

# Navy Performance Assessment Profile

*Requirements and Guidelines for Implementing xAPI in Performance Assessments*



Document Version: 1.0



# Table of Contents

<b>Revision History</b>	5
<b>1. Overview</b>	6
1.1. How to Read this Document	6
1.1.1. Conformance Requirements	6
1.1.2. Optional Requirements	7
1.2. When to Use this Profile	7
1.3. How to Use this Profile	7
<b>2. Navy Performance Assessment Profile</b>	7
2.1. Performance Assessment Use Cases	8
2.2. Scope	9
2.3. Performance Assessment Profile Concepts	9
2.3.1. Verbs	9
2.3.2. Activity Types	10
2.3.3. Activity Extensions	11
2.3.3.1. Scenario-Based Activity Extension Properties	14
2.3.4. Context Extensions	15
2.3.4.1. Context Agents Context Extension Properties	16
2.3.4.2. Scenario-Based Context Extension Properties	17
2.3.5. Result Extensions	18

2.4. Statement Requirements & Examples	19
2.4.1. Scenario-Based Performance Assessments	19
2.4.1.1. Initializing a Scenario-Based Performance Assessment	19
2.4.1.1.1. Initialized Statement Requirements	19
2.4.1.1.2. Initialized Statement Example	21
2.4.1.2. Responding to a Scenario-Based Performance Question	23
2.4.1.2.1. Responded Statement Requirements	23
2.4.1.2.2. Responded Statement Example	27
2.4.1.3. Terminating a Scenario-Based Performance Assessment	32
2.4.1.3.1. Terminated Statement Requirements	32
2.4.1.3.2. Terminated Statement Example	34
2.4.2. Other Performance Assessment Statement Examples	37
2.4.2.1. Instructor Performance Assessment	37
2.4.2.1.1. Responded Statement	37
2.4.2.1.2. Terminated Statement	41
2.4.2.2. Self-Reported Performance Assessment Survey	44
2.4.2.2.1. Responded Statement	44
2.4.2.2.2. Terminated Statement	48
2.4.2.3. Supervisor Performance Assessment Survey	50
2.4.2.3.1. Responded Statement	50
2.4.2.3.2. Terminated Statement	54

# Revision History

Version	Release Date	Notes
0.8	8/23/2022	Initial draft of the profile. Internal review only.
0.9	10/10/2022	Draft for Navy internal review. Incorporated UCLA CRESST feedback.
1.0	1/27/2023	Incorporated additional Navy feedback/comments. First official version for release.

*Table 1: Navy Performance Assessment Profile Revision History*

# 1. Overview

## 1.1. How to Read this Document

This document is provided as an auxiliary resource to the formal xAPI Specification (version 1.0.3) and addresses the Navy-specific requirements for implementing xAPI in performance assessments. If an object or property is listed as “optional” in the xAPI Specification, but that same object or property is listed as a requirement herein, then this document takes precedence. The requirements in this document provide content developers with the mandatory Learning Record Provider (LRP) obligations for implementing xAPI Statements in performance assessments. The following common syntactic and typographic conventions are used in this document:

- Footnotes appear at the bottom of pages where there is a need to provide additional information or references.
- Words or concepts will use *Italics* or “double quotations” when there is a need to draw special attention to them.
- Title Case is used to identify concepts and terminology from the xAPI Specification.
- A Courier font such as this is used to represent data objects or properties associated with the xAPI Statement Data Model. A Courier font is also used to distinguish between technical terminology or concepts originating from the xAPI Specification or an xAPI Profile. A Courier font is also used to represent unique identifiers such as IRIs or IDs.
- xAPI Statement examples represented as JSON snippets and other types of syntax examples are provided inside of light blue background box area like the one below:

```
"data-object":{  
    "property1": "value",  
    "property2": "value"  
}
```

### 1.1.1. Conformance Requirements

These xAPI conformance requirements are intended to be reused as part of the contract requirements in a Data Item Description (DID) deliverable or Contract Data Requirements List (CDRL). The use of “SHOULD” and “MAY” was avoided since these types of contract documents normally contain only mandatory instructions. Complete definitions are provided below. Not following these recommendations could risk interoperability and/or lead to xAPI deliverables not being accepted by the Navy.

1. SHALL OR SHALL NOT. If a product fails to implement a SHALL or SHALL NOT requirement, the product is non-conformant to Navy’s requirements.

## 1.1.2. Optional Requirements

Some attributes or values are labeled as optional or “if known.” This is based on the understanding that not all information may be available to the application recording the learner’s interactions with the content. Thus, when those optional attributes are unknown it is permitted to omit them. However, if the attribute or value is known, it is required to record that information.

## 1.2. When to Use this Profile

The purpose of this document is to provide content developers with best practices, technical guidance, and standard requirements for implementing xAPI in performance assessments. This document is intended to serve as Navy’s official technical requirements for any performance assessment contractually required to support xAPI. The different use cases for using xAPI to collect data for a performance assessment are provided below in Section 2.1.

## 1.3. How to Use this Profile

This document is intended to be used in addition to the xAPI Specification and the Navy Core xAPI Profile. Please see these documents for the general data and content integration requirements. This document assumes an understanding of the xAPI Specification<sup>1</sup> and the underlying concepts explained therein. All communication and data formats SHALL follow the general requirements in the xAPI specification. The guidance provided in this document is meant to provide additional information and requirements specific to supporting performance assessment communications and data with xAPI. This Profile’s requirements are principally organized in the following sections:

- Profile Overview
- Profile Concepts
- xAPI Statement Requirements & Examples

## 2. Navy Performance Assessment Profile

Performance assessment measures whether Sailors can demonstrate what they learned by applying knowledge or skills through various performance tasks (simulated or real). Performance assessment can also be used for formative or summative assessment. It is a critical instrument in the Navy’s training effectiveness evaluation strategy, which uses the Kirkpatrick Model (KM) as the foundational approach. This profile provides the xAPI

---

<sup>1</sup> The xAPI Specification, <https://github.com/adlnet/xAPI-Spec>

requirements and Statement examples for specific performance assessment use cases in the Navy. Those use cases are described below.

## 2.1. Performance Assessment Use Cases

Performance assessment in the Navy is focused on collecting data for Level 2 (Learning) and Level 3 (Behavior) of the KM Levels. In this context, performance assessment may include measuring knowledge, skills or tasks by instrumenting surveys, knowledge-based assessments, and/or scenario-based performance assessments. Many performance assessment and evaluation strategies use electronic survey instruments (e.g., self-reported, observational, supervisor) to collect performance assessment data. However, performance assessments that require more complex xAPI data collection requirements will utilize scenario-based or tasked-based situations, authentic processes and procedures, and critical thinking.

Future performance assessment use cases and types of content may be added to this Profile as required by the Navy. When new use cases are identified, this Profile will be updated with the associated xAPI requirements and a new version of the Profile will be issued. Navy Performance Assessment currently addresses the following use cases:

1. ***Instructor Performance Assessment*** - This type of performance assessment is a feedback survey completed by the Instructor/Facilitator during or after observing the Sailor's performance on a classroom lab exercise, task, drill, or hands-on skill activity. The survey questions measure the Sailor's ability to demonstrate the required knowledge or skills based on one or more of the learning or performance objectives.
2. ***Scenario-Based (aka Task-Based) Performance Assessment*** - This type of performance assessment is based on the / NETC Training Assessment Framework (TAF) researched and developed by the National Center for Research on Evaluation, Standards, and Student Testing (CRESST) UCLA<sup>2</sup>. The assessment questions for scenario-based performance assessment are designed to measure the Sailor's cognitive demands, competencies, or task performance (e.g, declarative knowledge, procedural knowledge, situational awareness, reasoning, problem solving, systems thinking) after completing KM Level 2 training resources. The performance assessment may also include additional context and resources needed for responding to the interactive assessment questions (e.g., simulated virtual environment, equipment, interfaces, devices, tools, manuals, schematics, or workflows).
3. ***Self-Reported Performance Assessment*** - This type of performance assessment is a self-reported feedback survey completed by the Sailor on the job (KM Level 3). The survey includes questions based on their intent to apply on-the-job what was previously learned via training. The training may include refresher training as well as any prior classroom training. Per NETCINST 1540.2B, an example of this type of performance assessment includes Graduate Feedback Surveys, which are administered 6-12 months after graduation. For accession Sailors, the timeframe for the performance self-reported

---

<sup>2</sup> CRESST University of California, Los Angeles, <https://cresst.org/defense/>



assessment will be adjusted to 12 months after reporting to first duty station or from the completion of the full accession training path.

