow (NPG, item 7.6.6, pg 66).*

Extended description

The objective of the Track & Manage Resource Trouble is to ensure testing, repair and restoration activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open resource trouble reports in jeopardy. Responsibilities of these processes include, but are not limited to: **AM** *(NPG, item 7.6.6, pg 66 and others steps, see below)*

·   Initiating first-in testing using automated remote testing capabilities; **AM** *(NPG, item 7.6.6.3.1, pg 67 and NPG, item 7.6.3.3.2, pg 58)*

·   Adding additional information to an open resource trouble report based on the first-in testing; **AM** *(NPG, item 7.6.6.1, pg 66)*

·   Scheduling, assigning and coordinating repair and restoration activities; **A** *(NPG, item 7.6, pg 51 to 67)*

·   Initiate any final testing to confirm clearance of the service problem; **AM** *(NPG, item 7.6.5.3.1, pg 65)*

·   Undertake necessary tracking of the execution progress; **A** *(NPG, item 7.6, pg 51: All workflow steps for this purpose)*

·   Modifying information in an existing resource trouble report based on assignments;

·   Modifying the resource trouble report status; **A** *(NPG, item 7.6.6.1, pg 66:Thus, this step ensures that information from reports generated automatically are kept up to date.)*

·   Canceling a resource trouble report when the specific trouble was related to a false alarm event; and **AM** *(NPG, item 7.6.6.3.1, pg 67)*

·   Monitoring the jeopardy status of open resource trouble reports, and escalating resource trouble reports as necessary. **AM** *(NPG, item 7.6, pg 51 to 67 for monitoring issues and NPG, item 7.6.6.3.1, step 5, pg 67 for the escalation)*

These processes will co-ordinate all the actions necessary in order to guarantee that all tasks are

finished at the appropriate time and in the appropriate sequence. **A** *(NPG, item 7.6, pg 51: All workflow steps for this purpose)*

The Track & Manage Resource Trouble processes are responsible for engaging external suppliers in correction and recovery activities when higher level expertise and/or higher level support is required to resolve the resource trouble. This engagement can be linked to the priority of the resource trouble report, and could occur automatically for highest priority resource trouble reports. **AM** *(NPG, item 7.6.4.3.3, UC4.3 Step 5, pg 63   for the engaging Suppliers to correction and recover.)*

The Track & Manage Resource Trouble processes will also inform the Close Resource Trouble processes by modifying the resource trouble report status to cleared when the resource trouble has been resolved. **A** *(NPG, item 7.6.6.3.1, step 4, pg 67)*

4.3.1.5 Level 3: 1.1.3.3.5 - Report Resource Trouble

LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.3.5 - Report Resource Trouble

Brief Description

Monitor the status of resource trouble reports, provide notifications of any changes and provide management reports **AM** *Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Resource Problem defined in the NetVision Process Guide (NPG, item 7, pg 49) and treated by Track Issue & Report step on the flow (NPG, item 7.6.6, pg 66).*

Extended description

The objective of the Report Resource Trouble processes is to monitor the status of resource trouble reports, provide notifications of any changes and provide management reports. **AM** *(NPG, item 7.6.6, pg 66)*

These processes are responsible for continuously monitoring the status of resource trouble reports and managing notifications to processes and other parties registered to receive notifications of any status changes, for example, Resource Performance Management and Service Quality Management. Notification lists are managed and maintained by the Support Resource Trouble Management processes. **AM** *(NPG, item 7.6.6.3.1, pg 67 and NPG, item 7.6.1.4.1, pg 52)*

These processes record, analyze and assess the resource trouble report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall Resource Trouble Management process. These specialized summaries could be specific reports required by specific audiences. **A** *(NPG, item 7.6, pg 51: All workflow steps for this purpose)*

These processes will make the necessary reports about the resource trouble that occurred, the root cause and the activities carried out for restoration. **A** *(NPG, item 7.6, pg 51: All workflow steps*

> *for this purpose)*

4.3.1.6 Level 3: 1.1.3.3.6 - Close Resource Trouble Report

<table>
<tr><td align="center">LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.3.6 - Close Resource Trouble Report</td></tr>
</table>

Brief Description

Close a resource trouble report when the resource problem has been resolved ***AM*** *Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) through the process called Resource Problem defined in the NetVision Process Guide (NPG, item 7, pg 49) and treated by Close Issue step on the flow (NPG, item 7.6.5, pg 64).*

Extended description

The objective of the Close Service Trouble Report processes is to close a service trouble report when the service problem has been resolved. ***AM*** *(NPG, item 7.6.5, pg 64).*

These processes monitor the status of all open service trouble reports, and recognize that a service trouble report is ready to be closed when the status is changed to cleared.
AM *(NPG, item 7.6.5.3.1, pg 65).*

4.3.1.7 Level 3: 1.1.3.3.7 - Create Resource Trouble Report

<table>
<tr><td align="center">LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.3.7 - Create Resource Trouble Report</td></tr>
</table>

Brief Description

Create a new resource trouble report ***AM*** *Process handled by Netvision Service Desk Module (NPD, item 2.3, pg 10) through the process called Resource Problem defined in the NetVision Process Guide (NPG, item 7, pg 49) and treated by Create Issue step on the flow (NPG, item 7.6.2, pg 53).*

Extended description

The objective of the Create Resource Trouble Report process is to create a new resource trouble report. ***AM*** *(NPG, item 7.6.2, pg 53)*

A new resource trouble report may be created as a result of resource alarm event notification

analysis, and subsequent creation of new resource alarm event records, undertaken by the Survey & Analyze Resource Trouble processes, or at the request of analysis undertaken by other processes in the RM&O, SM&O (in particular a Service Trouble Report can generate one or more Resource Trouble Reports) or S/PRM layers which detect that some form of failure has occurred for which resource restoration activity is required to restore normal operation. **AM** *(NPG, item 7.6.1, pg 51 and NPG, item 7.6.2, pg 53)*

If the resource trouble report is created as a result of a notification or request from processes other than the Survey & Analyze Resource Trouble processes, the Create Resource Trouble Report processes are responsible for converting the received information into a form suitable for the Resource Trouble Management processes, and for requesting additional information if required. **AM** *(NPG, item 7.6.2.3.1, pg 54)*

These processes will make estimates of the time to restore resource which will be included in the new resource trouble report so that other processes can gain access to this information. **AM** *(NPG, item 7.6.2.3.2, pg 55)*

4.3.1.8 Supporting Evidence References (Works Cited)

- NPG – Netvision V3 - Process Guide [EN] v3.2.docx
- NPD – Netvision V3 - Product Description [EN] v1.1.docx

4.3.1.9 Level 2: 1.1.3.3 - Resource Trouble Management [7/7] - Scores

Table 4.5 - Level 2: 1.1.3.3 - Resource Trouble Management [7/7] - Scores

Level 2: 1.1.3.3 - Resource Trouble Management [7/7]		
Level 3 Process	**Level 4 Process**	**L4/L3 Process Score**
1.1.3.3.1 - Survey & Analyze Resource Trouble		**5**
	1.1.3.3.1.1 - Manage Resource Alarm Event Notifications	1
	1.1.3.3.1.2 - Filter Resource Alarm Event Notifications	1
	1.1.3.3.1.3 - Correlate Resource Alarm Event Notifications	1
	1.1.3.3.1.4 - Abate Alarm Event Records	1
	1.1.3.3.1.5 - Trigger Defined Action	1
1.1.3.3.2 - Localize Resource Trouble		**5**
	1.1.3.3.2.1 - Verify Resource Configuration	1
	1.1.3.3.2.2 - Perform Specific Resource Trouble Diagnostics	1
	1.1.3.3.2.3 - Perform Specific Resource Trouble Tests	1
	1.1.3.3.2.4 - Stop And Start Audit On Resources	1
	1.1.3.3.2.5 - Schedule Routine Resource Trouble Tests	1
	1.1.3.3.2.6 - Notify T&M Root Cause Resource Trouble	1
1.1.3.3.3 - Correct & Resolve Resource Trouble		**5**
	1.1.3.3.3.1 - Repair / Replace Failed Resource	1

