Navy Task Trainer Simulation Profile

Requirements and Guidelines for Implementing xAPI in Task Trainer (TT) Simulation Content

Document Version: 1.3

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Document Revision History

Version	Release Date	Notes
0.1	10/27/2020	Working draft document for community review.
0.2	11/12/2020	Updates resulting from peer technical review.
1.0	2/12/2021	Final review and updates for official first release.
1.1	7/20/2021	Global update from "NETC" to "Navy."
1.2	7/05/2022	Global update from "Navy Common Reference Profile and xAPI Implementation Guidelines" to "Navy Core xAPI Profile". Clarification of requirements and supporting text.
1.3	11/15/2022	Made several minor text updates to align with other Navy profile updates.

Table 1: Navy TT Simulation 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 Task Trainer (TT) Simulation content. 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 xAPI Statement Requirements & Examples sections throughout this document provide content developers with the mandatory Learning Record Provider (LRP) obligations for implementing xAPI in TT Simulations. 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.
- 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

There are two levels of obligation regarding xAPI conformance requirements identified by the terms herein. Since 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" are avoided since these types of contract documents normally contain only mandatory instructions. Not following these recommendations could risk interoperability and/or lead to xAPI content deliverables not being accepted by the Government.

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

1.2. When to Use this Profile

The purpose of this Profile document is to provide content developers with best practices, technical guidance, and requirements for implementing xAPI in Task Trainer (TT) Simulation content. This document is intended to serve as the Navy's official technical requirements for any TT Simulation content contractually required to support xAPI. The scope of this document is limited to xAPI content, and does <u>not</u> address other learning technology standards.

1.2.1. TT Simulation Use Case

A Task Trainer (TT) Simulation provides the ability to train critical and key task steps in documented, well-defined procedures. This category of simulation allows students to focus on their technical skill development through the application of knowledge in a manner that mimics the performance of their job in the Fleet. It gives students the opportunity for repeated practice to achieve mastery of those skill sets.

One class of task trainers is the virtual maintenance task trainer (VMT). Navy VMT is a simulation utilizing virtual versions of hardware and software as a replacement for the tactical equipment to teach technicians how to maintain, troubleshoot and repair their equipment in accordance with documented procedures. VMT simulations include, but are not limited to, web-based and desktop virtual simulation (VSIM) for the purpose of training maintenance in accordance with documented procedures performed in the Fleet for preventive, condition-based, and/or predictive maintenance. Students may use VMT Simulation content by themselves (i.e., Self-Directed Interactive Training), or with the guidance of a remotely present instructor (i.e., Instructor-Facilitated Interactive Training).

Profile Design Considerations - The TT Simulation Profile is an extension of the xAPI Simulation Base Profile. It takes into consideration the related best practices for extending that Profile to support TT Simulation content's unique characteristics and data tracking requirements. TT Simulation content can cover a wide range of systems and equipment, and be delivered through a variety of technology or media across multiple Navy communities. As a result, it is difficult (and <u>not</u> recommended) to create an xAPI profile that is designed for the specific objects of a given task trainer. Doing so would be unsustainable, costly, and inevitably lead to inconsistency in interoperable TT Simulation xAPI Statement data within and across LRS systems. Therefore, the TT Simulation Profile describes xAPI data tracking requirements from a perspective of common characteristics shared across all classes of the TT Simulation method category. For example, all TT Simulation learning experiences are designed and delivered in accordance with precisely documented, linear and/or branching procedures during which students' deviations are monitored, recorded, and/or corrected.

Additional classes of TT Simulations include the virtual operator trainer (VOT), and part task trainer (PTT). The use case for this xAPI profile initially focused on the VMT class. However, it is expected that its design can also support the VOT and PTT classes, and will be updated accordingly to support any additional unique characteristics. The designers of this profile have accounted for this multi-use and reuse potential, which is why it has been accordingly identified as the "Task Trainer (TT) Simulation xAPI Profile."

1.3. How to Use this Profile

This document SHALL be used in addition to the xAPI Specification[1], and the following Navy-specific profile requirements and guidelines for modeling and storing xAPI data:

- Navy Core xAPI Profile
- Navy Common Reference Profile
- Navy E-learning Profile
- Navy Assessment Profile
- Navy Performance Assessment Profile
- Navy   Simulation   Base   Profile

The TT Simulation Profile's requirements and guidelines are designed to promote consistent authoring practices for the Navy's wide variety of TT Simulation content developers, which is critical to achieving consistent results in data reporting, analytics, and interoperability.

This TT Simulation Profile document assumes an understanding of the xAPI Specification and the underlying concepts explained therein. This profile's requirements are principally organized into the following sections:

- Overview
- Concepts
- xAPI Statement Requirements & Examples

2. TT Simulation Profile Requirements

2.1. Overview

The TT Simulation Profile will leverage the xAPI profiles listed in Section 1.3. Existing Verbs, Activity Types and Context Extensions are reused to avoid redundancy and facilitate consistent implementation of xAPI by different TT Simulation content providers.

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[1] The xAPI Specification, https://github.com/adlnet/xAPI-Spec

Figure 1 provides an operational view of how the major Activity Types are related, and the Verbs that may be used with each. Note that the TT Simulation Profile does <u>not</u> define a new or distinct "TT-Simulation" Activity Type. It uses the Simulation Activity Type defined in the Simulation Base Profile.

Figure 1: Operational view of common TT Simulation activity types.

Also note that this figure does <u>not</u> show all possible TT Simulation Activity Types (e.g., tool interactions during a step, and interactions with various types of feedback objects). However, xAPI Statement models and examples are provided for all such cases within this document.

2.1.1. Terminology

The terminology in this TT Simulation Profile document assumes an understanding of the xAPI Specification and TT Simulation content.

2.2. TT Simulation Profile Concepts

The following tables provide a reference of available Concepts defined for use in the TT Simulation Profile. If additional requirements for the TT Simulation use case are identified (e.g., to support additional activity patterns in operator task training), and new Concepts are needed, then a revised version of this profile will be issued.

2.2.1. Verbs

Table 2 lists verbs that are used in the TT Simulation Profile and their applicable Activity Type(s).

Concept	Definition	IRI	Applicable Activity Type(s)
completed	Finished or concluded the Activity normally.	http://adlnet.gov/expapi/verbs/completed	task-trainer-scenario, task-trainer-task, task-trainer-step
exited	Intentionally departed or left an object.	http://adlnet.gov/expapi/verbs/exited	task-trainer-scenario, task-trainer-task
failed	Unsuccessfully completed an Activity to a level of predetermined satisfaction.	http://adlnet.gov/expapi/verbs/failed	task-trainer-scenario
initialized	Started an attempt on an Activity.	http://adlnet.gov/expapi/verbs/initialized	simulation, task-trainer-scenario, task-trainer-task
passed	Indicates the Actor successfully passed an Activity to a level of predetermined satisfaction.	http://adlnet.gov/expapi/verbs/passed	task-trainer-scenario
received	Presented with or given an object during a procedure.	https://w3id.org/xapi/task-trainer-simulation/verbs/received	feedback-corrective, feedback-error, feedback-performance, feedback-safety
responded	Reacted or replied to an Object.	http://adlnet.gov/expapi/verbs/responded	assessment, feedback-corrective, feedback-error, feedback-safety
resumed	Continued or reopened a suspended attempt on an Activity.	http://adlnet.gov/expapi/verbs/resumed	task-trainer-scenario, task-trainer-task

restarted	Started an exited attempt on an Activity	https://w3id.org/xapi/task-trainer-simulation/verbs/restarted	task-trainer-scenario, task-trainer-task
skipped	Passed over or omitted an expected interaction in a sequence of defined interactions.	http://id.tincanapi.com/verb/skipped	task-trainer-step
suspended	Suspended an attempt on an Activity with the intent to return at a later time.	http://adlnet.gov/expapi/verbs/suspended	task-trainer-scenario, task-trainer-task
terminated	Ended an attempt on an activity.	http://adlnet.gov/expapi/verbs/terminated	simulation, task-trainer-scenario, task-trainer-task
used	Referenced or applied an object during a procedure.	https://w3id.org/xapi/task-trainer-simulation/verbs/used	task-trainer-tool
viewed	Arrived at, entered or visited an object.	http://id.tincanapi.com/verb/viewed	task-trainer-document

Table 2: Verbs Used in the TT Simulation Profile

2.2.2. Activity Types

Table 3 lists Activity Types that are used in the TT Simulation Profile, and their relationships within the TT Simulation context.