4. **Supervisor Performance Assessment** - This type of performance assessment is a feedback survey completed by the Supervisor about the Sailor’s performance on the job (KM Level 3). The survey includes questions based on performance on the job or with actual equipment. The performance (knowledge and skills) assessed on the job should align with what was previously learned via training. Per NETCINST 1540.2B, an example of this type of performance assessment includes Supervisor Feedback Surveys, which are administered while the Sailor is performing their job.

## 2.2. Scope

The Navy Assessment Profile provides the baseline requirements for collecting and structuring xAPI data for the most common types of assessments and surveys. All of the Statement requirements and events identified in the Navy Assessment Profile (i.e., Initialized, Responded, Resumed, Suspended, and Terminated) also apply to the Performance Assessment Profile. The Navy Performance Assessment Profile extends the Navy Assessment Profile by identifying the data collection requirements and examples primarily for Use Case #2 in Section 2.1 (Scenario-Based Performance Assessment). Since the other use cases require survey data collection (covered in the Navy Assessment Profile), only xAPI Statement examples will be provided for those other survey-based performance assessment use cases to highlight how the extensions from the Navy Performance Assessment Profile should be applied.

## 2.3. Performance Assessment Profile Concepts

The following tables provide a list of available vocabulary Concepts used in the Navy Performance Assessment Profile. If additional performance assessment use cases are identified and new Concepts are added, then an updated version of this Profile will be issued.

### 2.3.1. Verbs

Concept	Description	IRI	Applicable Activity
initialized	Indicates that the Actor successfully started an attempt on an Activity.	<a href="http://adlnet.gov/expapi/verbs/initialized">http://adlnet.gov/expapi/verbs/initialized</a>	assessment
responded	Indicates an Actor reacted or replied to an Object.	<a href="http://adlnet.gov/expapi/verbs/responded">http://adlnet.gov/expapi/verbs/responded</a>	cmi.interaction

resumed	Indicates that the Actor continued or reopened a suspended attempt on an Activity.	<a href="http://adlnet.gov/expapi/verbs/resumed">http://adlnet.gov/expapi/verbs/resumed</a>	assessment
suspended	Indicates that the Actor suspended an attempt on an Activity with the intent to return at a later time.	<a href="http://adlnet.gov/expapi/verbs/suspended">http://adlnet.gov/expapi/verbs/suspended</a>	assessment
terminated	Indicates that the Actor successfully ended an attempt on an Activity.	<a href="http://adlnet.gov/expapi/verbs/terminated">http://adlnet.gov/expapi/verbs/terminated</a>	assessment

Table 2: Verbs in the Navy Performance Assessment Profile

## 2.3.2. Activity Types

Concept	Description	IRI	ContextActivity Relationships
assessment	An assessment is an Activity Type that determines a learner's mastery of a particular subject area. An assessment typically has one or more questions.	<a href="http://adlnet.gov/expapi/activities/assessment">http://adlnet.gov/expapi/activities/assessment</a>	N/A
cmi.interaction	An interaction is typically a part of a larger Activity (such as an assessment, game, or simulation) and refers to a control to which a learner provides input.	<a href="http://adlnet.gov/expapi/activities/cmi.interaction">http://adlnet.gov/expapi/activities/cmi.interaction</a>	assessment (parent)
profile	A Profile defines a set of rules and recommendations for generating xAPI Statements for a particular domain. The inclusion of a Profile Activity in a	<a href="http://adlnet.gov/expapi/activities/profile">http://adlnet.gov/expapi/activities/profile</a>	N/A

	Statement identifies that Statement as following the rules outlined in the Profile.		
--	---	--	--

Table 3: Activity Types in the Navy Performance Assessment Profile

### 2.3.3. Activity Extensions

Concept	Description	IRI	Value Type	Expected Values / Examples	Applicable Activity
assessment-type	The value representing the type of assessment.	<a href="http://id.tincanapi.com/extension/assessment-type">http://id.tincanapi.com/extension/assessment-type</a>	string	One of the following in lowercase: <ul style="list-style-type: none"> <li>- survey</li> <li>- quiz</li> <li>- progress test</li> <li>- pretest</li> <li>- posttest</li> <li>- comprehensive</li> <li>- oral test</li> <li>- essay test</li> <li>- problem sheet</li> <li>- assignment sheet</li> </ul>	assessment
navy-enlisted-classification	The specific Navy Enlisted Classification (NEC)(s) targeted by this assessment.	<a href="https://w3id.org/xapi/netc/extensions/navy-enlisted-classification">https://w3id.org/xapi/netc/extensions/navy-enlisted-classification</a>	array of strings	One or more alphanumeric codes that are associated with a specific rating and are frequently used to indicate specialized qualifications. Refer to Navy Personnel Command for current NEC values <sup>3</sup> . Use uppercase format.  For example:  ["ET-1402", "ETV-15V9", "ET-V011", "FC-V020", "IC-V001"]	assessment

<sup>3</sup> NEC List, <https://www.mynavyhr.navy.mil/Career-Management/Detailing/Placement-Management/NEC-Information>

performance-assessment-type	The value representing the type of performance assessment.	<a href="https://w3id.org/xapi/netc-performance-assessment/extensions/performance-assessment-type">https://w3id.org/xapi/netc-performance-assessment/extensions/performance-assessment-type</a>	string	One of the following in lowercase: <ul style="list-style-type: none"> <li>- instructor</li> <li>- scenario-based</li> <li>- self-reported</li> <li>- supervisor</li> </ul>	assessment
scenario-based-activity	This activity extension is used to define additional subproperties for a <i>scenario-based assessment</i> or <i>interaction</i> .	<a href="https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-activity">https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-activity</a>	object	The subproperties are listed below and their requirements are provided in the subsequent table. <ul style="list-style-type: none"> <li>- assessmentPurpose</li> <li>- assessmentStandards</li> <li>- otjMapping</li> <li>- task</li> <li>- taskCategory</li> <li>- taskType</li> <li>- timeConstraint</li> </ul>	assessment, cmi.interaction
target-audience	The target audience for the assessment.	<a href="https://w3id.org/xapi/netc/extensions/target-audience">https://w3id.org/xapi/netc/extensions/target-audience</a>	array of strings	One or more of the following in lowercase: <ul style="list-style-type: none"> <li>- apprentice</li> <li>- journeyman</li> <li>- master</li> </ul>	assessment
target-rating	The specific Navy rating(s) targeted by this assessment.	<a href="https://w3id.org/xapi/netc/extensions/target-rating">https://w3id.org/xapi/netc/extensions/target-rating</a>	array of strings	One or more of the following abbreviated ratings from NEOCS Manual <sup>4</sup> denoted in uppercase: <ul style="list-style-type: none"> <li>- AB</li> <li>- ABE</li> <li>- ABF</li> <li>- ABH</li> <li>- AC</li> <li>- AD</li> <li>- AE</li> </ul>	assessment

<sup>4</sup> The authoritative source of Navy ratings is the NEOCS Manual. Refer to the NEOCS Manual for the most up-to-date list of ratings, located here: <https://www.mynavyhr.navy.mil/References/NEOCS-Manual/NEOCS-Vol-I/>

				<ul style="list-style-type: none"> <li>- AG</li> <li>- AM</li> <li>- AME</li> <li>- AN</li> <li>- AO</li> <li>- AS</li> <li>- AT</li> <li>- AW</li> <li>- AWF</li> <li>- AWO</li> <li>- AWR</li> <li>- AWS</li> <li>- AWV</li> <li>- AZ</li> <li>- BM</li> <li>- BU</li> <li>- CE</li> <li>- CM</li> <li>- CN</li> <li>- CS</li> <li>- CSS</li> <li>- CT</li> <li>- CTI</li> <li>- CTM</li> <li>- CTN</li> <li>- CTR</li> <li>- CTT</li> <li>- DC</li> <li>- EA</li> <li>- EM</li> <li>- EMN</li> <li>- EOD</li> <li>- EN</li> <li>- EO</li> <li>- ET</li> <li>- ETN</li> <li>- ETV</li> <li>- FC</li> <li>- FCA</li> <li>- FN</li> <li>- FT</li> <li>- GM</li> <li>- GSE</li> <li>- GSM</li> <li>- HM</li> <li>- HN</li> <li>- HT</li> <li>- IC</li> <li>- IS</li> <li>- IT</li> <li>- ITS</li> <li>- LS</li> <li>- LSS</li> <li>- LN</li> </ul>	
--	--	--	--	---	--