1.1.3.3.3.2 - Isolate Unit with Fault	1
1.1.3.3.3.3 - Manage Standby Resource Units	1
1.1.3.3.3.4 - Implement Resource Trouble Work Arounds	1
1.1.3.3.3.5 - Invoke Support Resource Trouble Management Processes	1
1.1.3.3.4 - Track & Manage Resource Trouble	**4.83**
1.1.3.3.4.1 - Coordinate Resource Trouble	1
1.1.3.3.4.2 - Perform First in Testing	1
1.1.3.3.4.3 - Cancel Resource Trouble	1
1.1.3.3.4.4 - Escalate/End Resource Trouble	0.5
1.1.3.3.4.5 - Perform Final Test	1
1.1.3.3.4.6 - Engaging External Suppliers	1
1.1.3.3.5 - Report Resource Trouble	**5**
1.1.3.3.5.1 - Monitor Resource Trouble	1
1.1.3.3.5.2 - Distribute Notifications	1
1.1.3.3.5.3 - Distribute Management Reports & Summaries	1
1.1.3.3.6 - Close Resource Trouble Report	**5**
1.1.3.3.7 - Create Resource Trouble Report	**5**
1.1.3.3.7.1 - Generate Resource Trouble	1
1.1.3.3.7.2 - Convert Report To Resource Trouble Format	1
1.1.3.3.7.3 - Estimate Time For Restoring Resource	1

tmforum

4.3.2   Level 2: 1.1.3.4 - Resource Performance Management [7/7] - Mapping Details

4.3.2.1 Level 3: 1.1.3.4.1 - Monitor Resource Performance

LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.4.1 - Monitor Resource Performance

Brief Description

Monitor received resource performance information and undertake first-in detection.
AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8) and Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Resource Performance defined in the NetVision Process Guide (NPG, item 8, pg 70) and treated by Monitor step on the flow (NPG, item 8.6.1, pg 72).

Extended Description

The objective of the Monitor Resource Performance processes is to monitor received resource performance information and undertake first-in detection. *AM (NPG, item 8.6.1, pg 72)*

The responsibilities of the processes include, but are not limited to:

·   Undertaking the role of first in detection by monitoring the received specific resource performance data; *AM (NPG, item 8.6.1.4.1, pg 73, steps 1 to 3)*

·   Comparing the received specific resource performance data to performance standards set for each specific resource (available from the Resource Inventory); *AM (NPG, item 8.6.1.5.1, pg 74)*

·   Assessing and recording received specific resource performance data which is within tolerance limits for performance standards, and for which continuous monitoring and measuring of specific resource performance is required; *AM (NPG, item 8.6.1.4.1, pg 73, steps 1 to 3 and NPG, item 8.6.1.5.1, pg 74)*

·   Recording the results of the continuous monitoring for reporting through the Report Resource Performance processes; *A (NPG, item 8.6.1.5.1, pg 74 and NPG, item 8.6.3.4.1, pg 79)*

·   Detecting performance threshold violations which represent specific resource failures due to abnormal performance; *(NPG, item 8.6.1.4.1, pg 73, steps 1 to 3 and NPG, item 8.6.1.5.1, pg 74) Powered by NetVision Event Module – Performance Events (NPD, item 2.1, pg 8).*

·   Passing information about resource failures due to performance threshold violations to Resource Trouble Management to manage any necessary restoration activity as determined by that process; *AM (NPG, item 8.6.1.4.1, pg 73, step 6 and NPD, item 2.1, pg 8)*

·   Passing information about potential specific service performance degradations arising from specific resource degradations to Service Quality Management to manage any necessary restoration activity as determined by that process; *AM (NPG, item 8.6.1.4.1, pg 73, step 5 and NPD, item 2.1, pg 8)*

· Detecting performance degradation for specific resources which provide early warning of potential issues; *AM (NPG, item 8.6.1.4.1, pg 73, steps 1-3 and 7)*

· Forwarding resource performance degradation notifications to other Resource Performance Management processes, which manage activities to restore normal specific resource performance; and *AM (NPG, item 8.6.1.4.1, pg 73, step 8)*

· Logging specific resource performance degradation and violation details within the repository in the Manage Resource Inventory processes to ensure historical records are available to support the needs of other processes. *A (NPG, item 8.6.1.5.1, pg 74)*

4.3.2.2 Level 3: 1.1.3.4.2 - Analyze Resource Performance

LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.4.2 - Analyze Resource Performance

Brief Description

Analyze and evaluate the performance of specific resources
AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8) and Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Resource Performance defined in the NetVision Process Guide (NPG, item 8, pg 70) and treated by Analyze step on the flow (NPG, item 8.6.3, pg 77).

Extended Description

The objective of the Analyze Resource Performance processes is to analyze the information received from the Monitor Resource Performance process to evaluate the performance of a specific resource. *AM (NPG, item 8.6.3, pg 77)*

The responsibilities of the processes include, but are not limited to:

· Undertaking analysis as required on specific resource performance information received from the Monitor Resource Performance processes; *AM (NPG, item 8.6.3.3.1, pg 78, steps 1-4)*

· Initiating, modifying and cancelling continuous performance data collection schedules for specific resources required to analyze specific resource performance. These schedules are established through requests sent to the Enable Resource Data Collection & Distribution processes; *AM (NPG, item 8.6.2.3.1, pg 76 and NPG, item 8.6.1.4.1, pg 73 and NPD, item 2.1.3, pg 8 for data collection handling)*

· Determining the root causes of specific resource performance degradations and violations; *AM (NPG, item 8.6.3.3.1, pg 78, steps 5-8)*

· Recording the results of the analysis and intermediate updates in the Resource Inventory for historical analysis and for use as required by other processes; and *AM (NPG, item 8.6.3.4.2, pg 79*

· Undertaking specific detailed analysis (if the original requested came from Service Quality Management processes) to discover the root cause of service performance degradations that may

be arising due to interactions between resource instances, without any specific resource instance having an unacceptable performance in its own right. *AM (NPG, item 8.6.3.3.1, pg 78 and NPD, item 2.1, pg 8)*

4.3.2.3 Level 3: 1.1.3.4.3 - Control Resource Performance

LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.4.3 - Control Resource Performance

Brief Description

Apply controls to resources in order to optimize the resource performance
AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8) and Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Resource Performance defined in the NetVision Process Guide (NPG, item 8, pg 70) and treated by Create Issue step on the flow (NPG, item 8.6.2, pg 75).

Extended Description

The objective of the Control Resource Performance processes is to apply controls to resource instances in order to optimize the resource performance. *M (NPG, item 8.6.2.3, step 10, pg 76 handled manually based on information gathered by monitoring use cases.)*

The responsibilities of the processes include, but are not limited to:

·   Instantiating controls to attempt to restore resource instances to normal operation, at the request of Analyze Resource Performance processes. These controls may be based on established control plans, or the controls may be developed within the Control Resource Performance processes depending on circumstances.

·   Instantiating controls to attempt to restore failed resource instances to normal operation, at the request of Resource Trouble Management or Service Quality Management processes. These controls may be based on established control plans, or the controls may be developed within the Control Resource Performance process depending on circumstances.
M (NPG, item 8.6.2.3.1, pg 76, step 10 handled manually based on information gathered by monitoring use cases.)

4.3.2.4 Level 3: 1.1.3.4.4 - Report Resource Performance

LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.4.4 - Report Resource Performance

Brief Description

Monitor the status of resource performance degradation reports, provide notifications of any changes and provide management reports

AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8) and Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Resource Performance defined in the NetVision Process Guide (NPG, item 8, pg 70) and treated by Track & Report step on the flow (NPG, item 8.6.6, pg 84).