Concept	Definition	IRI	ContextActivity Relationships

feedback-corrective	A multimedia intervention that improves or corrects training performance.	https://w3id.org/xapi/task-trainer-simulation/activity-types/feedback-corrective	task-trainer-step (parent), task-trainer-task (grouping), task-trainer-scenario (grouping), simulation (grouping)
feedback-error	A notice that informs of an illogical condition that prohibits continuation of task.	https://w3id.org/xapi/task-trainer-simulation/activity-types/feedback-error	task-trainer-step (parent), task-trainer-task (grouping), task-trainer-scenario (grouping), simulation (grouping)
feedback-performance	A notice that informs of the degree of training performance in relation to a standard.	https://w3id.org/xapi/task-trainer-simulation/activity-types/feedback-performance	task-trainer-scenario (parent), simulation (grouping)
feedback-safety	A multimedia intervention that informs of or corrects safety violations that occur during training performance.	https://w3id.org/xapi/task-trainer-simulation/activity-types/feedback-safety	task-trainer-step (parent), task-trainer-task (grouping), task-trainer-scenario (grouping), simulation (grouping)
simulation	An attempted task or series of tasks in an artificial context that mimics reality. Tasks would likely take on the form of interactions, or the simulation could be self-contained content.	http://adlnet.gov/expapi/activities/simulation	N/A
task-trainer-document	A digital resource for storing the task steps for a work package or procedure in a specific format on a computer.	https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-document	task-trainer-task (grouping), task-trainer-scenario (grouping), simulation (grouping)
task-trainer-scenario	A single or set of simulated preconditions or states within simulated hardware or software systems that requires	https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-scenario	simulation (grouping)

Concept	Description	IRI	Expected Values / Examples
	the completion of one or more work packages or procedures to complete a simulated job task.		
task-trainer-step	The representation of a step within a task that is performed to complete the task on simulated hardware equipment or software applications.	https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-step	task-trainer-task (parent), task-trainer-scenario (grouping), simulation (grouping)
task-trainer-task	The representation of a set of prescribed steps within a work package or procedure that is performed to complete a task on simulated hardware equipment or software applications.	https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task	task-trainer-scenario (grouping), simulation (grouping)
task-trainer-tool	A simulated tool or equipment used to complete a maintenance step.	https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-tool	task-trainer-step (parent), task-trainer-task (grouping), task-trainer-scenario (grouping), simulation (grouping)

Table 3: *Activity Types Used in the TT Simulation Profile.*

2.2.3. Activity Extensions

The following table provides a list of the Activity Extensions used in the TT Simulation Profile.

Concept	Description	IRI	Value Type	Expected Values / Examples

course-id-number	A string value of the identifier of the course.	https://w3id.org/xapi/netc/extensions/course-id-number	The school's or learning center's official course identification number[2]. Use uppercase format. Do NOT include revision or version information. (Example. A-150-9021)	course-id-number
element-nomenclature	A string value that provides the system or equipment type designation represented in the content.	https://w3id.org/xapi/simulation/extensions/element-nomenclature	Use uppercase format of value from the Type Designation column in the program engineering equipment list. Confirm with PMO[3]. (Ex: AS-4108/SPY)	task-trainer-task task-trainer-step
element-ref-des	A string value of the system or equipment reference designator represented in the content.	https://w3id.org/xapi/simulation/extensions/element-ref-des	Use uppercase format of value from the Ref Des column in the program engineering equipment list. Confirm with PMO. (Ex: T01A1)	task-trainer-task task-trainer-step

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[2] Course identification numbers (CINs) should be confirmed with a Curriculum Maintenance Manager or Learning Standards Officer for accuracy.

[3] This may be a contractor's internal company Program Management Office or a Government PMO.

hull-applicability	A string value of the hull number(s) to which the content is applicable.	https://w3id.org/xapi/netc/extensions/hull-applicability	An official Navy ship, submarine, or airframe identifier. Shall be provided in UPPERCASE, without spaces, hyphens, or any other special characters. (Examples: DDG81, F22)	hull-applicability
hull-configuration	A string value of the hardware/software configuration that is represented in the content.	https://w3id.org/xapi/netc/extensions/hull-configuration	An official Navy ship configuration nomenclature.[4] (Example: 9.C2.3.0.2D).	hull-configuration
navy-enlisted-classification	A string value used to identify the Navy Enlisted Code that the content supports.	https://w3id.org/xapi/netc/extensions/navy-enlisted-classification	array	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[5]. Use uppercase format. (Example: V03A)
s1000d-dmc	A string value that provides the data module code of the procedural data module that is being used to	https://w3id.org/xapi/simulation/extensions/s1000d-dmc	Use uppercase format of value from the DMC column in the program technical documentatio	task-trainer-task

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[4] Ship configuration nomenclature can be confirmed by an internal company Program Management Office or Government PMO.

[5] Navy Personnel Command NEC List, https://www.public.navy.mil/bupers-npc/enlisted/placement/Pages/NECInformation.aspx

	support the content.		n data module requirements list (DMRL). (Ex: MK16-A-CSA-00-0027-00A-283A-A)	
s1000d-sns	A string value that provides the Standard Numbering System code for the system or equipment that is being used to support the content.	https://w3id.org/xapi/simulation/extensions/s1000d-sns	Use uppercase format of value contained in s1000d-dmc value. Confirm with PMO[6]. May also verify against NAVSEA S1000D DMRL Planner > MICC-SNS tab > Combined column. (Ex. CSA-00)	task-trainer-task
tech-doc-id	A string value of the technical document or PMS series and version/revision used to support the content.	https://w3id.org/xapi/netc/extensions/tech-doc-id	Use uppercase format of value in the Tech Doc ID column in the program's bibliography of technical documentation. Do NOT include revision or version information. (Example: ST890-A8-AEG-020)	tech-doc-id

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[6] This may be an internal company Program Management Office or Government PMO.

tech-doc-procedure-id	A string value of the technical document or MRC and version/revision used to support the content.	https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id	Use uppercase format of value in the Procedure ID column in the program's bibliography of technical documentation. (Example: WP009)	tech-doc-procedure-id
tech-doc-procedure-title	A string value of the approved title of the documented procedure used to support the content.	https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title	Use uppercase format of value in the Procedure Title column in the program's bibliography of technical documentation. (Example: Data Channel Fault Localization)	tech-doc-procedure-title

Table 3: Activity Extensions in the Navy Common Reference Profile

2.2.3. Context

2.2.3.1. Context Activities Category

The Context Activities Category array is a location in an xAPI Statement reserved for objects used to categorize, or tag, the Statement. This location is used in profiles to indicate that a Statement follows a specific profile or a collection of profiles. This TT Simulation Profile defines specific Statement requirements for simulation content and also references requirements in the Navy Core xAPI Profile and the Navy Simulation Base Profile. This is represented in xAPI Statements by adding the following three activities to the Context Activities Category array of the Statements.

```
{
```

```
   "id": "https://w3id.org/xapi/netc/v1.0",

   "definition": {

      "type":"http://adlnet.gov/expapi/activities/profile"

   }

}
```

Navy Core xAPI Profile activity

```
{

   "id": "https://w3id.org/xapi/simulation/v1.0",

   "definition": {

      "type":"http://adlnet.gov/expapi/activities/profile"

   }

}
```

Navy Simulation Base Profile activity

```
{

   "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",

   "definition": {

      "type": "http://adlnet.gov/expapi/activities/profile"

   }

}
```

Navy TT Simulation Profile activity

2.2.3.2 Context Extensions

Table 4 lists Context Extensions that are used and their applicable Activity Type(s).