				<ul style="list-style-type: none"> <li>- MA</li> <li>- MC</li> <li>- MN</li> <li>- MMA</li> <li>- MMN</li> <li>- MN</li> <li>- MR</li> <li>- MT</li> <li>- MU</li> <li>- NC</li> <li>- NCC</li> <li>- NCR</li> <li>- ND</li> <li>- OS</li> <li>- PS</li> <li>- PR</li> <li>- QM</li> <li>- RP</li> <li>- RS</li> <li>- SB</li> <li>- SN</li> <li>- SO</li> <li>- STG</li> <li>- STS</li> <li>- SW</li> <li>- TM</li> <li>- UT</li> <li>- YN</li> <li>- YNS</li> </ul>	
--	--	--	--	---	--

Table 4: Activity Extensions in the Navy Performance Assessment Profile

### 2.3.3.1. Scenario-Based Activity Extension Properties

The <https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-activity> Activity Extension is a JSON object that can include the following properties.

Property	Description	Value Type	Expected Values / Examples	Applicable Activity
assessmentPurpose	A description about the purpose of the assessment.	string	For example:  Progress assessment of troubleshooting radar equipment fundamentals.	assessment
assessmentStandards	The criteria used for scoring the overall assessment or a specific question.	string	A text description of the assessment standards. For example:  - within +/- 10 percent accuracy	assessment, cmi.interaction

			<ul style="list-style-type: none"> <li>- within 1 hour</li> <li>- to the nearest tenth (unit)</li> <li>- to two decimal points</li> </ul>	
otjMapping	This property is used to map/relate the question or an assessment to an on-the-job task.	array of strings	<p>One or more unique identifiers and the task description from a PQS (100, 200, 300 level).</p> <p>For example:</p> <p>["301.1: Determine the resistance of the components used to control the circuits"]</p>	assessment, cmi.interaction
task	An identifier and/or description of the actual task being performed. Authoritative tasks are located in the course training task list (CTTL).	string	Task 1: Measure the resistance with a digital multimeter (DMM).	cmi.interaction
taskCategory	The broader category associated with the task, such as Naval Standards (NAVSTDs) or Occupational Standards (OCCSTDs) <sup>5</sup> .	array of strings	<p>One or more of the following classifications in lowercase:</p> <ul style="list-style-type: none"> <li>- naval standard</li> <li>- occupational standard</li> </ul>	assessment, cmi.interaction
taskType	The type of task (performance or procedure) performed.	array of strings	<p>One or more of the following in lowercase:</p> <ul style="list-style-type: none"> <li>- procedure</li> <li>- principle</li> </ul>	cmi.interaction
timeConstraint	Identifies the time limit for performing the task.	string	ISO 8601 Duration Format <sup>6</sup>	assessment, cmi.interaction

Table 5: Activity Extensions in the Navy Performance Assessment Profile

## 2.3.4. Context Extensions

The Context Extensions required for performance assessment are provided in the table below.

<sup>5</sup> Navy Enlisted Manpower and Personnel Classifications and Occupational Standards, <https://www.mynavyhr.navy.mil/References/NEOCS-Manual/NEOCS-Vol-I/>

<sup>6</sup> ISO 8601, [https://en.wikipedia.org/wiki/ISO\\_8601](https://en.wikipedia.org/wiki/ISO_8601)

Concept	Description	IRI	Value Type	Expected Values / Examples	Applicable Activity
context-agents	Collection of Objects describing relationship(s) between the Agent(s) and the current Statement. Zero or more Activity Type IRIs are used to categorize these relationship(s).	<a href="https://w3id.org/xapi/netc-performance-assessment/extensions/context-agents">https://w3id.org/xapi/netc-performance-assessment/extensions/context-agents</a>	Array of contextAgent Objects	The subproperties are listed below and their requirements are provided in the Agents Extension Properties Table in Section 2.3.4.1.	assessment, cmi.interaction
scenario-based context	This context extension is used to provide additional subproperties for a <i>scenario-based assessment</i> or <i>interaction</i> .	<a href="https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-context">https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-context</a>	object	The subproperties are listed below and their requirements are provided in the Scenario-Based Context Extension Properties Table in Section 2.3.4.2.  - assessmentConditions - assessmentScenario	assessment, cmi.interaction

Table 6: Activity Extensions in the Navy Performance Assessment Profile

### 2.3.4.1. Context Agents Context Extension Properties

The <https://w3id.org/xapi/netc-performance-assessment/extensions/context-agents> Context Extension is an array of objects that can include the following properties.

Property	Description	Value Type	Expected Values / Examples	Applicable Activity
objectType	The type of object.	string	contextAgent	assessment, cmi.interaction
agent	A single Agent Object for which a Statement specific relationship is being defined.	agent object	"agent": { "name": "John Doe", "account": { "homepage": "https://edipi.navy.mil", "name": "0123456789" } }	assessment, cmi.interaction



relevantTypes	A collection of 1 or more relevant types used to characterize the relationship between the Statement and the Agent.	array of relevant type IRIs	One or more of the following:  <a href="https://w3id.org/xapi/netc-performance-assessment/extensions/relevantTypes/observation-subject">https://w3id.org/xapi/netc-performance-assessment/extensions/relevantTypes/observation-subject</a>  <a href="https://w3id.org/xapi/netc-performance-assessment/extensions/relevantTypes/student">https://w3id.org/xapi/netc-performance-assessment/extensions/relevantTypes/student</a>	assessment, cmi.interaction
---------------	---	-----------------------------	---	-----------------------------

Table 7: Context Agents Context Extensions in the Navy Performance Assessment Profile

### 2.3.4.2. Scenario-Based Context Extension Properties

The <https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-context> Context Extension is a JSON object that can include the following properties.

Property	Description	Value Type	Expected Values / Examples	Applicable Activity
assessmentConditions	The limitations, constraints, resources, or special circumstances that pertain to the assessment.	array of strings	One or more text descriptions of the conditions in lowercase. This value is determined by Navy SME or Assessment Designer.  <ul style="list-style-type: none"> <li>- lab activity</li> <li>- physical trainer</li> <li>- navy-supplied schematics</li> <li>- navy-supplied electronics</li> <li>- equipment</li> <li>- Navy computer systems</li> <li>- open-book</li> <li>- closed-book</li> <li>- calculator</li> <li>- web</li> <li>- navy computers</li> <li>- manuals</li> </ul>	assessment, cmi.interaction
assessmentScenario	Additional scenario context featured in the assessment.	array of strings	One or more text descriptions of the scenarios in lowercase. This value is determined by Navy SME or Assessment Designer.  <ul style="list-style-type: none"> <li>- casualty response</li> <li>- maintenance task</li> <li>- client support</li> </ul>	assessment

Table 8: Activity Extensions in the Navy Performance Assessment Profile

## 2.3.5. Result Extensions

Concept	Description	IRI	Value	Expected Values / Examples	Applicable Activity
aggregate-performance - score	The aggregate score of performance competency scores and cognitive demand scores.	<a href="https://w3id.org/xapi/netc-performance-assessment/extensions/aggregate-performance-score">https://w3id.org/xapi/netc-performance-assessment/extensions/aggregate-performance-score</a>	number	A numeric value representing the combined score. For example:  3.5	assessment
cognitive-demand-scores	The scores for each cognitive demand.	<a href="https://w3id.org/xapi/netc-performance-assessment/extensions/cognitive-demand-scores">https://w3id.org/xapi/netc-performance-assessment/extensions/cognitive-demand-scores</a>	object	An associated score for one or more of the following:  <ul style="list-style-type: none"> <li>- declarativeKnowledge</li> <li>- proceduralKnowledge</li> <li>- problemSolving</li> <li>- communication</li> <li>- multiTasking</li> <li>- writtenComprehension</li> <li>- estimating</li> <li>- interactingWithComputers</li> </ul> For example: <pre>{   "proceduralKnowledge": 0 }</pre>	cmi.interaction
performance competency scores	The scores for each performance competency. Each score must be mapped to the identifier for the competency or performance objective.	<a href="https://w3id.org/xapi/netc-performance-assessment/extensions/performance-competency-scores">https://w3id.org/xapi/netc-performance-assessment/extensions/performance-competency-scores</a>	object	“some competency ID”: number  For example:  <pre>{   "https://cass.asid.eduworks.com/api/data/schema.cassproject.org.0.4.Competency/LADRIMP_10a40f58-6ecb-423d-9c8a-48345c27a641": 0.7 }</pre>	cmi.interaction