Extended Description

The objective of the Report Resource Performance processes is to monitor the status of resource performance degradation reports, provide notifications of any changes and provide management reports. *AM (NPG, item 8.6.6, pg 84)*

These processes are responsible for continuously monitoring the status of resource performance degradation reports and managing notifications to other processes in the RM&O and other layers, and to other parties registered to receive notifications of any status changes. Notification lists are managed and maintained by the Enable Resource Performance Management processes. *AM (NPG, item 8.6.6.3.2, pg 86 and NPG, item 8.6.3.4.2, pg 79)*

These processes record, analyze and assess the resource performance degradation report status changes to provide management reports and any specialized summaries of the efficiency and effectiveness of the overall Resource Performance Management process. These specialized summaries could be specific reports required by specific audiences. *AM (NPG, item 8.6.6.3.2, pg 86)*

4.3.2.5 Level 3: 1.1.3.4.5 - Create Resource Performance Degradation Report

LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.4.5 - Create Resource Performance Degradation Report

Brief Description

Create a new resource performance degradation report
AM Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8) and Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Resource Performance defined in the NetVision Process Guide (NPG, item 8, pg 70) and treated by Create Issue step on the flow (NPG, item 8.6.2, pg 75).

Extended Description

The objective of the Create Resource Performance Degradation Report process is to create a new resource performance degradation report, modify existing resource performance degradation reports, and request cancellation of existing resource performance degradation reports. *AM (NPG, item 8.6.2, pg 75)*

A new resource performance degradation report may be created as a result of specific resource performance notifications undertaken by the Monitor Resource Performance processes, or at the request of analysis undertaken by other RM&O, SM&O or S/PRM processes which detect that some form of deterioration or failure has occurred requires an assessment of the specific resource

performance. **AM** *(NPG, item 8.6.2.3.1, pg 76, steps 1-4 started by Monitoring use cases and/or by other process like Service Problem or Resource Problem)*

If the resource performance degradation report is created as a result of a notification or request from processes other than Monitor Resource Performance processes, the Create Resource Performance Degradation Report processes are responsible for converting the received information into a form suitable for the Resource Performance Management processes, and for requesting additional information if required.
AM *(NPG, item 8.6.2.3.1, pg 76, steps 4-12)*

4.3.2.6 Level 3: 1.1.3.4.6 - Track & Manage Resource Performance Resolution

LEVEL 3 PROCESS MAPPING DETAILS
1.1.3.4.6 - Track & Manage Resource Performance Resolution

Brief Description

Ensure testing, repair and restoration activities are assigned, coordinated and tracked efficiently, and that escalation is invoked as required for any open resource performance degradation reports in jeopardy
AM *Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8) and Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Resource Performance defined in the NetVision Process Guide (NPG, item 8, pg 70) and treated by Track & Report step on the flow (NPG, item 8.6.6, pg 84).*

Extended Description

The objective of the Track & Manage Resource Performance Resolution processes is to efficiently assign, coordinate and track specific resource performance analysis and control activities, and escalate any open resource performance degradation reports in jeopardy. **AM** *(NPG, item 8.6.6, pg 84)*

Responsibilities of these processes include, but are not limited to:

· Adding additional information to an open resource performance degradation report based on the first-in and on-going analysis; **AM** *(NPG, item 8.6.6.3.1, pg 85 and complemented by NPG, item 8.6.3.3.1 use cases for analysis information.)*

· Scheduling, assigning and coordinating analysis and specific resource performance restoration activities and/or repair activities delegated to other processes; **AM** *(NPG, item 8.6.6.3.1, pg 85, steps 4-5. The Resource Performance process is responsible for the management os restoration and/or repair using the Associated Ticket feature of the NetVision Service Desk Module)*

· Generating the respective S/P problem report creation request(s) to Initiate S/P Problem Report processes based on specific resource performance degradation reports where analysis the root cause is related to S/P products; **AM** *(NPG, item 8.6.4.3.1, pg 81, step 5)*

· Modifying information in an existing resource performance degradation report based on assignments;

· Modifying the resource performance degradation report status;

***AM** (NPG, item 8.6.6.1, pg 84:* Thus, this step ensures that information from reports generated automatically is kept up to date.*)*

· Canceling a resource performance degradation report when the specific request was related to a false resource failure event; and ***AM** (NPG, item 8.6.6.3.1, pg 85, steps 4)*

· Monitoring the jeopardy status of open resource performance degradation reports, and escalating resource performance degradation reports as necessary. ***AM** (NPG, item 8.6.6.3.1, pg 85, steps 5)*

These processes will co-ordinate all the actions necessary in order to guarantee that all tasks are finished at the appropriate time and in the appropriate sequence. ***AM** (NPG, item 8.6.6.3.1, pg 85 and all workflow steps for this purpose)*

The Track & Manage Resource Performance Resolution processes will also inform the Close Resource Performance Degradation Report processes by modifying the resource performance degradation report status to cleared when the specific resource performance issues have been resolved. ***AM** (NPG, item 8.6.6.3.1, pg 85, steps 4)*

4.3.2.7 Level 3: 1.1.3.4.7 - Close Resource Performance Degradation Report

LEVEL 3 PROCESS MAPPING DETAILS   **<Level 3 Process Id> <Level 3 Process Name>**

Brief Description

Close a resource performance degradation report when the resource performance has been resolved

***AM** Process handled by Netvision Event Manager Module (NPD, item 2.1, pg 8) and Netvision Service Desk Module (NPD, item 2.3, pg 10) trough the process called Resource Performance defined in the NetVision Process Guide (NPG, item 8, pg 70) and treated by Close Issue step on the flow (NPG, item 8.6.5, pg 82).*

Extended Description

The objective of the Close Resource Performance Degradation Report processes is to close a resource performance degradation report when the resource performance has been resolved. ***AM** (NPG, item 8.6.5, pg 82)*

These processes monitor the status of all open resource performance degradation reports, and recognize that a resource performance degradation report is ready to be closed when the status is changed to cleared. ***AM** (NPG, item 8.6.5.3.1, pg 83)*

4.3.2.8 Supporting Evidence References (Works Cited)

- NPG – Netvision V3 - Process Guide [EN] v4.1.docx
- NPD – Netvision V3 - Product Description [EN] v1.1.docx

4.3.2.9 Level 2: 1.1.3.4 - Resource Performance Management [7/7] - Scores

Table 4.6 - Level 2: 1.1.3.4 - Resource Performance Management [7/7] - Scores

Level 3 Process	Level 4 Process	L4/L3 Process Score
1.1.3.4.1 - Monitor Resource Performance		**5**
	1.1.3.4.1.1 - Manage Resource Performance Data	1
	1.1.3.4.1.2 - Record Resource Performance Data	1
	1.1.3.4.1.3 - Correlate Resource Performance Event Notifications	1
1.1.3.4.2 - Analyze Resource Performance		**4.5**
	1.1.3.4.2.1 - Perform Specific Resource Performance Diagnostics	1
	1.1.3.4.2.2 - Manage Resource Performance Data Collection Schedules	0.5
1.1.3.4.3 - Control Resource Performance		**4**
	1.1.3.4.3.1 - Instantiate Resource Performance Controls	0.5
	1.1.3.4.3.2 - Instantiate Resource Trouble Controls	0.5
1.1.3.4.4 - Report Resource Performance		**5**
	1.1.3.4.4.1 - Monitor Resource Performance Degradation Report	1
	1.1.3.4.4.2 - Distribute Resource Quality Management Reports & Summaries	1
1.1.3.4.5 - Create Resource Performance Degradation Report		**4.5**
	1.1.3.4.5.1 - Generate Resource Performance Degradation Problem	1
	1.1.3.4.5.2 - Convert Report To Resource Performance Degradation Report Format	0.5
1.1.3.4.6 - Track & Manage Resource Performance Resolution		**4.71**
	1.1.3.4.6.1 - Coordinate Resource Performance	0.5
	1.1.3.4.6.2 - Request S/P Performance Degradation Report Creation and Update	1
	1.1.3.4.6.3 - Update First in Resource Testing Results	1
	1.1.3.4.6.4 - Cancel Resource Performance Degradation Report	1
	1.1.3.4.6.5 - Escalate/End Resource Performance Degradation Report	0.5
	1.1.3.4.6.6 - Clear Resource Performance Degradation Report Status	1
	1.1.3.4.6.7 - Engage External Resource Suppliers	1
1.1.3.4.7 - Close Resource Performance Degradation Report		**5**

5   Information Framework Assessment Overview

5.1   Mapping Technique Employed

The certification scope defines the list of ABEs (Aggregated Business Entities) to be addressed during the assessment. The entities, association classes and dependent entities for each ABE in scope are also included in the assessment.