Concept	Definition	IRI	Values	Applicable Activity Type(s)
launch-location	A string value describing whether the content was launched while ashore or afloat.	https://w3id.org/xapi/netc/extensions/launch-location	See Navy implementation guidelines.	simulation
school-center	A string value describing the Navy schoolhouse or learning center that owns the content.	https://w3id.org/xapi/netc/extensions/school-center	See Navy implementation guidelines.	simulation
simulation-mode[7]	A string value used to determine the simulation	https://w3id.org/xapi/simulation/extensions/simulation-mode	freeplay[8], graded[9], guided[10], tutorial[11]	task-trainer-scenario

---

[7]This version of the TT Simulation Profile accounts for the capture of activity in the Guided Mode and Graded Mode. These are currently the most prevalent modes provided and used in this class of simulation. Future versions will include support for the additional modes.

[8]freeplay - This mode allows the student to perform task steps within a loaded scenario in any order desired, with scoring disabled.

[9]graded - This is an assessment mode. It requires the student to perform all required operation or maintenance task steps within a scenario, as listed in the technical documentation. Automatic scoring is enabled in this mode.

[10]guided - This is an instructor-facilitated interactive training mode. It is a guided practice mode that requires the student to perform all required operation or maintenance steps within a task, as listed in the technical documentation.

[11]tutorial - This is a self-directed interactive training mode. It is an automated tutorial mode that steps the student through all required steps within an operation or maintenance task, as listed in the technical manual. This mode only requires the student to advance (e.g., clicking a "next" button or some other prompt on the screen) through the demonstration of steps in a task.

mode in which the content is experienced.			

Table 4: Context Extensions Used in the TT Simulation content .

2.3. xAPI Statement Requirements & Examples

2.3.1. Overview

This section provides detailed xAPI Statement requirements for the most common types of events in TT Simulation content. Example xAPI Statements are also provided for illustrative purposes after the requirements. In some instances, the Navy Core xAPI Profile or the LRS Administrator may need to be consulted to determine the appropriate values.

2.3.2. TT Simulations

2.3.2.1. Initializing a TT Simulation

An Initialized Statement is required to be communicated when a TT Simulation is started. A new Context Registration Universally Unique Identifier (UUID) SHALL be included in the Initialized Statement (and associated Terminated Statement for the simulation activity). There is no requirement that other granular activities use this same UUID within an attempt on the simulation. However, developers should use the same Context Registration UUID if the nested granular activities require only a single attempt within the parent simulation attempt. Conversely, developers SHALL NOT use the same Context Registration UUID for nested granular activities that have multiple attempts within the parent simulation attempt. An attempt includes all data generated during a learning activity after the Initialized Statement but before the Terminated Statement.

All xAPI requirements for an Initialized Statement for the simulation Activity Type are provided below.

2.3.2.1.1. Initialized TT Simulation Statement Requirements

The following are the requirements for an xAPI Statement for initializing a TT simulation activity:

- 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 simulation Activity 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/simulation`
- The following Activity Extensions requirements apply:
  - The `https://w3id.org/xapi/netc/extensions/hull-applicability` property SHALL be set to the appropriate value
  - The `https://w3id.org/xapi/netc/extensions/hull-configuration` property SHALL be set to the appropriate value
  - The `https://w3id.org/xapi/netc/extensions/course-id-number` property SHALL be set to the appropriate value
- 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to a new activity attempt UUID
- 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 `timestamp` SHALL be set according to the requirements in the Navy Core xAPI Profile

2.3.2.1.2. Initialized TT Simulation 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/simulations/3e3ff734-07ff-1235-
9ae3-0184bb639fe",
    "definition": {
      "name": {
        "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
      },
      "description": {
        "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
      },
      "type": "http://adlnet.gov/expapi/activities/simulation",
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/hull-applicability": "DDG82",
        "https://w3id.org/xapi/netc/extensions/hull-configuration": "9.C2.3.0.2D",
        "https://w3id.org/xapi/netc/extensions/course-id-number": "A-150-9021"
      }
    }
  },
  "context": {
    "contextActivities": {
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
```

```
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    },
    "registration": "ad8ca9da-51b1-48eb-ae58-a68d4d3ae886",
    "extensions": {
      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
    }
  },
  "timestamp": "2020-04-29T16:00:21.230Z"
}
```

2.3.2.2. Terminating a TT Simulation

A Terminated Statement is recommended to be communicated when an attempt on a TT Simulation is ended. The Context Registration ID used for a simulation initialization and termination SHALL be the same unique ID during an attempt. There is no requirement that other granular activities use this same UUID within an attempt on the simulation but it is recommended, if possible.

If desired, overall simulation results can be conveyed in the Terminated Statement. The instructional design of the TT Simulation will help determine what the content developer should set, if anything, for the overall simulation results in Result Duration, Result Success, Result Completion, and Result Score Scaled.

Minimum xAPI requirements for a Terminated Statement for simulation activities are provided below, in addition to the optional results.

2.3.2.2.1. Terminated TT Simulation Statement Requirements

The following are the requirements for an xAPI Statement for terminating a simulation:

- 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/terminated`
- The `verb.display.en` SHALL be set to terminated
- The `object.id` SHALL be set to a unique identifier for the simulation Activity 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/simulation`
- The following Activity Extensions requirements apply:
    - The `https://w3id.org/xapi/netc/extensions/hull-applicability` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
    - The `https://w3id.org/xapi/netc/extensions/hull-configuration` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
    - The `https://w3id.org/xapi/netc/extensions/course-id-number` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
- 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same activity attempt UUID established during the last Initialization
- 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
- If known, set the following Result Object properties to the overall result values for the simulation Activity using the requirements below:

- The `result.duration` SHALL be set to an ISO 8601 formatted duration value representing the total time spent in the simulation
- The `result.success` SHALL be set to `true` if the simulation Activity was passed
- The `result.success` SHALL be set to `false` if the simulation Activity was failed
- The `result.completion` SHALL be set to `true` if the simulation Activity was completed
- The `result.completion` SHALL be set to `false` if the simulation Activity was not completed
- The `result.score.scaled` SHALL be set to a decimal number between `-1` and `1` if there is an overall score associated with the simulation Activity
- The `timestamp` SHALL be set according to the requirements in the Navy Core xAPI Profile

2.3.2.2.2. Terminated TT Simulation 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/simulations/3e3ff734-07ff-1235-9ae3-0184bb639fe",
    "definition": {
      "name": {
        "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
      },
      "description": {
```

```
      "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
      },
      "type": "http://adlnet.gov/expapi/activities/simulation",
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/hull-applicability": "DDG82",
        "https://w3id.org/xapi/netc/extensions/hull-configuration": "9.C2.3.0.2D",
        "https://w3id.org/xapi/netc/extensions/course-id-number": "A-150-9021"
      }
    }
  },
  "context": {
    "contextActivities": {
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
```

```
    },
    "registration": "ad8ca9da-51b1-48eb-ae58-a68d4d3ae886",
    "extensions": {
       "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
  Combat Systems (CSCS)",
       "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
    }
  },
  "result": {
      "duration": "PT1H10M5S",
      "success": true,
      "completion": true,
      "score": {
      "scaled": 0.95
      }
  },
  "timestamp": "2020-04-29T16:30:45.520Z"
}
```

2.3.3. Task Trainer Scenarios

2.3.3.1. Initializing a Task Trainer Scenario

xAPI Statements can describe how a learner passed, failed and/or completed a Task Trainer Scenario within a given attempt. Each attempt begins with an Initialized Statement and ends with a Terminated Statement. When the Initialized Statement is sent, a new Context Registration ID SHALL be created and used for the entire attempt. Unlike the Context Registration for simulations, any Statements with the Task Trainer Scenario as the Activity, and issued between the Initialized Statement and Terminated Statement of the task-trainer-scenario attempt SHALL use the same UUID for Context Registration in order to associate the Statements with the attempt. All of the xAPI requirements for an Initialized Task Trainer Scenario Statement are provided below.