Table 9: Result Extensions in the Navy Assessment Profile

## 2.4. Statement Requirements & Examples

All xAPI Statements based on the rules in this profile SHALL include the Navy Performance Assessment Profile Activity in the ContextActivities Category Array. See the Statement examples in the sections below for where this is included in Statements.

```
{
  "id": "https://w3id.org/xapi/netc-performance-assessment/v1.0",
  "definition": {
    "type": "http://adlnet.gov/expapi/activities/profile"
  }
}
```

### 2.4.1. Scenario-Based Performance Assessments

#### 2.4.1.1. Initializing a Scenario-Based Performance Assessment

An Initialized Statement is required to be communicated when an attempt on a performance assessment is started. A new Context Registration Universally Unique Identifier (UUID) SHALL be created upon initialization of the performance assessment and included in all statements reported for the attempt on the performance assessment. All of the Navy xAPI requirements for an Initialized Statement for performance assessment activities are provided below.

##### 2.4.1.1.1. Initialized Statement Requirements

- The `actor` property SHALL be set according to the requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `http://adlnet.gov/expapi/verbs/initialized`
- The `verb.display.en` SHALL be set to `initialized`
- The `object.id` SHALL be set to a unique identifier for the course according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `http://adlnet.gov/expapi/activities/assessment`
- The `object.definition.extensions` object SHALL include the `http://id.tincanapi.com/extension/assessment-type` Activity Extension and be set to a predefined string value to indicate the type of assessment
- The `object.definition.extensions` object SHALL include the `https://w3id.org/xapi/netc-performance-assessment/extensions/performance-assessment-type` Activity Extension and be set to a predefined string value to indicate the type of assessment

- The `object.definition.extensions` object SHALL include the `https://w3id.org/xapi/netc/extensions/target-rating` Activity Extension and be set to a predefined string value defined in the Navy Common Reference Profile
- The `object.definition.extensions` object SHALL include the `https://w3id.org/xapi/netc/extensions/target-audience` Activity Extension and be set to an array of predefined values defined in the Navy Common Reference Profile
- The `object.definition.extensions` object SHALL include the `https://w3id.org/xapi/netc/extensions/navy-enlisted-classification` Activity Extension and be set to an array of values defined in the Navy Common Reference Profile
- If known, the `object.definition.extensions` object SHALL include the `https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-activity` Activity Extension and include the following properties and values:
  - `assessmentPurpose` SHALL be set to a string value that describes the purpose of the assessment
  - `assessmentStandards` SHALL be set to a string value that describes the standard criteria used to score the assessment
  - `otjTaskMapping` SHALL be set to an array of values that relate the assessment to one or more task identifiers in a PQS
  - `taskCategory` SHALL be set to an array of values to indicate one or more common task categories
  - `timeConstraint` SHALL be set to a string value (ISO 8601 duration format) representing any time-based restrictions for completing the assessment
- The `context.contextActivities.category` array SHALL include the Navy Core xAPI Profile Activity identified in the Navy Core xAPI Profile
- The `context.contextActivities.category` array SHALL include the Navy Assessment Profile Activity identified in the Navy Assessment Profile
- The `context.contextActivities.category` array SHALL include the Navy Performance Assessment Profile Activity identified previously in this document
- The `context.registration` SHALL be set to a new attempt UUID
- The `context.platform` SHALL be set to the appropriate string value defined in the Navy Core xAPI Profile
- If known, the following Context Extensions requirements apply:
  - The `https://w3id.org/xapi/netc/extensions/school-center` property SHALL be set to the appropriate predefined value from the Navy Common Reference Profile
  - The `https://w3id.org/xapi/netc/extensions/launch-location` property SHALL be set to the appropriate predefined value from the Navy Common Reference Profile

- The `https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-context` object SHALL include the following properties and values:
  - `assessmentConditions` property SHALL be set to an array of values that indicates any special assessment conditions or resources
  - `assessmentScenario` property SHALL be set to an array of values that indicates any additional scenario context about the performance assessment Activity
- The `timestamp` SHALL be set according to the requirements in the Navy Core xAPI Profile

#### 2.4.1.1.2. Initialized Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/initialized",
    "display": {
      "en": "initialized"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/assessments/29a412e9-3e4f-4a15-9c56-8b5a5290345b",
    "definition": {
      "name": {
        "en": "Resistance Measurement Essential Skills Assessment"
      },
      "description": {
        "en": "An interactive performance assessment for measuring resistance."
      }
    }
  }
}
```

```

    "type": "http://adlnet.gov/expapi/activities/assessment",
    "extensions": {
      "http://id.tincanapi.com/extension/assessment-type": "progress test",
      "https://w3id.org/xapi/netc-performance-
assessment/extensions/performance-assessment-type": "scenario-based",
      "https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-
activity": {
        "assessmentPurpose": "Progress assessment on measuring resistance
fundamentals.",
        "assessmentStandards": "Students should complete the assessment within 1
hour and be able to successfully demonstrate performance 3 times using the
multimeter simulation.",
        "otjMapping": ["301.1: Determine the resistance of the components used to
control the circuits"],
        "taskCategory": ["occupational standard"],
        "timeConstraint": "PT1H"
      },
      "https://w3id.org/xapi/netc/extensions/target-rating": ["IC","ET"],
      "https://w3id.org/xapi/netc/extensions/target-audience": ["apprentice"],
      "https://w3id.org/xapi/netc/extensions/navy-enlisted-classification": ["ET-1402",
"ETV-15V9","ET-V011","FC-V020","IC-V001"]
    }
  },
  "context": {
    "contextActivities": {
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/netc-assessment/v1.0",
          "definition": {

```

```

        "type": "http://adlnet.gov/expapi/activities/profile"
    }
},
{
    "id": "https://w3id.org/xapi/netc-performance-assessment/v1.0",
    "definition": {
        "type": "http://adlnet.gov/expapi/activities/profile"
    }
}]
},
"registration": "3b8c0c04-6754-11ed-9022-0242ac120002",
"extensions": {
    "https://w3id.org/xapi/netc-performance-
assessment/extensions/scenario-based-context": {