The mapping technique used, was based on the analysis of the SID model files and addendum specifications for the entities', association classes' in scope and its related attributes. The role of each entity', association class or attribute is then interpreted and mapped into the NetVision information model related element. This will clearly state how the SID model is supported by NetVision.

5.2   Information Framework Assessment - ABE Scope

The diagram in Figure 5.1 illustrates the Information Framework Level 1 ABEs that were presented in scope for the Assessment, and the textual callouts represent the domain areas of the ISPM NetVision that were assessed and support the corresponding SID ABEs.
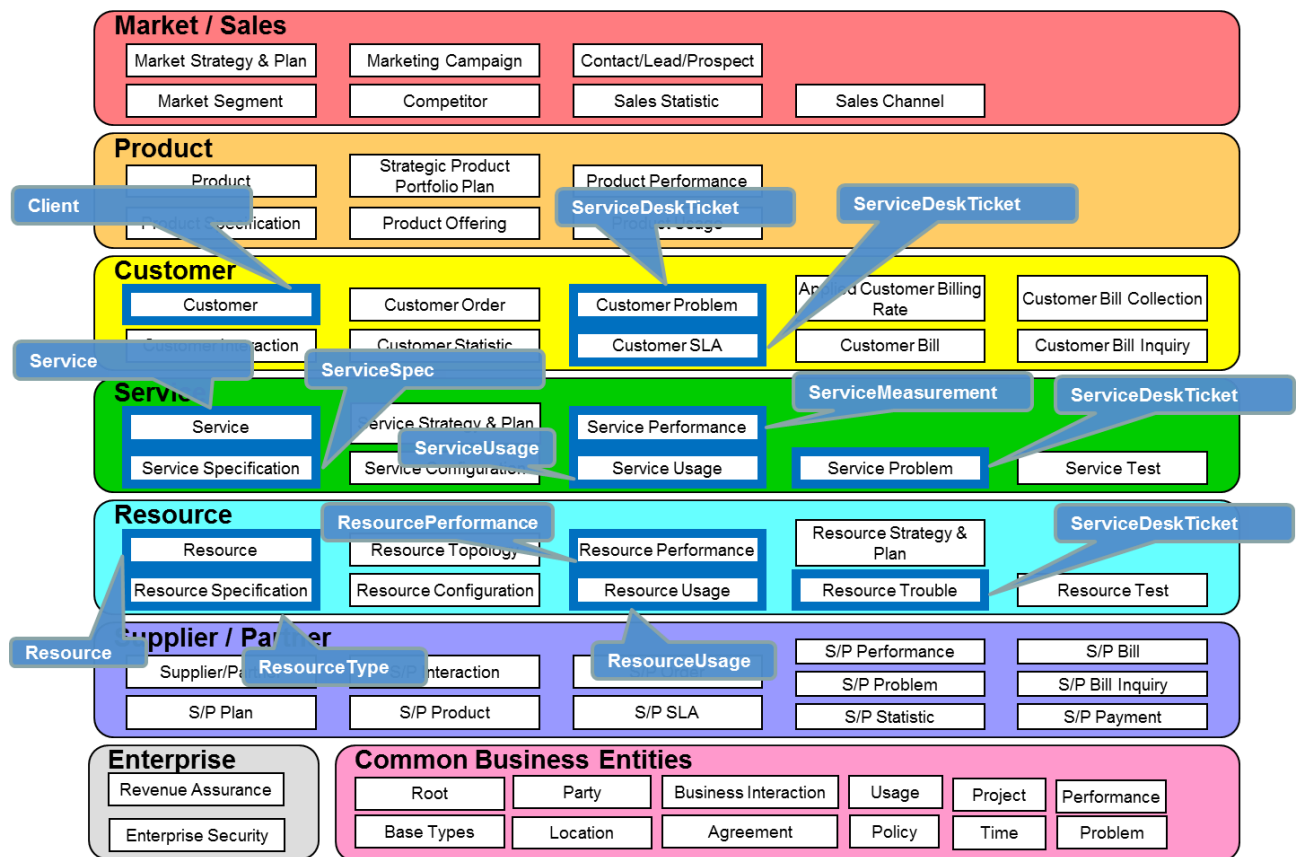

Figure 5.1 - Information Framework: Level 1 ABEs in scope for NetVision V3.7 Assessment

5.3   Product Scope

The diagram in Figure 5.2 represents the ISPM NetVision and how it is mapped to the Information Framework Level 1 ABEs that were assessed as part of this Frameworx Conformance Assessment.
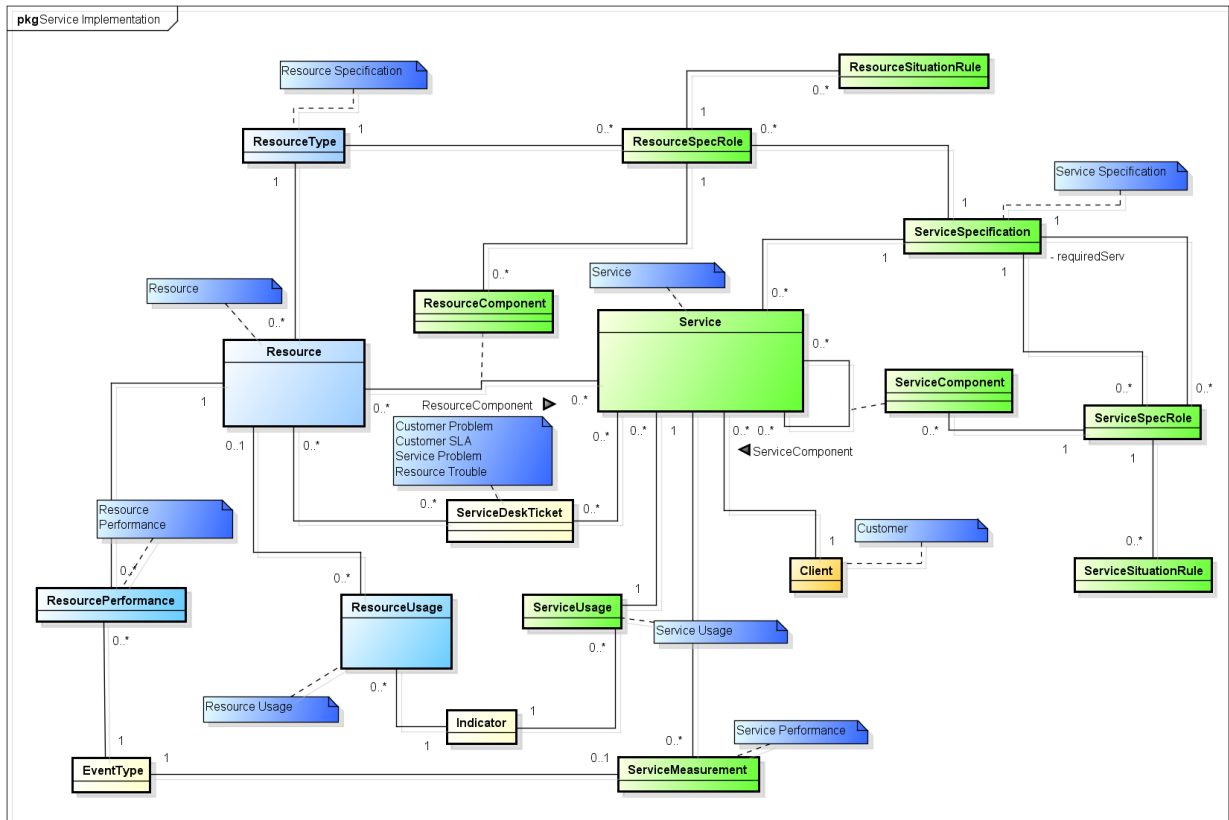

Figure 5.2 - NetVision V3.7 Product Footprint: Product Scope for SID Assessment

6   Frameworx Conformance Result

This section details the Scores awarded to reflect Conformance of the ISPM NetVision to the Business Process Framework & Information Framework components of Frameworx 12.