2.3.3.1.1. Initialized Task Trainer Scenario Statement Requirements

The following are the requirements for an xAPI Statement for initializing a Task Trainer Scenario activity:

- 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 task-trainer-scenario Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-scenario`
- 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
- The `context.contextActivities.parent` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to a new attempt UUID
- 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 following Context Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/simulation-mode` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `timestamp` SHALL be set to the time the scenario was initialized using the Timestamp requirements in the Navy Core xAPI Profile
- The Activity State SHALL be set to the values defined in the "Using Document Resources" section of the Navy Simulation Base Profile document.

2.3.3.1.2. Initialized Task Trainer Scenario 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/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",

        "definition":{

            "name":{

                "en":"ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"

            },

            "description":{

                "en":"A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."

            },

            "extensions":{          "https://w3id.org/xapi/netc/extensions/navy-
enlisted-classification":["V43A"]

        },
"type":"https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-scenario"

        }

    },

    "context":{
```

```
    "contextActivities":{
        "grouping":[
            {
                "id":"https://navy.mil/netc/xapi/activities/simulations/3e3ff734-
07ff-1235-9ae3-0184bb639fe",
                "definition":{
                    "name":{
                        "en":"SPY Radar Alignment Maintenance Task Trainer
Simulation"
                    },
                    "description":{
                        "en":"A virtual maintenance task trainer simulation for SPY
radar alignment and verification procedures."
                    },
                    "type":"http://adlnet.gov/expapi/activities/simulation"
                }
            }
        ],
        "category":[
            {
                "id":"https://w3id.org/xapi/netc/v1.0",
                "definition":{
                    "type":"http://adlnet.gov/expapi/activities/profile"
                }
            },
            {
                "id":"https://w3id.org/xapi/simulation/v1.0",
                "definition":{
                    "type":"http://adlnet.gov/expapi/activities/profile"
                }
            },
```

```
            {
                "id":"https://w3id.org/xapi/task-trainer-simulation/v1.0",
                "definition":{
                    "type":"http://adlnet.gov/expapi/activities/profile"
                }
            }
        ]
    },
    "registration":"d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
    "extensions":{
        "https://w3id.org/xapi/netc/extensions/school-center":"Center for
 Surface Combat Systems (CSCS)",
        "https://w3id.org/xapi/netc/extensions/launch-location":"Ashore",
        "https://w3id.org/xapi/simulation/extensions/simulation-mode":"guided"
    }
    },
    "timestamp":"2020-04-29T16:01:41.520Z"
}
```

2.3.3.2. Suspending a Task Trainer Scenario

Learners can suspend their scenario with the intent of coming back to it at a later time. With this in mind, the Navy requires content to track the state of each learning attempt by suspending and later resuming the scenario.

A Suspended Statement SHALL be sent when the user suspends an attempt on scenario content. The Suspended Statement SHALL be issued immediately before recording the attempt data in the LRS by using the `Activity State Resource` to persist (and later access) educationally relevant state data about the Activity and the Agent (e.g., Metadata about an Agent's attempt of a Task Trainer Scenario Activity). Refer to the "Activity State" section of the Navy E-learning profile and the "Using Document Resources" section of the Navy Simulation Base Profile document for more information and requirements on the use of `Activity State Resource.`

All of the xAPI requirements for a Suspended Statement are provided below.

2.3.3.2.1. Suspended Task Trainer Scenario Statement Requirements

The following are the requirements for an xAPI Statement for suspending a Task Trainer Scenario activity:

- 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/suspended`
- The `verb.display.en` SHALL be set to `suspended`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-scenario Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-scenario`
- 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
- The `context.contextActivities.parent` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-scenario Initialization
- 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 following Context Extensions requirements apply:
    - The `https://w3id.org/xapi/simulation/extensions/simulation-mode` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `timestamp` SHALL be set to the time the content was suspended and using the Timestamp requirements in the Navy Core xAPI Profile

2.3.3.2.2. Suspended Task Trainer Scenario Statement Example

```json
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/suspended",
    "display": {
      "en": "suspended"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-scenarios/9e32f474-
af07-11ea-b3de-0242ac130004",
    "definition": {
      "name": {
        "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
      },
      "description": {
        "en": "A maintenance scenario for the disassemble, repair and reassemble
of Antenna Group components."
      },
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/navy-enlisted-classification": [
          "V43A"
        ]
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-scenario"
    }
```

```json
    },
    "context": {
      "contextActivities": {
        "grouping": [
          {
            "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-1235-9ae3-0184bb639fe",
            "definition": {
              "name": {
                "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
              },
              "description": {
                "en": "A virtual maintenance task trainer simulation for SPY radar alignment and verification procedures."
              },
              "type": "http://adlnet.gov/expapi/activities/simulation"
            }
          }
        ],
        "category": [
          {
            "id": "https://w3id.org/xapi/netc/v1.0",
            "definition": {
              "type": "http://adlnet.gov/expapi/activities/profile"
            }
          },
          {
            "id": "https://w3id.org/xapi/simulation/v1.0",
            "definition": {
              "type": "http://adlnet.gov/expapi/activities/profile"
            }
          },
          {
            "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
```

```
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
    ]
  },
  "registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
  "extensions": {
    "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
    "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore",
    "https://w3id.org/xapi/simulation/extensions/simulation-mode": "guided"
  }
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.3.3. Resuming a Task Trainer Scenario

Learners should be able to resume a Task Trainer Scenario that they suspended during a prior attempt. As previously noted, the Navy requires content to track the state of each learning attempt by suspending and resuming the Task Trainer Scenario activity.

If a resumed attempt requires access to additional educationally relevant state data from a previous attempt about the Activity and the Agent (e.g., Metadata about an Agent's attempt of a Task Trainer Scenario Activity). Refer to the "Activity State" section of the Navy E-learning profile Please review and the "Using Document Resources" section of the Navy Simulation Base Profile document for more information and requirements on the use of `Activity State Resource`.

All of the xAPI requirements for a Resumed Statement are provided below.

2.3.3.3.1. Resumed Task Trainer Scenario Statement Requirements

The following are the requirements for an xAPI Statement for resuming a Task Trainer Scenario activity:

- 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/resumed`
- The `verb.display.en` SHALL be set to `resumed`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-scenario Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-scenario`
- 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
- The `context.contextActivities.parent` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALLinclude the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-scenario Initialization
- 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 following Context Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/simulation-mode` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `timestamp` SHALL be set to the time the content was resumed and using the Timestamp requirements in the Navy Core xAPI Profile