        "assessmentConditions": ["analog multimeter", "digital multimeter", "lab
activity", "Navy-supplied electronics equipment"],
        "assessmentScenario": ["operations task"]
    }
}
},
"timestamp": "2022-04-02T16:00:21.230Z"
}

```

### 2.4.1.2. Responding to a Scenario-Based Performance Question

A Responded Statement is recommended to be communicated when the learner responds to a question or interaction within a performance assessment. The `interactionTypes` provided in Section 3.5 of the Navy Assessment Profile SHALL be used for performance assessment questions. Additional extensions associated with performance assessment questions are provided in the requirements and examples below.

#### 2.4.1.2.1. Responded Statement Requirements

The following are the requirements for an xAPI Statement when responding to an interaction in a performance assessment:

- The `actor` SHALL be set according to the requirements in the Navy Core xAPI Profile

- The `verb.id` SHALL be set to `http://adlnet.gov/expapi/verbs/responded`
- The `verb.display.en` SHALL be set to `responded`
- The `object.id` SHALL be set to a unique identifier for the interaction according to the Activity ID requirements in the Navy Core xAPI Profile
- If known, the `object.definition.name.en` SHALL be set to a short description of the interaction
- The `object.definition.description.en` SHALL be set to the question text of the interaction
- The `object.definition.type` SHALL be set to `http://adlnet.gov/expapi/activities/cmi.interaction`
- The `object.definition.interactionType` SHALL be set to a predefined string value for the type of interaction.
- The additional values for each `interactionType` property's supported interaction component list(s) SHALL be set according to the rules defined in the xAPI Specification.
  - All ID values SHALL be distinct for Interaction component lists
  - All ID values for Interaction component lists SHALL NOT include any whitespace
- If known, the `object.definition.extensions` object SHALL include the `https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-activity` Activity Extension and include the following properties and values:
  - `assessmentStandards` SHALL be set to a string value that describes the standard criteria used to score the assessment
  - `otjTaskMapping` SHALL be set to an array of values that relate the assessment to one or more task identifiers in a PQS
  - `task` SHALL be set to a string value that describes the task identifier and/or the task being performed
  - `taskCategory` SHALL be set to an array of values to indicate one or more common task categories
  - `taskType` SHALL be set to an array of values to indicate the type of task
  - `timeConstraint` SHALL be set to a string value (ISO 8601 format) representing any time-based restrictions for completing the assessment
- The `context.contextActivities.parent` array SHALL include the assessment Activity
- The `context.contextActivities.category` array SHALL include the Navy Core xAPI Profile Activity identified in the Navy Core xAPI Profile
- The `context.contextActivities.category` array SHALL include the Navy Assessment Profile Activity identified in the Navy Assessment Profile
- The `context.contextActivities.category` array SHALL include the Navy Performance Assessment Profile Activity identified previously in this document



- The `context.registration` SHALL be set to the same attempt UUID established during the last assessment Initialization
- The `context.platform` SHALL be set to the appropriate string value defined in the Navy Core xAPI Profile
- If known, the following Context Extensions requirements apply:
  - The `https://w3id.org/xapi/netc/extensions/school-center` property SHALL be set to the appropriate predefined value from the Navy Common Reference Profile
  - The `https://w3id.org/xapi/netc/extensions/launch-location` property SHALL be set to the appropriate predefined value from the Navy Common Reference Profile
  - The `https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-context` object SHALL include the following properties and values:
    - `assessmentConditions` property SHALL be set to an array of values that indicates any special assessment conditions or resources
    - `assessmentScenario` property SHALL be set to an array of values that indicates any additional scenario context about the performance assessment Activity
    - `cognitiveDemandScores` property SHALL be set to an array of values that indicates any cognitive demands and the associated scores for the performance assessment Activity
    - `performanceCompetencyScores` property SHALL be set to an array of values that indicates any performance competencies and the associated scores for the performance assessment Activity
- If known, set the following Result Object properties using the requirements below:
  - The `result.success` SHALL be set to `true` if the answer to the interaction was correct
  - The `result.success` SHALL be set to `false` if the answer to the interaction was incorrect
  - The `result.completion` SHALL be set to `true` if the interaction was completed
  - The `result.completion` SHALL be set to `false` if the interaction was not completed
  - The `result.score.scaled` SHALL be set to a decimal number between 0 and 1 representing the grade of the answer
  - The `result.score.raw` SHALL be set to a number representing the learner's raw score on the question between the min and max values
  - The `result.score.min` SHALL be set to a number representing the minimum score on the question
  - The `result.score.max` SHALL be set to a number representing the maximum score on the question
- If known, the following Result Extensions requirements apply:

- The `https://w3id.org/xapi/netc-performance-assessment/extensions/cognitive-demand-scores` object SHALL include any of the following properties and values:
  - `declarativeKnowledge` property SHALL be set to a numeric value that indicates the score for that cognitive demand
  - `proceduralKnowledge` property SHALL be set to a numeric value that indicates the score for that cognitive demand
  - `problemSolving` property SHALL be set to a numeric value that indicates the score for that cognitive demand
  - `communication` property SHALL be set to a numeric value that indicates the score for that cognitive demand
  - `multiTasking` property SHALL be set to a numeric value that indicates the score for that cognitive demand
  - `writtenComprehension` property SHALL be set to a numeric value that indicates the score for that cognitive demand
  - `estimating` property SHALL be set to a numeric value that indicates the score for that cognitive demand
  - `interactingWithComputers` property SHALL be set to a numeric value that indicates the score for that cognitive demand
- The `https://w3id.org/xapi/netc-performance-assessment/extensions/performance-competency-scores` object SHALL include the identifier and a numeric score for each competency or performance objective
- The `result.response` SHALL be set to a string value representing the response provided by the learner. See the Assessment Question Interaction Types Table in the Navy Assessment Profile for response format requirements.
- If the question also asks for an explanation for their response, the `result.extensions` object SHALL be created or updated to include the property `https://w3id.org/xapi/netc-assessment/extensions/result/response-explanation` and set the value to the learner's explanation.
- If known, set the following Result Extensions using the requirements below:
  - The `https://w3id.org/xapi/netc-performance-assessment/extensions/cognitive-demand-scores` property SHALL be set to an object with key-value pairs that indicate a numeric score for each of the cognitive demands in the performance assessment interaction
  - The `https://w3id.org/xapi/netc-performance-assessment/extensions/performance-competency-scores` property SHALL be set to an object with key-value pairs where each key is the performance competency IRI and the value is the numeric score associated with that performance competency

- The timestamp SHALL be set to the time of the response using the Timestamp requirements in the Navy Core xAPI Profile

#### 2.4.1.2.2. Responded Statement Example

The Responded Statement example below illustrates how to store responses to performance assessment questions (cmi.interactions) with the interactionType set to performance.

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/responded",
    "display": {
      "en": "responded"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/cmi.interactions/fba4d592-69e4-11ed-aleb-0242ac120002",
    "definition": {
      "name": {
        "en": "Task 001-123: Measure the resistance with a digital multimeter (DMM).",
      },
      "description": {
        "en": "Perform the steps for measuring resistance with DMM in the simulated environment. Your performance will be measured in terms of successfully completing each step."
      },
      "type": "http://adlnet.gov/expapi/activities/cmi.interaction",
      "interactionType": "performance",
    }
  }
}
```

```
"steps": [  
  {  
    "id": "step01",  
    "description": {  
      "en": "Step 1: Select the item to be measured."  
    }  
  },  
  {  
    "id": "step02",  
    "description": {  
      "en": "Step 2: Insert the probes into the required sockets."  
    }  
  },  
  {  
    "id": "step03",  
    "description": {  
      "en": "Step 3: Turn on the multimeter."  
    }  
  },  
  {  
    "id": "step04",  
    "description": {  
      "en": "Step 4: Select the required range."  
    }  
  },  
  {  
    "id": "step05",  
    "description": {  
      "en": "Step 5: Make the measurement."  
    }  
  },  
  {  
    "id": "step06",  
    "description": {
```

```

        "en": "Step 6: Turn off the multimeter."
    }
}
],
"extensions": {
    "https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-
based-activity": {
        "assessmentStandards": "Students should complete the question within 5
minutes using the multimeter simulation.",
        "otjMapping": [
            "301.1: Determine the resistance of the components used to control the
circuits"
        ],
        "task": "Task 001-123: Measure the resistance with a digital multimeter
(DMM).",
        "taskCategory": [
            "occupational standard"
        ],
        "taskType": [
            "training task"
        ],
        "timeConstraint": "PT5M"
    }
}
},
"context": {
    "contextActivities": {
        "category": [
            {
                "id": "https://w3id.org/xapi/netc/v1.0",
                "definition": {
                    "type": "http://adlnet.gov/expapi/activities/profile"
                }
            }
        ],
    },
}

```

```

    {
      "id": "https://w3id.org/xapi/netc-assessment/v1.0",
      "definition": {
        "type": "http://adlnet.gov/expapi/activities/profile"
      }
    },
    {
      "id": "https://w3id.org/xapi/netc-performance-assessment/v1.0",
      "definition": {
        "type": "http://adlnet.gov/expapi/activities/profile"
      }
    }
  ],
  "parent": [
    {
      "id": "https://navy.mil/netc/xapi/activities/assessments/29a412e9-3e4f-4a15-9c56-8b5a5290345b",
      "definition": {
        "name": {
          "en": "Resistance Measurement Essential Skills Assessment"
        },
        "description": {
          "en": "An interactive performance assessment for measuring resistance."
        },
        "type": "http://adlnet.gov/expapi/activities/assessment",
        "extensions": {
          "http://id.tincanapi.com/extension/assessment-type": "progress test",
          "https://w3id.org/xapi/netc-performance-assessment/extensions/performance-assessment-type": "scenario-based"
        }
      }
    }
  ]
},