6.1   Business Process Framework – Scoring Rules

The conformance scores granted were based on the following TM Forum scoring rules:

Frameworx 12.0 Conformance Certification (Product/Solution/Implementation)		
Business Process Framework (eTOM) - Conformance Level Descriptions (Level 3 processes)		
Process level	**Conformance Score**	**Qualifier**
Level 1	**Not applicable**	**Conformance Assessment shall not be carried out at this process level - hence Confomance Level shall not be awarded at this level.**
Level 2	**Not applicable**	**A conformance level is not awarded to Level 2 processes in Frameworx 12.0 Assessments. The Certification Report shall highlight the coverage of a Level 2 process submitted in scope for an Assessment in terms of number of Level 3 processes submitted for assessment out of the total number defined for the Level 2 process.**
Level 3	**Score is awarded between 3.1 & 5.**	**The Conformance Score is awarded for each Level 3 processes submitted in scope for the Assessment.** **The Conformance Score awarded can be a value between 3.1 & 5 depending on the level of coverage & conformance to the Level 3 process based on the alignment to the level 3 Implied Tasks as decomposed in the Level 4 process definitions.** *Any manual implementation of the process support shall be noted in the Conformance Report and Detailed Results Report.*

Figure 6.1 - TM Forum Business Process Framework: Conformance Scoring Rules

6.2   Business Process Framework - Conformance Result Summary

The graph in this section provides an overview of the conformance levels granted to the Level 3 Processes presented in scope for the ISPM NetVision Assessment. Each Level 3 process was measured using a Business Process Framework (eTOM) conformance score according to level of Conformance – Full Conformance or Partial Conformance as described in section 6.1 Business Process Framework – Scoring Rules.
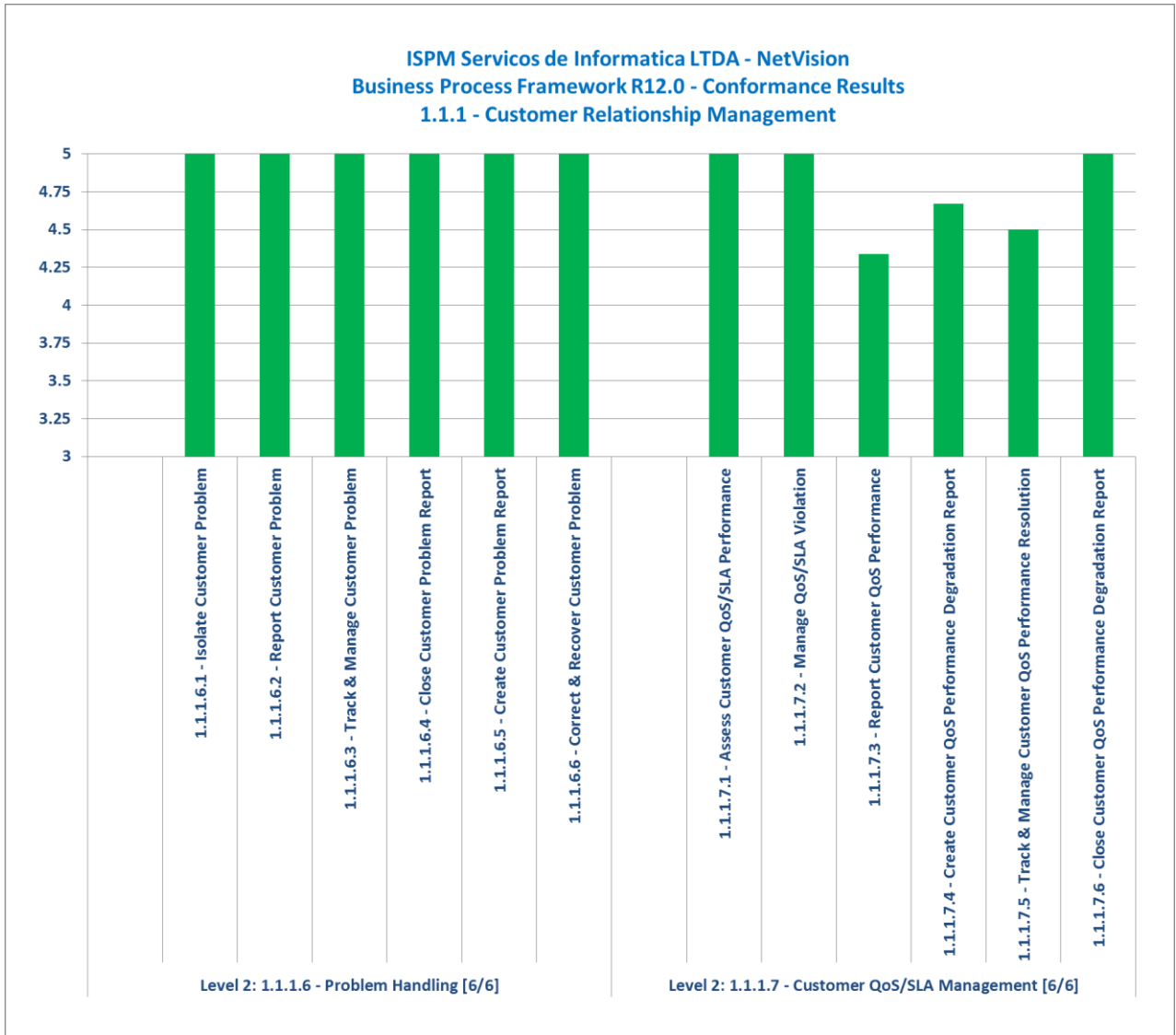

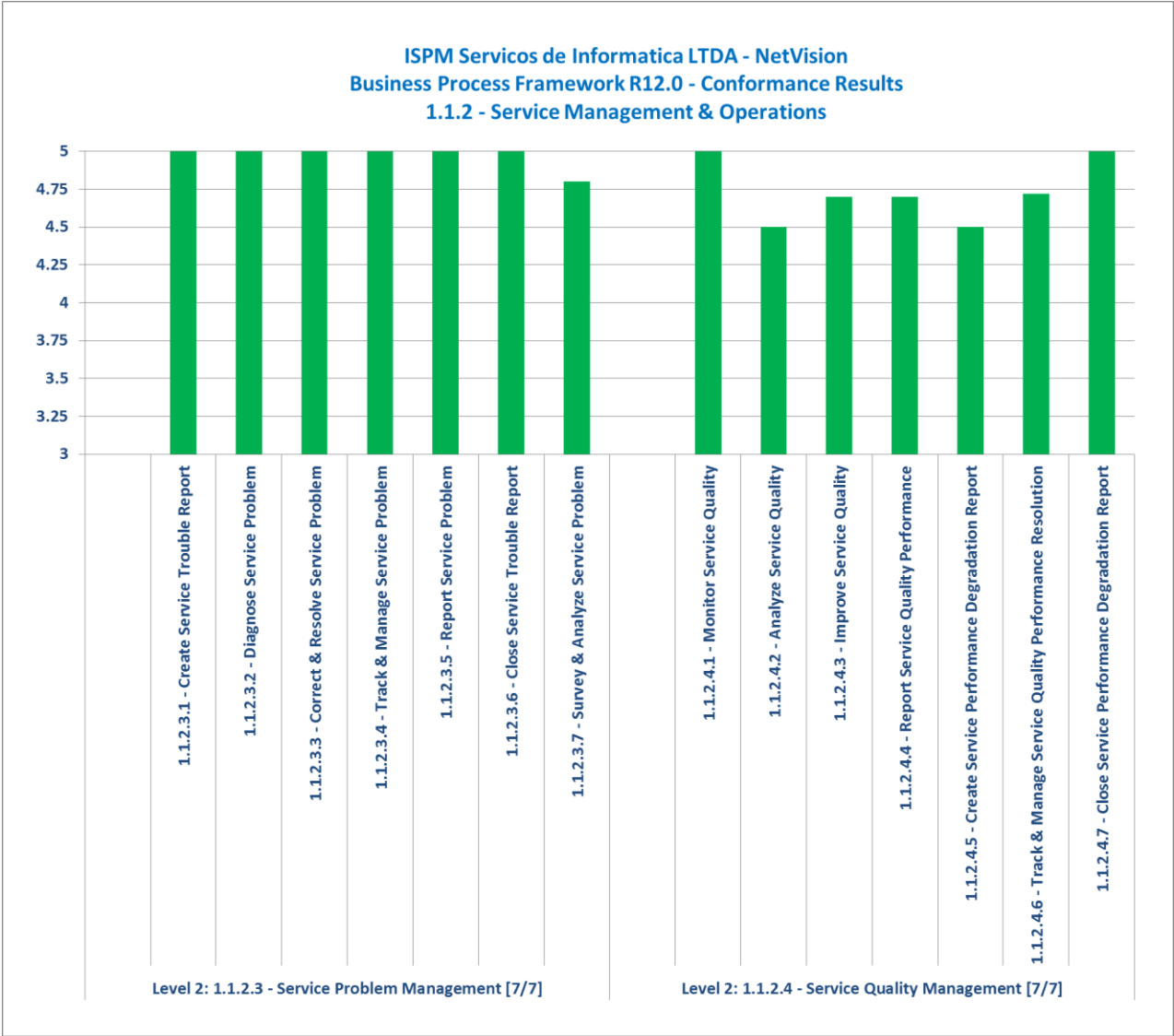**Figure 6.2 - Conformance Result Summary: 1.1.1 - Customer Relationship Management**