2.3.3.3.2. Resumed Task Trainer Scenario Statement Example

```
{
  "actor": {
    "name": "John Doe",
```

```
      "account": {
        "homePage": "https://edipi.navy.mil",
        "name": "1625378"
      }
    },
    "verb": {
      "id": "http://adlnet.gov/expapi/verbs/resumed",
      "display": {
        "en": "resumed"
      }
    },
    "object": {
      "id": "https://navy.mil/netc/xapi/activities/task-trainer-scenarios/9e32f474-
af07-11ea-b3de-0242ac130004",
      "definition": {
        "name": {
          "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
        },
        "description": {
          "en": "A maintenance scenario for the disassemble, repair and reassemble
of Antenna Group components."
        },
        "extensions": {
          "https://w3id.org/xapi/netc/extensions/navy-enlisted-classification": [
            "V43A"
          ]
        },
        "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-scenario"
      }
    },
    "context": {
      "contextActivities": {
        "grouping": [
```

```json
      {
        "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
        "definition": {
          "name": {
            "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
          },
          "description": {
            "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
          },
          "type": "http://adlnet.gov/expapi/activities/simulation"
        }
      }
    ],

    "category": [
      {
        "id": "https://w3id.org/xapi/navy-core/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      },
      {
        "id": "https://w3id.org/xapi/netc/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      },
      {
        "id": "https://w3id.org/xapi/simulation/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      },
```

```
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    },
    "registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
    "extensions": {
      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore",
      "https://w3id.org/xapi/simulation/extensions/simulation-mode": "guided"
    }
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.3.4. Completing a Task Trainer Scenario

Task Trainer Scenario activities can be completed by the learners when the intent or objective of the scenario has been met. Regardless of how the completion criteria is determined for a particular TT Simulation, responsibility falls on the content to generate an xAPI Statement that informs the LRS that the learner has completed the scenario.

The final completion of a scenario SHALL be communicated by using a Terminated Statement that sets result.completion to true. However, the intermittent completion of activities within a scenario may be set via a Completed Statement.

Please review the Terminating a Task Trainer Scenario Section of this document for the requirements and an example of a Terminated Statement with optional completion results.

All of the xAPI requirements for a general Completed Statement are provided below.

2.3.3.4.1. Completed Task Trainer Scenario Statement Requirements

The following are the requirements for an xAPI Statement for completing a Task Trainer Scenario activity:

- 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/completed`
- The `verb.display.en` SHALL be set to `completed`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-scenario Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-scenario`
- 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
- The `context.contextActivities.parent` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-scenario Initialization
- 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 following Context Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/simulation-mode` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `timestamp` SHALL be set according to the requirements in the Navy Core xAPI Profile

2.3.3.4.2. Completed Task Trainer Scenario Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/completed",
    "display": {
      "en": "completed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-scenarios/9e32f474-
af07-11ea-b3de-0242ac130004",
    "definition": {
      "name": {
        "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
      },
      "description": {
        "en": "A maintenance scenario for the disassemble, repair and reassemble
of Antenna Group components."
      },
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/navy-enlisted-classification": [
          "V43A"
        ]
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-scenario"
    }
```

```json
    },
  "context": {
    "contextActivities": {
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
```

```
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
    ]
  },
  "registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
  "extensions": {
     "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
     "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore",
     "https://w3id.org/xapi/simulation/extensions/simulation-mode": "guided"
  }
},
"timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.3.5. Passing a Task Trainer Scenario

If applicable in a given Task Trainer Scenario, learners may pass or fail the success criteria. Passing is often reserved for e-learning content that contains assessments, knowledge measurement, or grading of a learner's performance. However, a Passed Statement could also be used for knowledge checks or practice tests provided during a scenario, without a scoring requirement.

Multiple Passed Statements can be sent in a given scenario attempt. However, the final success of a scenario SHALL be communicated by using a Terminated Statement that sets `result.success` to `true`.

Please review Terminating a Task Trainer Scenario Section of this document for the requirements and an example of a Terminated Statement with optional success results.

All of the xAPI requirements for a general Passed Statement are provided below.

2.3.3.5.1. Passed Task Trainer Scenario Statement Requirements

The following are the requirements for an xAPI Statement for passing a Task Trainer Scenario activity:

- 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/passed`
- The `verb.display.en` SHALL be set to `passed`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-scenario Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-scenario`
- 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
- The `context.contextActivities.parent` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-scenario Initialization
- 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 following Context Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/simulation-mode` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `timestamp` SHALL be set according to the requirements in the Navy Core xAPI Profile

2.3.3.5.2. Passed Task Trainer Scenario Statement Example

```
{
  "actor": {
    "name": "John Doe",
```

```
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/passed",
    "display": {
      "en": "passed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-scenarios/9e32f474-
af07-11ea-b3de-0242ac130004",
    "definition": {
      "name": {
        "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
      },
      "description": {
        "en": "A maintenance scenario for the disassemble, repair and reassemble
of Antenna Group components."
      },
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/navy-enlisted-classification": [
          "V43A"
        ]
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-scenario"
    }
  },
  "context": {
    "contextActivities": {
      "grouping": [
```

```
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
```

```
      ]
    },
    "registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
    "extensions": {

      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
  Combat Systems (CSCS)",

      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore",

      "https://w3id.org/xapi/simulation/extensions/simulation-mode": "guided"

    }
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.3.6. Failing a Task Trainer Scenario

If applicable in a given Task Trainer Scenario, learners may pass or fail the success criteria. Failing is often reserved for e-learning content that contains assessments, knowledge measurement, or grading of a learner's performance. However, a Failed Statement could also be used for knowledge checks or practice tests provided during a scenario, without a scoring requirement.

Multiple Failed Statements can be sent during a given scenario attempt. However, the final success of a scenario SHALL be communicated by using a Terminated Statement that sets `result.success` to `false`. Please review Terminating a Task Trainer Scenario Section of this document for the requirements and an example of a Terminated Statement with optional success results.

All of the xAPI requirements for a general Failed Statement are provided below.

2.3.3.6.1. Failed Task Trainer Scenario Statement Requirements

The following are the requirements for an xAPI Statement for failing a Task Trainer Scenario activity:

- 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/failed`
- The `verb.display.en` SHALL be set to `failed`

- The `object.id` SHALL be set to a unique identifier for the task-trainer-scenario Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-scenario`
- 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
- The `context.contextActivities.parent` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-scenario Initialization
- If known, the following Context Extensions requirements apply:
  - The `https://w3id.org/xapi/netc/extensions/school-center` 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 following Context Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/simulation-mode` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `timestamp` SHALL be set according to the requirements in the Navy Core xAPI Profile

2.3.3.6.2. Failed Task Trainer Scenario Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
```

```json
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/failed",
    "display": {
      "en": "failed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-scenarios/9e32f474-
af07-11ea-b3de-0242ac130004",
    "definition": {
      "name": {
        "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
      },
      "description": {
        "en": "A maintenance scenario for the disassemble, repair and reassemble
of Antenna Group components."
      },
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/navy-enlisted-classification": [
          "V43A"
        ]
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-scenario"
    }
  },
  "context": {
    "contextActivities": {
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
```

```
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    },
```

```
    "registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",

    "extensions": {

      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",

      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore",

      "https://w3id.org/xapi/simulation/extensions/simulation-mode": "guided"

    }

  },

  "timestamp": "2020-04-29T16:01:41.520Z"

}
```

2.3.3.7. Exiting a Task Trainer Scenario

A Task Trainer Scenario activity can be exited if the learner must leave the activity without ending the current attempt. Exiting is different from Suspending in that it does not indicate the intent of coming back to the scenario to resume the learning attempt. It indicates the intent of restarting the attempt. Therefore, there is no requirement to track the state of the learning attempt when the learner exits the activity.

The Exited Task Trainer Scenario Statement is typically associated with an exit or restart button, or some other type of user interface element that enables the learner to intentionally leave the task without saving state or progress in the activity. For example, the learner may need to exit a Task Trainer Scenario activity if there is an illogical or error condition that prevents the learner from continuing the activity.

All of the xAPI requirements for an Exited Statement are provided below.

2.3.3.7.1. Exited Task Trainer Scenario Statement Requirements

The following are the requirements for an xAPI Statement for exiting a Task Trainer Scenario activity:

- 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/exited`
- The `verb.display.en` SHALL be set to `exited`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-scenario Activity according to the Activity ID requirements in the Navy Core xAPI Profile

- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-scenario`
- 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
- The `context.contextActivities.parent` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-scenario Initialization
- 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 following Context Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/simulation-mode` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `timestamp` SHALL be set according to the requirements in the Navy Core xAPI Profile

2.3.3.7.2. Exited Task Trainer Scenario Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
```

```
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/exited",
    "display": {
      "en": "exited"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-scenarios/9e32f474-
af07-11ea-b3de-0242ac130004",
    "definition": {
      "name": {
        "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
      },
      "description": {
        "en": "A maintenance scenario for the disassemble, repair and reassemble
of Antenna Group components."
      },
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/navy-enlisted-classification": [
          "V43A"
        ]
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-scenario"
    }
  },
  "context": {
    "contextActivities": {
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
```

```
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    },
    "registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
    "extensions": {
```

```
      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",

      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore",

      "https://w3id.org/xapi/simulation/extensions/simulation-mode": "guided"

    }

  },

  "timestamp": "2020-04-29T16:01:41.520Z"

}
```

2.3.3.8. Restarting a Task Trainer Scenario

A learner should be able to restart a Task Trainer Scenario activity that they exited in the current attempt. Restarting is different from Resuming in that it does not indicate the continuation of an attempt.

The Restarted Task Trainer Scenario Statement is typically associated with the learner's intentional exit of a task-trainer-scenario Activity due to an illogical or error condition during the activity.