```

```

"registration": "3b8c0c04-6754-11ed-9022-0242ac120002",
"extensions": {
  "https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-
context": {
    "assessmentConditions": [
      "digital multimeter"
    ]
  }
},
"result": {
  "response": "step01[.]battery[, ]step02[.]probes-
inserted[, ]step03[.]on[, ]step04[.]20V[, ]step05[.]9V[, ]step06[.]on",
  "duration": "PT3M12S",
  "success": true,
  "completion": true,
  "score": {
    "scaled": 0.83,
    "raw": 5,
    "min": 0,
    "max": 6
  },
  "extensions": {
    "https://w3id.org/xapi/netc-performance-assessment/extensions/cognitive-
demand-scores": {
      "proceduralKnowledge": 0
    },
    "https://w3id.org/xapi/netc-performance-assessment/extensions/performance-
competency-scores": {
      "https://cass.asid.eduworks.com/api/data/schema.cassproject.org.0.4.Competency/LADR
IMP_25aa93b6-8508-353b-9ce3-da0d1bab1c73": 0,
      "https://cass.asid.eduworks.com/api/data/schema.cassproject.org.0.4.Competency/LADR
IMP_10a40f58-6ecb-423d-9c8a-48345c27a641": 0.7
    }
  }
}

```

```
},  
  "timestamp": "2022-04-02T16:12:41.520Z"  
}
```

### 2.4.1.3. Terminating a Scenario-Based Performance Assessment

A Terminated Statement is recommended to be communicated when an attempt on a performance assessment has ended. The `context.registration` used for performance assessment initialization and termination SHALL be the same unique ID. The overall performance assessment results (e.g., pass/fail, completion, score, duration) SHALL be conveyed in the Terminated Statement. All of the Navy xAPI requirements for a Terminated Statement in a scenario-based performance assessment are provided below.

#### 2.4.1.3.1. Terminated Statement Requirements

- The `actor` SHALL be set according to the requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `http://adlnet.gov/expapi/verbs/terminated`
- The `verb.display.en` SHALL be set to `terminated`
- The `object.id` SHALL be set to a unique identifier for the course according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `http://adlnet.gov/expapi/activities/assessment`
- The `object.definition.extensions` object SHALL include the `http://id.tincanapi.com/extension/assessment-type` Activity Extension and set to a predefined string value to indicate the type of assessment
- The `object.definition.extensions` object SHALL include the `https://w3id.org/xapi/netc-performance-assessment/extensions/performance-assessment-type` Activity Extension and be set to a predefined string value to indicate the type of assessment
- The `object.definition.extensions` object SHALL include the `https://w3id.org/xapi/netc/extensions/target-rating` Activity Extension and be set to a predefined string value defined in the Navy Common Reference Profile
- The `object.definition.extensions` object SHALL include the `https://w3id.org/xapi/netc/extensions/target-audience` Activity Extension and be set to an array of predefined values defined in the Navy Common Reference Profile
- The `object.definition.extensions` object SHALL include the `https://w3id.org/xapi/netc/extensions/navy-enlisted-classification` Activity Extension and be set to an array of values defined in the Navy Common Reference Profile



- If known, the `object.definition.extensions` object SHALL include the `https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-activity` Activity Extension and include the following properties and values:
  - `assessmentPurpose` SHALL be set to a string value that describes the purpose of the assessment
  - `assessmentStandards` SHALL be set to a string value that describes the standard criteria used to score the assessment
  - `otjTaskMapping` SHALL be set to an array of values that relate the assessment to one or more task identifiers in a PQS
  - `taskCategory` SHALL be set to an array of values to indicate one or more common task categories
  - `timeConstraint` SHALL be set to a string value (ISO 8601 format) representing any time-based restrictions for completing the assessment
- The `context.contextActivities.category` array SHALL include the Navy Core xAPI Profile Activity identified in the Navy xAPI Core Profile
- The `context.contextActivities.category` array SHALL include the Navy Assessment Profile Activity identified previously in the Navy Assessment Profile
- The `context.contextActivities.category` array SHALL include the Navy Performance Assessment Profile Activity identified previously in this document
- The `context.registration` SHALL be set to the same attempt UUID established during the last Initialization
- The `context.platform` SHALL be set to the appropriate string value defined in the Navy Core xAPI Profile
- If known, the following Context Extensions requirements apply:
  - The `https://w3id.org/xapi/netc/extensions/school-center` property SHALL be set to the appropriate predefined value from the Navy Common Reference Profile
  - The `https://w3id.org/xapi/netc/extensions/launch-location` property SHALL be set to the appropriate predefined value from the Navy Common Reference Profile
  - The `https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-context` object SHALL include the following properties and values:
    - `assessmentConditions` property SHALL be set to an array of values that indicates any special assessment conditions or resources
    - `assessmentScenario` property SHALL be set to an array of values that indicates any additional scenario context about the performance assessment Activity
- If known, set the following Result Object properties to the overall result values for the performance assessment Activity using the requirements below:

- The `result.duration` SHALL be set to an ISO 8601 duration format representing the total time spent in the assessment
- The `result.success` SHALL be set to `true` if the assessment was passed
- The `result.success` SHALL be set to `false` if the assessment was failed
- The `result.completion` SHALL be set to `true` if the assessment was completed
- The `result.completion` SHALL be set to `false` if the assessment was not completed
- The `result.score.scaled` SHALL be set to a decimal number between `-1` and `1`
- The `result.score.raw` SHALL be set to a number representing the learner's performance on the assessment between the min and max values
- The `result.score.min` SHALL be set to a number representing the minimum score on the assessment
- The `result.score.max` SHALL be set to a number representing the maximum score on the assessment
- If known, set the following Result Extensions using the requirements below:
  - The `https://w3id.org/xapi/netc-performance-assessment/extensions/aggregate-score` property SHALL be set to a numeric value that represents an aggregate score of the performance competency scores and cognitive demand scores the performance assessment Activity
- The `timestamp` SHALL be set according to the requirements in the Navy Core xAPI Profile

#### 2.4.1.3.2. Terminated Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/terminated",
    "display": {
      "en": "terminated"
    }
  },
}
```

```

"object": {
  "id": "https://navy.mil/netc/xapi/activities/assessments/29a412e9-3e4f-4a15-9c56-8b5a5290345b",
  "definition": {
    "name": {
      "en": "Resistance Measurement Essential Skills Assessment"
    },
    "description": {
      "en": "An interactive performance assessment for measuring resistance."
    },
    "type": "http://adlnet.gov/expapi/activities/assessment",
    "extensions": {
      "http://id.tincanapi.com/extension/assessment-type": "progress test",
      "https://w3id.org/xapi/netc-performance-assessment/extensions/performance-assessment-type": "scenario-based",
      "https://w3id.org/xapi/netc-performance-assessment/extensions/scenario-based-activity": {
        "assessmentPurpose": "Progress assessment on measuring resistance fundamentals.",
        "assessmentStandards": "Students should complete the assessment within 1 hour and be able to successfully demonstrate performance 3 times using the multimeter simulation.",
        "otjMapping": ["301.1: Determine the resistance of the components used to control the circuits"],
        "taskCategory": ["occupational standard"],
        "timeConstraint": "PT1H"
      },
      "https://w3id.org/xapi/netc/extensions/target-rating": ["IC","ET"],
      "https://w3id.org/xapi/netc/extensions/target-audience": ["apprentice"],
      "https://w3id.org/xapi/netc/extensions/navy-enlisted-classification": ["ET-1402","ETV-15V9","ET-V011","FC-V020","IC-V001"]
    }
  },
  "context": {
    "contextActivities": {
      "category": [

```

```

    {
      "id": "https://w3id.org/xapi/netc/v1.0",
      "definition": {
        "type": "http://adlnet.gov/expapi/activities/profile"
      }
    },
    {
      "id": "https://w3id.org/xapi/netc-assessment/v1.0",
      "definition": {
        "type": "http://adlnet.gov/expapi/activities/profile"
      }
    },
    {
      "id": "https://w3id.org/xapi/netc-performance-assessment/v1.0",
      "definition": {
        "type": "http://adlnet.gov/expapi/activities/profile"
      }
    }
  ]
},
"registration": "3b8c0c04-6754-11ed-9022-0242ac120002",
"extensions": {
  "https://w3id.org/xapi/netc-performance-
assessment/extensions/scenario-based-context": {
    "assessmentConditions": ["analog multimeter", "digital multimeter", "lab
activity", "Navy - supplied electronics equipment"],
    "assessmentScenario": ["operations task"]
  }
},
"result": {
  "extensions": {
    "https://w3id.org/xapi/netc-performance-assessment/extensions/aggregate-
performance-score": 3.5
  }
}

```