Figure 6.3 - Conformance Result Summary: 1.1.2 - Service Management & Operations
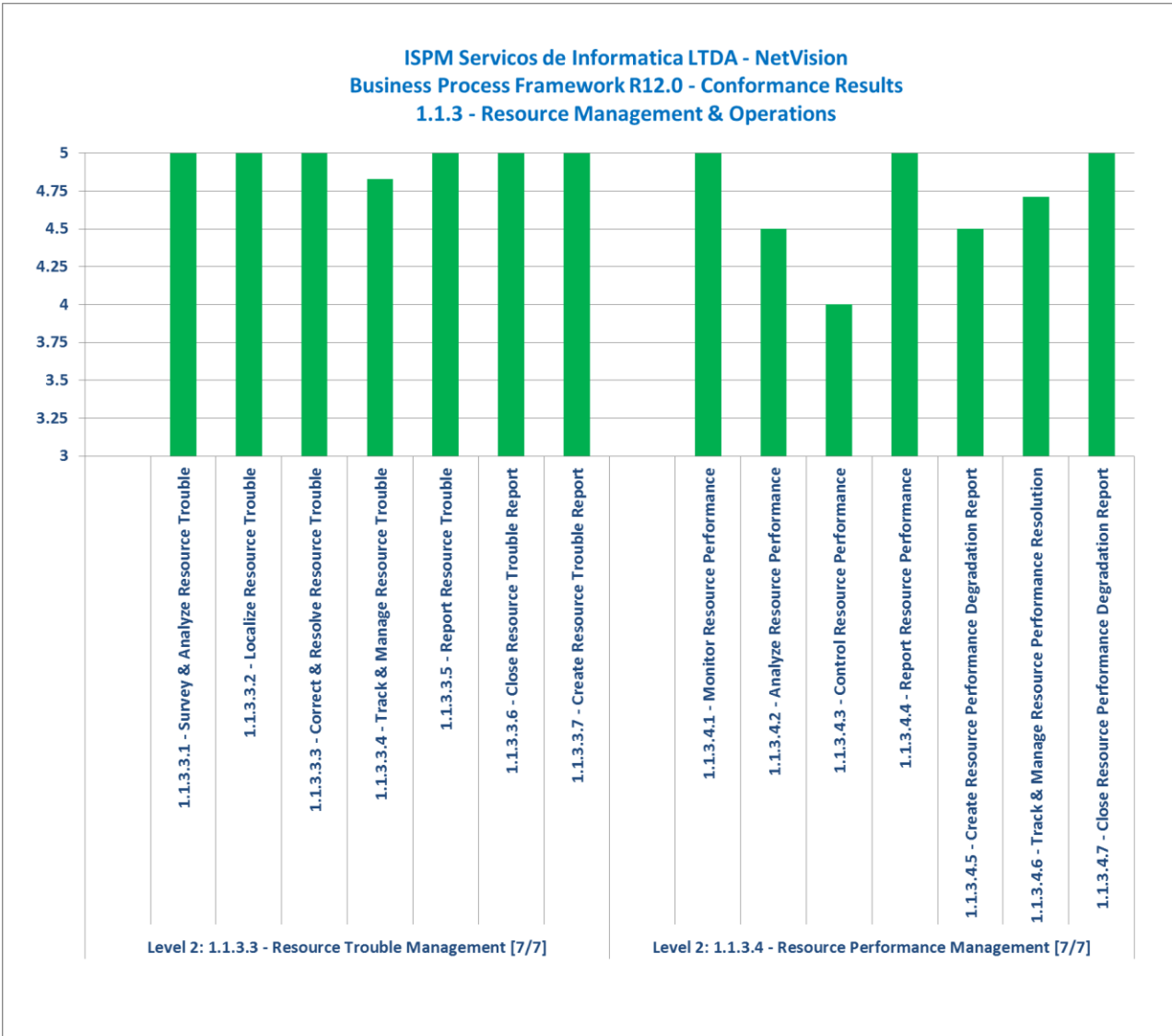
Figure 6.4 - Conformance Result Summary: 1.1.3 - Resource Management & Operations

6.3   Business Process Framework – Conformance Results Detailed

The following table provides a more detailed breakdown of the scores awarded with some additional commentary.

Table 6.1 - Business Process Framework: Detailed Conformance Result

ISPM Servicos de Informatica LTDA NetVision Business Process Framework (eTOM) Release 12 Conformance		
Business Process Framework Process	**Conformance Score**	**Comment**
Level 1: 1.1.1 - Customer Relationship Management	**N/A**	The following Level 2 process elements were submitted in scope for this Level 1 process: 1.1.1.6 - Problem Handling 1.1.1.7 - Customer QoS/SLA Management
Level 2: 1.1.1.6 - Problem Handling	**Scope [6/6]**	The following Level 3 processes were assessed for conformance: 1.1.1.6.1 - Isolate Customer Problem 1.1.1.6.2 - Report Customer Problem 1.1.1.6.3 - Track & Manage Customer Problem 1.1.1.6.4 - Close Customer Problem Report 1.1.1.6.5 - Create Customer Problem Report 1.1.1.6.6 - Correct & Recover Customer Problem These processes represent the full level 3 process scope (6/6) defined within the 1.1.1.6 - Problem Handling (level 2) process.
1.1.1.6.1 - Isolate Customer Problem	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.6.2 - Report Customer Problem	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).

1.1.1.6.3 - Track & Manage Customer Problem	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.6.4 - Close Customer Problem Report	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.6.5 - Create Customer Problem Report	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.6.6 - Correct & Recover Customer Problem	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
Level 2: 1.1.1.7 - Customer QoS/SLA Management	**Scope [6/6]**	The following Level 3 processes were assessed for conformance: 1.1.1.7.1 - Assess Customer QoS/SLA Performance 1.1.1.7.2 - Manage QoS/SLA Violation 1.1.1.7.3 - Report Customer QoS Performance 1.1.1.7.4 - Create Customer QoS Performance Degradation Report 1.1.1.7.5 - Track & Manage Customer QoS Performance Resolution 1.1.1.7.6 - Close Customer QoS Performance Degradation Report These processes represent the full level 3 process scope (6/6) defined within the 1.1.1.7 - Customer QoS/SLA Management (level 2) process.