All of the xAPI requirements for a Restarted Statement are provided below.

2.3.3.8.1. Restarted Task Trainer Scenario Statement Requirements

The following are the requirements for an xAPI Statement for restarting a Task Trainer Scenario activity:

- The `actor` property SHALL be set according to the requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/verbs/restarted`
- The `verb.display.en` SHALL be set to `restarted`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-scenario Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-scenario`
- 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
- The `context.contextActivities.parent` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-scenario Initialization
- 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 following Context Extensions requirements apply:
    - The `https://w3id.org/xapi/simulation/extensions/simulation-mode` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `timestamp` SHALL be set according to the requirements in the Navy Core xAPI Profile

2.3.3.8.2. Restarted Task Trainer Scenario Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "1625378"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/task-trainer-simulation/verbs/restarted",
    "display": {
      "en": "restarted"
    }
  },
```

```json
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-scenarios/6415f6a4-
a85e-4bf7-8157-601d96e416fd",
    "definition": {
      "name": {
        "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
      },
      "description": {
        "en": "A maintenance scenario for the disassemble, repair and reassemble
of Antenna Group components."
      },
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/navy-enlisted-classification": [
          "V43A"
        ]
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-scenario"
    }
  },
  "context": {
    "contextActivities": {
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
```

```
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    },
    "registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
    "extensions": {
      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore",
      "https://w3id.org/xapi/simulation/extensions/simulation-mode": "guided"
    }
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
```

```
}
```

2.3.3.9. Terminating a Task Trainer Scenario

To indicate that an attempt on a Task Trainer Scenario has ended, the content SHALL send a Terminated Statement. If applicable, the Terminated Statement SHALL also contain the overall results associated with the scenario, such as whether it was passed, failed, completed, or if there is a score.

Minimum xAPI requirements for a Terminated Statement for a task-trainer-scenario Activity are provided below, in addition to the optional results.

2.3.3.9.1. Terminated Task Trainer Scenario Statement Requirements

The following are the requirements for an xAPI Statement for terminating a Task Trainer Scenario activity:

- 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/terminated`
- The `verb.display.en` SHALL be set to `terminated`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-scenario Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-scenario`
- 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
- The `context.contextActivities.parent` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-scenario Initialization
- 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 following Context Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/simulation-mode` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- If known, set the following Result Object properties to the overall result values for the task-trainer-scenario using the requirements below:
  - The `result.duration` SHALL be set to an ISO 8601 formatted duration value representing the total time spent in the task-trainer-scenario under the current attempt
  - The `result.success` SHALL be set to `true` if the task-trainer-scenario was passed
  - The `result.success` SHALL be set to `false` if the task-trainer-scenario was failed
  - The `result.completion` SHALL be set to `true` if the task-trainer-scenario was completed
  - The `result.completion` SHALL be set to `false` if the task-trainer-scenario was not completed
  - The `result.score.scaled` SHALL be set to a decimal number between `-1` and `1` if there is an overall score associated with the task-trainer-scenario
- The `timestamp` SHALL be set to the time the attempt was terminated and using the Timestamp requirements in the Navy Core xAPI Profile

2.3.3.9.2. Terminated Task Trainer Scenario 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/task-trainer-scenarios/9e32f474-
af07-11ea-b3de-0242ac130004",
    "definition": {
      "name": {
        "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
      },
      "description": {
        "en": "A maintenance scenario for the disassemble, repair and reassemble
of Antenna Group components."
      },
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/navy-enlisted-classification": [
          "V43A"
        ]
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-scenario"
    }
  },
  "context": {
    "contextActivities": {
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
```

```json
          "name": {
            "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
          },
          "description": {
            "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
          },
          "type": "http://adlnet.gov/expapi/activities/simulation"
        }
      }
    ],
    "category": [
      {
        "id": "https://w3id.org/xapi/netc/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      },
      {
        "id": "https://w3id.org/xapi/simulation/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      },
      {
        "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
```

```
        ]
      },

      "registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",

      "extensions": {

        "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",

        "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore",

        "https://w3id.org/xapi/simulation/extensions/simulation-mode": "guided"

      }

    },

    "result": {

      "duration": "PT1H10M5S",

      "success": true,

      "completion": true,

      "score": {

        "scaled": 0.95

      }

    },

    "timestamp": "2020-04-29T16:30:45.520Z"

  }
```

2.3.4. Task Trainer Tasks

2.3.4.1. Initializing a Task Trainer Task

xAPI Statements can describe how a learner passed, failed and/or completed a Task Trainer Task within a given attempt. Each attempt begins with an Initialized Statement and ends with a Terminated Statement. When the Initialized Statement is sent, a new Context Registration ID SHALL be created and used for the entire attempt. Unlike the Context Registration for simulations, any Statements with the Task Trainer Task as the Activity, and

issued between the Initialized Statement and Terminated Statement of the task-trainer-task attempt SHALL use the same UUID for Context Registration in order to associate the Statements with the attempt.

All of the xAPI requirements for an Initialized Task Trainer Task Statement are provided below.

2.3.4.1.1. Initialized Task Trainer Task Statement Requirements

The following are the requirements for an xAPI Statement for initializing a Task Trainer Task activity:

- 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 task-trainer-task Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task`
- The following Activity Extensions requirements apply:
    - The `https://w3id.org/xapi/simulation/extensions/element-nomenclature` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
    - The `https://w3id.org/xapi/simulation/extensions/element-ref-des` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-id` property SHALL be set to the appropriate value and format defined in the Navy Common Reference Profile
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id` property SHALL be set to the appropriate value and format defined in the Navy Common Reference Profile
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title` property SHALL be set to the appropriate value and format defined in the Navy Common Reference Profile
- If known, the following Activity Extensions requirements apply:
    - The `https://w3id.org/xapi/simulation/extensions/s1000d-dmc` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
    - The `https://w3id.org/xapi/simulation/extensions/s1000d-sns` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `context.contextActivities.grouping` array SHALL include the simulation Activity
- The `context.contextActivities.parent` array SHALL include the task-trainer-scenario 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to a new attempt UUID
- 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 `timestamp` SHALL be set to the time the task-trainer-task Activity was initialized using the Timestamp requirements in the Navy Core xAPI Profile
- The Activity State SHALL be set to the values defined in the "Using Document Resources" section of the Navy Simulation Base Profile document.

2.3.4.1.2. Initialized Task Trainer Task 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": {
```

```json
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-tasks/7a2ab106-1ffb-
40c6-be7a-4f4d0b6586d2",
    "definition": {
      "name": {
        "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
      },
      "description": {
        "en": "A maintenance task within the removal and replacement of the ECSP
MCE 7 10MHz tray assembly."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-task",
      "extensions": {
        "https://w3id.org/xapi/simulation/extensions/element-nomenclature": "R-
2537/SPY-1D(V)",
        "https://w3id.org/xapi/simulation/extensions/element-ref-des": "T09",
        "https://w3id.org/xapi/netc/extensions/tech-doc-id": "SW272-A2-AEG-020",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id": "WPM109",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title": "Antenna
Group MCE T09 10MHz Tray Assembly Removal/Replacement",
        "https://w3id.org/xapi/simulation/extensions/s1000d-dmc": "ANSPY1-AAA-GG1-
60-0000-00A-009A-D",
        "https://w3id.org/xapi/simulation/extensions/s1000d-sns": "GG1-60"
      }
    }
  },
  "context": {
    "contextActivities": {
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
          "definition": {
            "name": {
              "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
```

```json
            },
            "description": {
              "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
          }
        },
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
```

```
        "type": "http://adlnet.gov/expapi/activities/profile"
      }
    },
    {
      "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
      "definition": {
        "type": "http://adlnet.gov/expapi/activities/profile"
      }
    }
  ]
},
"registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
"extensions": {
  "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
  "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
}
},
"timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.4.2. Suspending a Task Trainer Task

Learners can suspend their Task Trainer Task activity with the intent of coming back to it at a later time. With this in mind, the Navy requires content to track the state of each learning attempt by suspending and later resuming the task-trainer-task Activity.