```
    },
    "duration": "PT44M12S",
    "success": true,
    "completion": true,
    "score": {
      "scaled": 0.80,
      "raw": 80,
      "min": 0,
      "max": 100
    }
  },
  "timestamp": "2022-04-02T16:00:21.230Z"
}
```

## 2.4.2. Other Performance Assessment Statement Examples

### 2.4.2.1. Instructor Performance Assessment

#### 2.4.2.1.1. Responded Statement

```
{
  "actor": {
    "name": "Phil Instructor",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "09877654321"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/responded",
    "display": {
```

```

    "en": "responded"
  }
},
"object": {
  "id": "https://navy.mil/netc/xapi/activities/cmi.interactions/88865058-bbdf-4c04-926a-e8f494400c50",
  "definition": {
    "name": {
      "en": "Task 001-123: Measure the resistance with a digital multimeter (DMM).",
    },
    "description": {
      "en": "Rate the student's ability in performing this task."
    },
    "type": "http://adlnet.gov/expapi/activities/cmi.interaction",
    "interactionType": "likert",
    "scale": [
      {
        "id": "L2Inst_0",
        "description": {
          "en": "Very limited (Can do no part of the task). Need to be trained to do the task."
        }
      },
      {
        "id": "L2Inst_1",
        "description": {
          "en": "Limited (Can do some or simple parts of the task). Needs further training and close supervision when doing the task."
        }
      },
      {
        "id": "L2Inst_2",
        "description": {
          "en": "Somewhat proficient (Needs help on the hardest parts of the task). Needs general supervision."
        }
      }
    ]
  }
}

```

```

        }
    },
    {
        "id": "L2Inst_3",
        "description": {
            "en": "Competent (Can do the complete task but some parts
are difficult). Needs only a spot check on completed work."
        }
    },
    {
        "id": "L2Inst_4",
        "description": {
            "en": "Highly competent (Can do the complete task quickly
and accurately). Can teach others to do the task."
        }
    }
]
}
},
"context": {
"contextActivities": {
"parent": [
{
"id": "https://navy.mil/netc/xapi/activities/surveys/980c5133-c412-458e-
a50e-05f469772f97",
"definition": {
"name": {
"en": "Multimeter Lab Exercise Performance Survey"
},
"description": {
"en": "A Level 2 instructor survey for evaluating a Sailor's performance
on a hands-on classroom lab exercise on using the multimeter."
},
"type": "http://adlnet.gov/expapi/activities/assessment",
"extensions": {

```

```

        "http://id.tincanapi.com/extension/assessment-type": "survey",
        "https://w3id.org/xapi/netc-performance-assessment/extensions/performance-
assessment-type": "instructor"
    }
}
],
"category": [
    {
        "id": "https://w3id.org/xapi/netc/v1.0",
        "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
        }
    },
    {
        "id": "https://w3id.org/xapi/netc-assessment/v1.0",
        "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
        }
    },
    {
        "id": "https://w3id.org/xapi/netc-performance-assessment/v1.0",
        "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
        }
    }
]
},
"registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
"platform": "Moodle 3.8.3",
"extensions": {
    "https://w3id.org/xapi/netc-performance-assessment/extensions/context-
agents": [
        {

```



```
    "objectType": "contextAgent",
    "agent": {
      "name": "John Doe",
      "account": {
        "homepage": "https://edipi.navy.mil",
        "name": "0123456789"
      }
    },
    "relevantTypes": [
      "https://w3id.org/xapi/netc-performance-
      assessment/extensions/relevantTypes/observation-subject"
    ]
  }
]
}
},
"result": {
  "response": "L2Inst_1",
  "duration": "PT32S",
  "completion": true
},
"timestamp": "2021-04-02T16:12:41.520Z"
}
```

#### 2.4.2.1.2.Terminated Statement

```
{
  "actor": {
    "name": "Phil Instructor",
    "account": {
      "homePage": "https://edipi.navy.mil",
```

```

    "name": "09877654321"
  }
},
"verb": {
  "id": "http://adlnet.gov/expapi/verbs/terminated",
  "display": {
    "en": "terminated"
  }
},
"object": {
  "id": "https://navy.mil/netc/xapi/activities/surveys/980c5133-c412-458e-a50e-05f469772f97",
  "definition": {
    "name": {
      "en": "Multimeter Lab Exercise Performance Survey"
    },
    "description": {
      "en": "A Level 2 instructor survey for evaluating a Sailor's performance on a hands-on classroom lab exercise on using the multimeter."
    },
    "type": "http://adlnet.gov/expapi/activities/assessment",
    "extensions": {
      "http://id.tincanapi.com/extension/assessment-type": "survey",
      "https://w3id.org/xapi/netc-performance-assessment/extensions/performance-assessment-type": "instructor"
    }
  }
},
"context": {
  "contextActivities": {
    "category": [
      {
        "id": "https://w3id.org/xapi/netc/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
    ]
  }
}

```

```

    }
  },
  {
    "id": "https://w3id.org/xapi/netc-assessment/v1.0",
    "definition": {
      "type": "http://adlnet.gov/expapi/activities/profile"
    }
  },
  {
    "id": "https://w3id.org/xapi/netc-performance-assessment/v1.0",
    "definition": {
      "type": "http://adlnet.gov/expapi/activities/profile"
    }
  }
]
},
"registration": "ad8ca9da-51b1-48eb-ae58-a68d4d3ae886",
"platform": "Moodle 3.8.3",
"extensions": {
  "https://w3id.org/xapi/netc-performance-assessment/extensions/context-
agents": [
    {
      "objectType": "contextAgent",
      "agent": {
        "name": "John Doe",
        "account": {
          "homepage": "https://edipi.navy.mil",
          "name": "0123456789"
        }
      }
    },
  ],
  "relevantTypes": [
    "https://w3id.org/xapi/netc-performance-
assessment/extensions/relavantTypes/observation-subject"
  ]
}

```

```

    ]
  }
},
"result": {
  "duration": "PT10M",
  "completion": true
},
"timestamp": "2021-04-02T17:00:00.130Z"
}

```

## 2.4.2.2. Self-Reported Performance Assessment Survey

### 2.4.2.2.1. Responded Statement

```

{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/responded",
    "display": {
      "en": "responded"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/cmi.interactions/0a865058-bbdf-4c04-926a-e8f494400c50",
    "definition": {
      "name": {

```

```

    "en": "Task 001-123: Measure the resistance with a digital multimeter
(DMM).",
  },
  "description": {
    "en": "Rate your proficiency in performing this task."
  },
  "type": "http://adlnet.gov/expapi/activities/cmi.interaction",
  "interactionType": "likert",
  "scale": [
    {
      "id": "L3Grad_0",
      "description": {
        "en": "Very limited (Can do no part of the task). Need to
be trained to do the task."
      }
    },
    {
      "id": "L3Grad_1",
      "description": {
        "en": "Limited (Can do some or simple parts of the task).
Needs further training and close supervision when doing the task."
      }
    },
    {
      "id": "L3Grad_2",
      "description": {
        "en": "Somewhat proficient (Needs help on the hardest parts
of the task). Needs general supervision."
      }
    },
    {
      "id": "L3Grad_3",
      "description": {
        "en": "Competent (Can do the complete task but some parts
are difficult). Needs only a spot check on completed work."
      }
    }
  ]
}

```

```

    },
    {
      "id": "L3Grad_4",
      "description": {
        "en": "Highly competent (Can do the complete task quickly
and accurately). Can teach others to do the task."
      }
    }
  ]
}
},
"context": {
  "contextActivities": {
    "parent": [
      {
        "id": "https://navy.mil/netc/xapi/activities/surveys/b0cd727d-7d86-401f-
a110-7e0d8019c5db",
        "definition": {
          "name": {
            "en": "Resistance Measurement Proficiency Survey"
          },
          "description": {
            "en": "A Level 3 survey on resistance measurement proficiency"
          },
          "type": "http://adlnet.gov/expapi/activities/assessment",
          "extensions": {
            "http://id.tincanapi.com/extension/assessment-type": "survey",
            "https://w3id.org/xapi/netc-performance-assessment/extensions/performance-
assessment-type": "self-reported"
          }
        }
      }
    ]
  },
  "category": [
    {

```