1.1.1.7.1 - Assess Customer QoS/SLA Performance	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.7.2 - Manage QoS/SLA Violation	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.7.3 - Report Customer QoS Performance	**4.34**	**Partially Conformant** The documentation and mappings that were reviewed as part of the conformance assessment for one of the constituents of this L3 process element did not provide enough detail or insight to reach a full conformance score; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.
1.1.1.7.4 - Create Customer QoS Performance Degradation Report	**4.67**	**Partially Conformant** The documentation and mappings that were reviewed as part of the conformance assessment for one of the constituents of this L3 process element did not provide enough detail or insight to reach a full conformance score; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.
1.1.1.7.5 - Track & Manage Customer QoS Performance Resolution	**4.5**	**Partially Conformant** One of the consituent tasks in this process is not fully supported according to documentation and mappings that were reviewed as part of the conformance assessment process; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition

1.1.1.7.6 - Close Customer QoS Performance Degradation Report	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
Level 1: 1.1.2 - Service Management & Operations		The following Level 2 process elements were submitted in scope for this Level 1 process: 1.1.2.3 - Service Problem Management 1.1.2.4 - Service Quality Management
Level 2: 1.1.2.3 - Service Problem Management	**Scope [7/7]**	The following Level 3 processes were assessed for conformance: 1.1.2.3.1 - Create Service Trouble Report 1.1.2.3.2 - Diagnose Service Problem 1.1.2.3.3 - Correct & Resolve Service Problem 1.1.2.3.4 - Track & Manage Service Problem 1.1.2.3.5 - Report Service Problem 1.1.2.3.6 - Close Service Trouble Report 1.1.2.3.7 - Survey & Analyze Service Problem These processes represent the full level 3 process scope (6/6) defined within the 1.1.2.3 - Service Problem Management (level 2) process.
1.1.2.3.1 - Create Service Trouble Report	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.2.3.2 - Diagnose Service Problem	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).

1.1.2.3.3 - Correct & Resolve Service Problem	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.2.3.4 - Track & Manage Service Problem	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.2.3.5 - Report Service Problem	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.2.3.6 - Close Service Trouble Report	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.2.3.7 - Survey & Analyze Service Problem	**4.8**	**Partially Conformant** The documentation and mappings that were reviewed as part of the conformance assessment for one of the constituents of this L3 process element did not provide enough detail or insight to reach a full conformance score; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.

Level 2: 1.1.2.4 - Service Quality Management	Scope [7/7]	The following Level 3 processes were assessed for conformance: 1.1.2.4.1 - Monitor Service Quality 1.1.2.4.2 - Analyze Service Quality 1.1.2.4.3 - Improve Service Quality 1.1.2.4.4 - Report Service Quality Performance 1.1.2.4.5 - Create Service Performance Degradation Report 1.1.2.4.6 - Track & Manage Service Quality Performance Resolution 1.1.2.4.7 - Close Service Performance Degradation Report These processes represent the full level 3 process scope (6/6) defined within the 1.1.2.4 - Service Quality Management (level 2) process.
1.1.2.4.1 - Monitor Service Quality	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.2.4.2 - Analyze Service Quality	**4.5**	**Partially Conformant** One of the consituent tasks in this process is not fully supported according to documentation and mappings that were reviewed as part of the conformance assessment process; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.
1.1.2.4.3 - Improve Service Quality	**4.7**	**Partially Conformant** One of the consituent tasks in this process is not fully supported according to documentation and mappings that were reviewed as part of the conformance assessment process; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.
1.1.2.4.4 - Report Service Quality Performance	**4.7**	**Partially Conformant** One of the consituent tasks in this process is not fully supported according to documentation and mappings that were reviewed as part of the conformance assessment

		process; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.
1.1.2.4.5 - Create Service Performance Degradation Report	4.5	**Partially Conformant** One of the consituent tasks in this process is not fully supported according to documentation and mappings that were reviewed as part of the conformance assessment process; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.
1.1.2.4.6 - Track & Manage Service Quality Performance Resolution	4.72	**Partially Conformant** The documentation and mappings that were reviewed as part of the conformance assessment for one of the constituents of this L3 process element did not provide enough detail or insight to reach a full conformance score; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.
1.1.2.4.7 - Close Service Performance Degradation Report	5	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
Level 1: 1.1.3 - Resource Management & Operations	**N/A**	The following Level 2 process elements were submitted in scope for this Level 1 process: 1.1.3.3 - Resource Trouble Management 1.1.3.4 - Resource Performance Management

Level 2: 1.1.3.3 - Resource Trouble Management	Scope [7/7]	The following Level 3 processes were assessed for conformance: 1.1.3.3.1 - Survey & Analyze Resource Trouble 1.1.3.3.2 - Localize Resource Trouble 1.1.3.3.3 - Correct & Resolve Resource Trouble 1.1.3.3.4 - Track & Manage Resource Trouble 1.1.3.3.5 - Report Resource Trouble 1.1.3.3.6 - Close Resource Trouble Report 1.1.3.3.7 - Create Resource Trouble Report These processes represent the full level 3 process scope (6/6) defined within the 1.1.3.3 - Resource Trouble Management(level 2) process.
1.1.3.3.1 - Survey & Analyze Resource Trouble	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.3.3.2 - Localize Resource Trouble	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.3.3.3 - Correct & Resolve Resource Trouble	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.3.3.4 - Track & Manage Resource Trouble	**4.83**	**Partially Conformant** The documentation and mappings that were reviewed as part of the conformance assessment for one of the constituents of this L3 process element did not provide enough detail or insight to reach a full conformance score; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.

1.1.3.3.5 - Report Resource Trouble	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.3.3.6 - Close Resource Trouble Report	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.3.3.7 - Create Resource Trouble Report	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
Level 2: 1.1.3.4 - Resource Performance Management	**Scope [7/7]**	The following Level 3 processes were assessed for conformance: 1.1.3.4.1 - Monitor Resource Performance 1.1.3.4.2 - Analyze Resource Performance 1.1.3.4.3 - Control Resource Performance 1.1.3.4.4 - Report Resource Performance 1.1.3.4.5 - Create Resource Performance Degradation Report 1.1.3.4.6 - Track & Manage Resource Performance Resolution 1.1.3.4.7 - Close Resource Performance Degradation Report These processes represent the full level 3 process scope (6/6) defined within the 1.1.3.4 - Resource Performance Management (level 2) process.
1.1.3.4.1 - Monitor Resource Performance	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).

1.1.3.4.2 - Analyze Resource Performance	**4.5**	**Partially Conformant** One of the consituent tasks in this process is not fully supported according to documentation and mappings that were reviewed as part of the conformance assessment process; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.
1.1.3.4.3 - Control Resource Performance	**4**	**Partially Conformant** One of the consituent tasks in this process is not fully supported according to documentation and mappings that were reviewed as part of the conformance assessment process; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.
1.1.3.4.4 - Report Resource Performance	**5**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.3.4.5 - Create Resource Performance Degradation Report	**4.5**	**Partially Conformant** One of the consituent tasks in this process is not fully supported according to documentation and mappings that were reviewed as part of the conformance assessment process; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.
1.1.3.4.6 - Track & Manage Resource Performance Resolution	**4.71**	**Partially Conformant** One of the consituent tasks in this process is not fully supported according to documentation and mappings that were reviewed as part of the conformance assessment process; therefore this L3 process is marked as having a slight deviation from the standard eTOM composition.

1.1.3.4.7 - Close Resource Performance Degradation Report	5	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).

6.4   Information Framework – Scoring Rules

The conformance scores granted were based on the following TM Forum scoring rules:

Frameworx 12.0 Conformance Certification (Product/Solution/Implementation)	
Information Framework (SID) - Conformance Score Descriptions	
Conformance Score	**Qualifier**
Non Conformance [Score = 1]	The content of the model is compatible with a subset of the Information Framework (SID) ABEs that define its domain coverage. This provides two interacting components/solutions with a common vocabulary and model structure. The subset represents the scope of the model, expressed in Information Framework (SID) domains
Non Conformance [Score = 2]	The model has passed level 1 conformance and the content of the ABE, part of the domain coverage and defined in the model, contains the ABE's core business entity or entities. A core business entity is an entity upon which other entities within the ABE are dependent. e.g. Service in the Service ABE. A core entity is also an entity whose
Very Low Conformance [2.0 < Score <= 3.0]	The model has passed level 2 conformance and *a percentage of the required attributes of the ABE's core entity or entities are defined in the model.
Low Conformance [3.0 < Score <= 4.0]	The model has passed level 3 conformance and *a percentage of the dependent entities within the ABE are defined in the model. A dependent entity is one whose instances are dependent on an instance of a core entity. For example, a ServiceCharacteristic instance within the Service ABE is dependent upon an instance of the Service entity.
Medium Conformance [4.0 < Score <= 5.0]	The model has passed level 4 conformance and *a percentage of the required attributes of the ABE's dependent entities are defined in the model.
High Conformance [5.0 < Score <= 6.0]	The model has passed level 5 conformance and *a percentage of all attributes of the ABE's core entities are defined in the model.
Very High Conformance [6.0 < Score < 7.0]	The model has passed level 6 conformance and *a percentage of all attributes of the ABE's dependent entities are defined in the model.
Full Conformance [Score = 7.0]	The model has achieved Level 7 conformance (Full Conformance) and all attributes of the ABE's core & dependent entities are defined in the model.
* For each level, according to what is required, a value is calculated based on the percentage of entities/attributes supported - as appropriate. This will result in a decimal figure (rounded to one decimal place).	