A Suspended Statement SHALL be sent when the user suspends an attempt on task-trainer-task Activity content. The Suspended Statement SHALL be issued immediately before recording the attempt data in the LRS by using the `Activity State Resource` to persist (and later access) educationally relevant state data about the Activity and the Agent (e.g., Metadata about an Agent's attempt of a Task Trainer Task Activity). Refer to the "Activity State" section of the Navy E-learning profile and the "Using Document Resources" section of the

Navy Simulation Base Profile document for more information and requirements on the use of `Activity State Resource`.

All of the xAPI requirements for a Suspended Statement are provided below.

2.3.4.2.1. Suspended Task Trainer Task Statement Requirements

The following are the requirements for an xAPI Statement for suspending a Task Trainer Task activity:

- 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/suspended`
- The `verb.display.en` SHALL be set to `suspended`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-task Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task`
- The following Activity Extensions requirements apply:
    - The `https://w3id.org/xapi/simulation/extensions/element-nomenclature` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
    - The `https://w3id.org/xapi/simulation/extensions/element-ref-des` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
- If known, the following Activity Extensions requirements apply:
    - The `https://w3id.org/xapi/simulation/extensions/s1000d-dmc` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
    - The `https://w3id.org/xapi/simulation/extensions/s1000d-sns` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `context.contextActivities.parent` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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 `timestamp` SHALL be set to the time the task-trainer-task Activity was suspended and using the Timestamp requirements in the Navy Core xAPI Profile

2.3.4.2.2. Suspended Task Trainer Task Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/suspended",
    "display": {
      "en": "suspended"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-tasks/7a2ab106-1ffb-
40c6-be7a-4f4d0b6586d2",
```

```
    "definition": {
      "name": {
        "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
      },
      "description": {
        "en": "A maintenance task within the removal and replacement of the ECSP
MCE 7 10MHz tray assembly."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-task",
      "extensions": {
        "https://w3id.org/xapi/simulation/extensions/element-nomenclature": "R-
2537/SPY-1D(V)",
        "https://w3id.org/xapi/simulation/extensions/element-ref-des": "T09",
        "https://w3id.org/xapi/netc/extensions/tech-doc-id": "SW272-A2-AEG-020",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id": "WPM109",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title": "Antenna
Group MCE T09 10MHz Tray Assembly Removal/Replacement",
        "https://w3id.org/xapi/simulation/extensions/s1000d-dmc": "ANSPY1-AAA-GG1-
60-0000-00A-009A-D",
        "https://w3id.org/xapi/simulation/extensions/s1000d-sns": "GG1-60"
      }
    }
  },
  "context": {
    "contextActivities": {
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
          "definition": {
            "name": {
              "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
            },
```

```
            "description": {
              "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
          }
        },
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
```

```
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    },
    "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
    "extensions": {
      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
  Combat Systems (CSCS)",
      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
    }
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.4.3. Resuming a Task Trainer Task

Learners should be able to resume a Task Trainer Task activity that they suspended during a prior attempt. The Navy requires content to track the state of each learning attempt by suspending and resuming the task-trainer-task Activity.

If a resumed attempt requires access to additional educationally relevant state data from a previous attempt about the Activity and the Agent (e.g., Metadata about an Agent's attempt of a task-trainer-task Activity). Refer to the "Activity State" section of the Navy E-learning profile and the "Using Document Resources" section of the Navy Simulation Base Profile document for more information and requirements on the use of Activity State Resource.

All of the xAPI requirements for a Resumed Statement are provided below.

2.3.4.3.1. Resumed Task Trainer Task Statement Requirements

The following are the requirements for an xAPI Statement for resuming a Task Trainer Task activity:

- 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/resumed`
- The `verb.display.en` SHALL be set to `resumed`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-task Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task`
- The following Activity Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/element-nomenclature` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/simulation/extensions/element-ref-des` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
- If known, the following Activity Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/s1000d-dmc` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/simulation/extensions/s1000d-sns` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `context.contextActivities.parent` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- If known, the following Context Extensions requirements apply:
    - The `https://w3id.org/xapi/netc/extensions/school-center` SHALL be set to the appropriate predefined value from the Navy Common Reference Profile
    - The `https://w3id.org/xapi/netc/extensions/launch-location` SHALL be set to the appropriate predefined value from the Navy Common Reference Profile
- The `timestamp` SHALL be set to the time the task-trainer-task Activity was resumed and using the Timestamp requirements in the Navy Core xAPI Profile

2.3.4.3.2. Resumed Task Trainer Task Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/resumed",
    "display": {
      "en": "resumed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-tasks/7a2ab106-1ffb-
40c6-be7a-4f4d0b6586d2",
    "definition": {
      "name": {
```

```
      "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
      },
      "description": {
        "en": "A maintenance task within the removal and replacement of the ECSP
MCE 7 10MHz tray assembly."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-task",
      "extensions": {
        "https://w3id.org/xapi/simulation/extensions/element-nomenclature": "R-
2537/SPY-1D(V)",
        "https://w3id.org/xapi/simulation/extensions/element-ref-des": "T09",
        "https://w3id.org/xapi/netc/extensions/tech-doc-id": "SW272-A2-AEG-020",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id": "WPM109",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title": "Antenna
Group MCE T09 10MHz Tray Assembly Removal/Replacement",
        "https://w3id.org/xapi/simulation/extensions/s1000d-dmc": "ANSPY1-AAA-GG1-
60-0000-00A-009A-D",
        "https://w3id.org/xapi/simulation/extensions/s1000d-sns": "GG1-60"
      }
    }
  },
  "context": {
    "contextActivities": {
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
          "definition": {
            "name": {
              "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
            },
            "description": {
              "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
```

```
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
          }
        },
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
```

```
            "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
            "definition": {
              "type": "http://adlnet.gov/expapi/activities/profile"
            }
          }
        ]
      },
      "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
        "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
      }
    },
    "timestamp": "2020-04-29T16:01:41.520Z"
  }
```

2.3.4.4. Completing a Task Trainer Task

Task Trainer Task activities can be completed by a learner when the intent or objective of the task-trainer-task Activity has been met. Regardless of how the completion criteria are determined for a particular TT Simulation, responsibility falls on the content to generate an xAPI Statement that informs the LRS that the learner has completed the task-trainer-task Activity.

The final completion of a task-trainer-task Activity SHALL be communicated by using a Terminated Statement that sets `result.completion` to `true`. However, the intermittent completion of activities may also be set via a Completed Statement. Please review the Terminating a Task Trainer Task Section of this document for the requirements and an example of a Terminated Statement with optional completion results.

All of the xAPI requirements for a general Completed Statement are provided below.

2.3.4.4.1. Completed Task Trainer Task Statement Requirements

The following are the requirements for an xAPI Statement for completing a Task Trainer Task activity:

- 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/completed`
- The `verb.display.en` SHALL be set to `completed`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-task Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task`
- The following Activity Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/element-nomenclature` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/simulation/extensions/element-ref-des` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
- If known, the following Activity Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/s1000d-dmc` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/simulation/extensions/s1000d-sns` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `context.contextActivities.parent` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above

- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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 `timestamp` SHALL be set to the time the task was completed and using the Timestamp requirements in the Navy Core xAPI Profile

2.3.4.4.2. Completed Task Trainer Task Statement Example

```json
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/completed",
    "display": {
      "en": "completed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-tasks/7a2ab106-1ffb-40c6-be7a-4f4d0b6586d2",
    "definition": {
      "name": {
        "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
      },
      "description": {
```

```
        "en": "A maintenance task within the removal and replacement of the ECSP
MCE 7 10MHz tray assembly."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-task",
      "extensions": {
        "https://w3id.org/xapi/simulation/extensions/element-nomenclature": "R-
2537/SPY-1D(V)",
        "https://w3id.org/xapi/simulation/extensions/element-ref-des": "T09",
        "https://w3id.org/xapi/netc/extensions/tech-doc-id": "SW272-A2-AEG-020",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id": "WPM109",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title": "Antenna
Group MCE T09 10MHz Tray Assembly Removal/Replacement",
        "https://w3id.org/xapi/simulation/extensions/s1000d-dmc": "ANSPY1-AAA-GG1-
60-0000-00A-009A-D",
        "https://w3id.org/xapi/simulation/extensions/s1000d-sns": "GG1-60"
      }
    }
  },
  "context": {
    "contextActivities": {
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
          "definition": {
            "name": {
              "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
            },
            "description": {
              "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
          }
```