```

    "id": "https://w3id.org/xapi/netc/v1.0",
    "definition": {
      "type": "http://adlnet.gov/expapi/activities/profile"
    }
  },
  {
    "id": "https://w3id.org/xapi/netc-assessment/v1.0",
    "definition": {
      "type": "http://adlnet.gov/expapi/activities/profile"
    }
  },
  {
    "id": "https://w3id.org/xapi/netc-performance-assessment/v1.0",
    "definition": {
      "type": "http://adlnet.gov/expapi/activities/profile"
    }
  }
]
},
"registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
"platform": "Moodle 3.8.3"
},
"result": {
  "response": "L3Grad_4",
  "duration": "PT40S",
  "completion": true
},
"timestamp": "2022-04-02T16:12:41.520Z"
}

```

#### 2.4.2.2.2.Terminated Statement

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/terminated",
    "display": {
      "en": "terminated"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/surveys/b0cd727d-7d86-401f-a110-7e0d8019c5db",
    "definition": {
      "name": {
        "en": "Resistance Measurement Proficiency Survey"
      },
      "description": {
        "en": "A Level 3 survey on resistance measurement proficiency."
      },
      "type": "http://adlnet.gov/expapi/activities/assessment",
      "extensions": {
        "http://id.tincanapi.com/extension/assessment-type": "survey",
        "https://w3id.org/xapi/netc-performance-assessment/extensions/performance-assessment-type": "self-reported"
      }
    }
  },
  "context": {
    "contextActivities": {
```



```

"category": [
  {
    "id": "https://w3id.org/xapi/netc/v1.0",
    "definition": {
      "type": "http://adlnet.gov/expapi/activities/profile"
    }
  },
  {
    "id": "https://w3id.org/xapi/netc-assessment/v1.0",
    "definition": {
      "type": "http://adlnet.gov/expapi/activities/profile"
    }
  },
  {
    "id": "https://w3id.org/xapi/netc-performance-assessment/v1.0",
    "definition": {
      "type": "http://adlnet.gov/expapi/activities/profile"
    }
  }
],
"registration": "ad8ca9da-51b1-48eb-ae58-a68d4d3ae886",
"platform": "Moodle 3.8.3",
"extensions": {
  "https://w3id.org/xapi/netc-performance-assessment/extensions/context-
agents": [
    {
      "objectType": "contextAgent",
      "agent": {
        "name": "John Doe",
        "account": {
          "homepage": "https://edipi.navy.mil",
          "name": "0123456789"
        }
      }
    }
  ]
}

```

```

    },
    "relevantTypes": [
      "https://w3id.org/xapi/netc-performance-
assessment/extensions/relevantTypes/observation-subject"
    ]
  }
]
}
},
"result": {
  "duration": "PT12M",
  "completion": true
},
"timestamp": "2021-04-02T17:00:00.130Z"
}

```

### 2.4.2.3. Supervisor Performance Assessment Survey

#### 2.4.2.3.1. Responded Statement

```

{
  "actor": {
    "name": "Jane Supervisor",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "1234567890"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/responded",
    "display": {
      "en": "responded"
    }
  }
}

```

```

},
"object": {
  "id": "https://navy.mil/netc/xapi/activities/cmi.interactions/2f2d849e-ba9f-4f9b-a143-48c2316af07a",
  "definition": {
    "name": {
      "en": "Task 001-123: Measure the resistance with a digital multimeter (DMM).",
    },
    "description": {
      "en": "Rate your subordinate's proficiency in performing this task."
    },
    "type": "http://adlnet.gov/expapi/activities/cmi.interaction",
    "interactionType": "likert",
    "scale": [
      {
        "id": "L3Sup_0",
        "description": {
          "en": "Very limited (Can do no part of the task). Need to be trained to do the task."
        }
      },
      {
        "id": "L3Sup_1",
        "description": {
          "en": "Limited (Can do some or simple parts of the task). Needs further training and close supervision when doing the task."
        }
      },
      {
        "id": "L3Sup_2",
        "description": {
          "en": "Somewhat proficient (Needs help on the hardest parts of the task). Needs general supervision."
        }
      }
    ]
  }
},

```

```

    {
      "id": "L3Sup_3",
      "description": {
        "en": "Competent (Can do the complete task but some parts are
difficult). Needs only a spot check on completed work."
      }
    },
    {
      "id": "L3Sup_4",
      "description": {
        "en": "Highly competent (Can do the complete task quickly and
accurately). Can teach others to do the task."
      }
    }
  ]
},
"context": {
  "contextActivities": {
    "parent": [
      {
        "id": "https://navy.mil/netc/xapi/activities/surveys/c5691dae-450c-441b-
8d10-ef43497583ec",
        "definition": {
          "name": {
            "en": "Resistance Measurement Proficiency Supervisor Survey"
          },
          "description": {
            "en": "A Level 3 supervisor survey on a Sailor's resistance
measurement task proficiency."
          },
          "type": "http://adlnet.gov/expapi/activities/assessment",
          "extensions": {
            "http://id.tincanapi.com/extension/assessment-type": "survey",
            "https://w3id.org/xapi/netc-performance-
assessment/extensions/performance-assessment-type": "supervisor"
          }
        }
      }
    ]
  }
}

```

```

        }
    }
}
],
"category": [
    {
        "id": "https://w3id.org/xapi/netc/v1.0",
        "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
        }
    },
    {
        "id": "https://w3id.org/xapi/netc-assessment/v1.0",
        "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
        }
    },
    {
        "id": "https://w3id.org/xapi/netc-performance-assessment/v1.0",
        "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
        }
    }
]
},
"registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
"platform": "Moodle 3.8.3",
"extensions": {
    "https://w3id.org/xapi/netc-performance-assessment/extensions/context-
agents": [
        {
            "objectType": "contextAgent",
            "agent": {
                "name": "John Doe",

```

```

    "account": {
      "homepage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "relevantTypes": [
    "https://w3id.org/xapi/netc-performance-
assessment/extensions/relevantTypes/observation-subject"
  ]
}
]
}
},
"result": {
  "response": "L3Sup_3",
  "duration": "PT32S",
  "completion": true
},
"timestamp": "2022-04-02T16:12:41.520Z"
}

```

#### 2.4.2.3.2.Terminated Statement

```

{
  "actor": {
    "name": "Jane Supervisor",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "1234567890"
    }
  },
}

```

```

"verb": {
  "id": "http://adlnet.gov/expapi/verbs/terminated",
  "display": {
    "en": "terminated"
  }
},
"object": {
  "id": "https://navy.mil/netc/xapi/activities/surveys/c5691dae-450c-441b-8d10-ef43497583ec",
  "definition": {
    "name": {
      "en": "Resistance Measurement Proficiency Supervisor Survey"
    },
    "description": {
      "en": "A Level 3 supervisor survey on a sailor's resistance measurement task proficiency."
    },
    "type": "http://adlnet.gov/expapi/activities/assessment",
    "extensions": {
      "http://id.tincanapi.com/extension/assessment-type": "survey",
      "https://w3id.org/xapi/netc-performance-assessment/extensions/performance-assessment-type": "supervisor"
    }
  }
},
"context": {
  "contextActivities": {
    "category": [
      {
        "id": "https://w3id.org/xapi/netc/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
    ]
  }
}

```

```

    "id": "https://w3id.org/xapi/netc-assessment/v1.0",
    "definition": {
      "type": "http://adlnet.gov/expapi/activities/profile"
    }
  },
  {
    "id": "https://w3id.org/xapi/netc-performance-assessment/v1.0",
    "definition": {
      "type": "http://adlnet.gov/expapi/activities/profile"
    }
  }
]
},
"registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
"platform": "Moodle 3.8.3",
"extensions": {
  "https://w3id.org/xapi/netc-performance-assessment/extensions/context-
agents": [
    {
      "objectType": "contextAgent",
      "agent": {
        "name": "John Doe",
        "account": {
          "homepage": "https://edipi.navy.mil",
          "name": "0123456789"
        }
      }
    },
    {
      "relevantTypes": [
        "https://w3id.org/xapi/netc-performance-
assessment/extensions/relavantTypes/observation-subject"
      ]
    }
  ]
}
},
},

```



```
"result": {  
  "duration": "PT14M",  
  "completion": true  
},  
"timestamp": "2021-04-02T17:00:00.130Z"  
}
```