Figure 6.5 - TM Forum Information Framework: Conformance Scoring Rules

Notes:

A **core business entity** is an entity upon which other entities within the ABE are dependent. For example, Service in the Service ABE. A model should strive to attain as high a level of Information Framework (SID) conformance as possible. A core entity is also an entity whose absence in the ABE would make the ABE incomplete.

A **dependent entity** is one whose instances are dependent on an instance of a core entity. For example, a ServiceCharacteristic instance within the Service ABE is dependent upon an instance of the Service entity.

6.5   Information Framework – Conformance Result Summary

The following graph provides an overview of the conformance levels granted to the ABEs presented in scope for the ISPM NetVision Information Framework Assessment. Each ABE was measured using an Information Framework (SID) conformance scale of 1–7 as described in section 6.4.
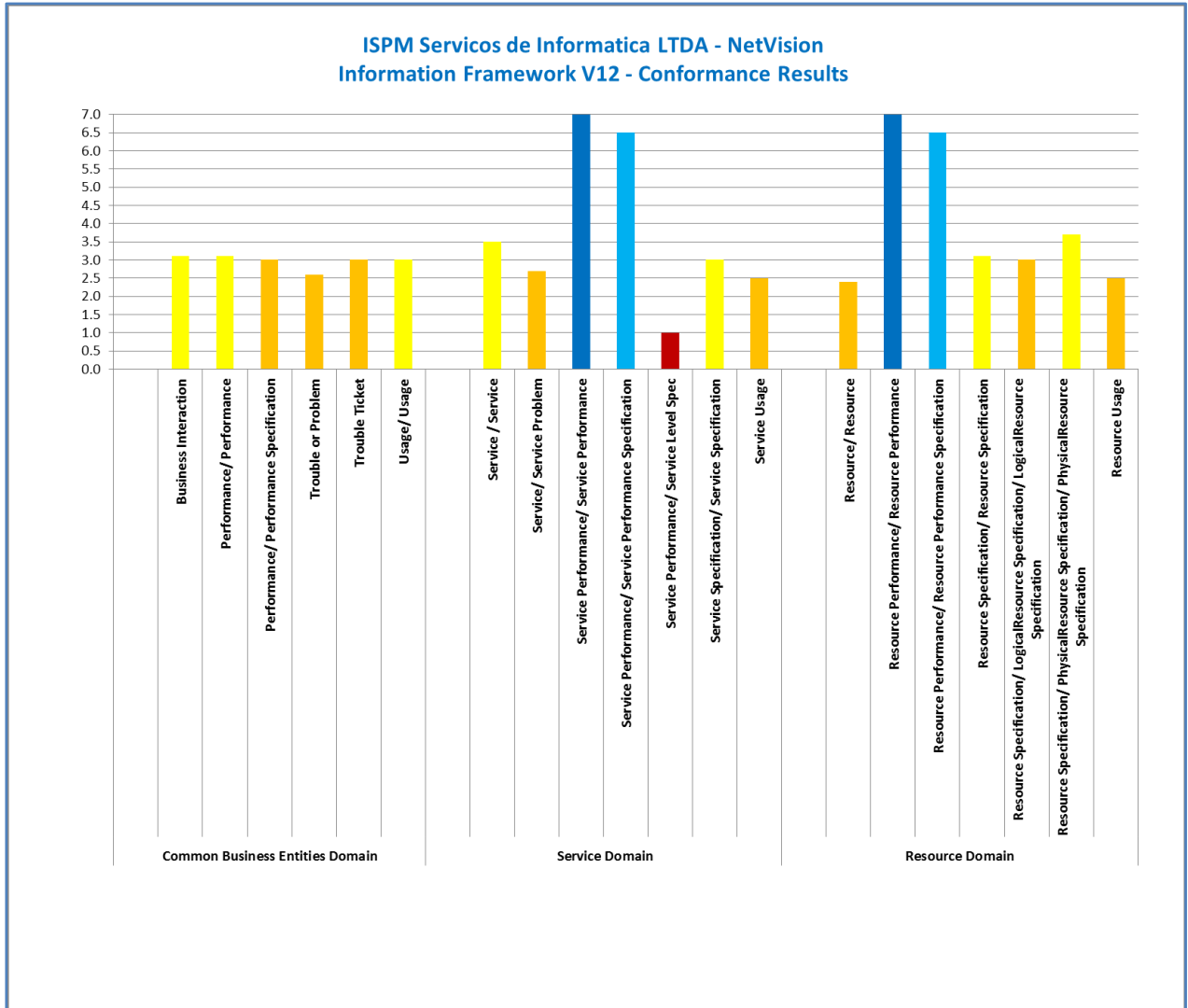

Figure 6.6 - Information Framework: Conformance Result Summary

6.6   Information Framework – Conformance Result Detailed

The following table provides a more detailed breakdown of the scores awarded with some additional commentary.

Note that there are a number of Custom attributes supported in the NetVision data model that are pre-configured in a pre-loaded database which is part of the NetVision product package.

Table 6.2 - Information Framework: Detailed Conformance Result

ISPM Servicos de Informatica LTDA NetVision V3.7 Information Framework (SID) Release 12 Conformance		
ABE	**Conformance Score**	**Comment**
Common Business Entities Domain		
Business Interaction	3.1	Core entity, required attributes, 10% of dependent entities supported.
Performance/ Performance	3.1	Core entity, required attributes, 10% of dependent entities supported.
Performance/ Performance Specification	3	Core entity and its required attributes supported.
Trouble or Problem	2.6	Core entity and 60% of required attributes supported.
Trouble Ticket	3	Core entity and its required attributes supported.
Usage/ Usage	3	Core entity and its required attributes supported. TM Forum Notes: 1. The UsageSpec ABE was not submitted for the assessment.
Service Domain		
Service / Service	3.5	Core entity, required attributes, 50% of dependent entities supported.
Service/ Service Problem	2.7	Core entity and 70% of required attributes supported.
Service Performance/ Service Performance	7	Core entity, required attributes, dependent entities, required attributes of dependent entities, all attributes of the core entity, all attributes of dependent entities supported.

		TM Forum Notes: 2. See Performance ABE score.
Service Performance/ Service Performance Specification	6.5	Core entity, required attributes, dependent entities, required attributes of dependent entities, all attributes of the core entity, 50% of attributes of dependent entities supported.
Service Performance/ Service Level Spec	1	Non Conformance
Service Specification/ Service Specification	3	Core entity and its required attributes supported.
Service Usage	2.5	Core entity and 50% of required attributes supported. TM Forum Notes: 1. See Usage ABE score.
Service Domain		
Resource/ Resource	2.4	Core entity and 40% of required attributes supported.
Resource Performance/ Resource Performance	7	Core entity, required attributes, dependent entities, required attributes of dependent entities, all attributes of the core entity, all attributes of dependent entities supported. TM Forum Notes: 1. See Performance ABE score.
Resource Performance/ Resource Performance Specification	6.5	Core entity, required attributes, dependent entities, required attributes of dependent entities, all attributes of the core entity, 50% of attributes of dependent entities supported.
Resource Specification/ Resource Specification	3.1	Core entity, required attributes, 10% of dependent entities supported.
Resource Specification/ LogicalResource Specification/ LogicalResource Specification	3	Core entity and its required attributes supported.
Resource Specification/ PhysicalResource Specification/ PhysicalResource Specification	3.7	Core entity, required attributes, 70% of dependent entities supported.
Resource Usage	2.5	Core entity and 50% of required attributes supported.

		TM Forum Notes: 1. See Usage ABE score.