```
        },
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
```

```
          }
        ]
      },
      "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
  Combat Systems (CSCS)",
        "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
      }
    },
    "timestamp": "2020-04-29T16:01:41.520Z"
  }
```

2.3.4.5. Passing a Task Trainer Task

If applicable in a given Task Trainer Task, a learner may pass or fail the success criteria. Passing is often reserved for e-learning content that contains assessments, knowledge measurement, or grading of a learner's performance. However, a Passed Statement could also be used for knowledge checks or practice tests provided during a task-trainer-task Activity, without a scoring requirement.

Multiple Passed Statements can be sent in a given task-trainer-task Activity attempt. However, the final success of a task SHALL be communicated using a Terminated Statement that sets `result.success` to `true`. Please review Terminating a Task Trainer Task Section of this document for the requirements and an example of a Terminated Statement with success results.

All of the xAPI requirements for a general Passed Statement are provided below.

2.3.4.5.1. Passed Task Trainer Task Statement Requirements

The following are the requirements for an xAPI Statement for passing a Task Trainer Task activity:

- 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/passed`
- The `verb.display.en` SHALL be set to `passed`

- The `object.id` SHALL be set to a unique identifier for the task-trainer-task Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task`
- The following Activity Extensions requirements apply:
    - The `https://w3id.org/xapi/simulation/extensions/element-nomenclature` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
    - The `https://w3id.org/xapi/simulation/extensions/element-ref-des` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
- If known, the following Activity Extensions requirements apply:
    - The `https://w3id.org/xapi/simulation/extensions/s1000d-dmc` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
    - The `https://w3id.org/xapi/simulation/extensions/s1000d-sns` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `context.contextActivities.parent` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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 `timestamp` SHALL be set to the time the task-trainer-task Activity was completed and using the Timestamp requirements in the Navy Core xAPI Profile

2.3.4.5.2. Passed Task Trainer Task Statement Example

```json
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/passed",
    "display": {
      "en": "passed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-tasks/7a2ab106-1ffb-40c6-be7a-4f4d0b6586d2",
    "definition": {
      "name": {
        "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement Procedure Task"
      },
      "description": {
        "en": "A maintenance task within the removal and replacement of the ECSP MCE 7 10MHz tray assembly."
      },
```

```json
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-task",
      "extensions": {
        "https://w3id.org/xapi/simulation/extensions/element-nomenclature": "R-
2537/SPY-1D(V)",
        "https://w3id.org/xapi/simulation/extensions/element-ref-des": "T09",
        "https://w3id.org/xapi/netc/extensions/tech-doc-id": "SW272-A2-AEG-020",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id": "WPM109",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title": "Antenna
Group MCE T09 10MHz Tray Assembly Removal/Replacement",
        "https://w3id.org/xapi/simulation/extensions/s1000d-dmc": "ANSPY1-AAA-GG1-
60-0000-00A-009A-D",
        "https://w3id.org/xapi/simulation/extensions/s1000d-sns": "GG1-60"
      }
    }
  },
  "context": {
    "contextActivities": {
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
          "definition": {
            "name": {
              "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
            },
            "description": {
              "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
          }
        },
        {
```

```json
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
```

```
    },
    "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
    "extensions": {
      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
    }
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.4.6. Failing a Task Trainer Task

If applicable to a given Task Trainer Task, a learner may pass or fail the success criteria. Failing is often reserved for e-learning content that contains assessments, knowledge measurement, or grading of a learner's performance. However, a Failed Statement could also be used for knowledge checks or practice tests provided during a task-trainer-task Activity, without a scoring requirement.

Multiple Failed Statements can be sent during a given task-trainer-task Activity attempt. However, the final success of a task SHALL be communicated using a Terminated Statement that sets `result.success` to `false`. Please review Terminating a Task Trainer Task Section of this document for the requirements and an example of a Terminated Statement with success results.

All of the xAPI requirements for a general Failed Statement are provided below.

2.3.4.6.1. Failed Task Trainer Task Statement Requirements

The following are the requirements for an xAPI Statement for failing a Task Trainer Task activity:

- 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/failed`
- The `verb.display.en` SHALL be set to `failed`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-task Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task`
- The following Activity Extensions requirements apply:

- The `https://w3id.org/xapi/simulation/extensions/element-nomenclature` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/simulation/extensions/element-ref-des` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
- If known, the following Activity Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/s1000d-dmc` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/simulation/extensions/s1000d-sns` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `context.contextActivities.parent` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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 `timestamp` SHALL be set to the time the task-trainer-task Activity was completed and using the Timestamp requirements in the Navy Core xAPI Profile

2.3.4.6.2. Failed Task Trainer Task Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/failed",
    "display": {
      "en": "failed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-tasks/7a2ab106-1ffb-
40c6-be7a-4f4d0b6586d2",
    "definition": {
      "name": {
        "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
      },
      "description": {
        "en": "A maintenance task within the removal and replacement of the ECSP
MCE 7 10MHz tray assembly."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-task",
      "extensions": {
        "https://w3id.org/xapi/simulation/extensions/element-nomenclature": "R-
2537/SPY-1D(V)",
        "https://w3id.org/xapi/simulation/extensions/element-ref-des": "T09",
        "https://w3id.org/xapi/netc/extensions/tech-doc-id": "SW272-A2-AEG-020",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id": "WPM109",
```

```json
      "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title": "Antenna
Group MCE T09 10MHz Tray Assembly Removal/Replacement",

      "https://w3id.org/xapi/simulation/extensions/s1000d-dmc": "ANSPY1-AAA-GG1-
60-0000-00A-009A-D",

      "https://w3id.org/xapi/simulation/extensions/s1000d-sns": "GG1-60"
    }
  }
},
"context": {
  "contextActivities": {
    "grouping": [
      {
        "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
        "definition": {
          "name": {
            "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
          },
          "description": {
            "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
          },
          "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
        }
      },
      {
        "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
        "definition": {
          "name": {
            "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
          },
          "description": {
```

```
            "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
          },
          "type": "http://adlnet.gov/expapi/activities/simulation"
        }
      }
    ],
    "category": [
      {
        "id": "https://w3id.org/xapi/netc/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      },
      {
        "id": "https://w3id.org/xapi/simulation/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      },
      {
        "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
    ]
  },
  "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
  "extensions": {
    "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
    "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
  }
```

```
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.4.7. Exiting a Task Trainer Task

A Task Trainer Task activity can be exited if the learner must leave the activity without ending the current attempt. Exiting is different from Suspending in that it does not indicate the intent of coming back to the task-trainer-scenario Activity to resume the learning attempt. It indicates the intent of restarting the current attempt. Therefore, there is no requirement to track the state of the learning attempt when the learner exits the activity.

The Exited Task Trainer Task Statement is typically associated with an exit or restart button, or some other type of user interface element that enables the learner to intentionally leave the task-trainer-task Activity without saving state or progress in the activity. For example, the learner may need to exit a Task Trainer Task activity if there is an illogical or error condition that prevents the learner from continuing the activity.

All of the xAPI requirements for an Exited Statement are provided below.

2.3.4.7.1. Exited Task Trainer Task Statement Requirements

The following are the requirements for an xAPI Statement for exiting a Task Trainer Task activity:

- 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/exited`
- The `verb.display.en` SHALL be set to `exited`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-task Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task`
- The following Activity Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/element-nomenclature` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile

- The `https://w3id.org/xapi/simulation/extensions/element-ref-des` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `https://w3id.org/xapi/netc/extensions/tech-doc-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
- The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
- The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
- If known, the following Activity Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/s1000d-dmc` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/simulation/extensions/s1000d-sns` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `context.contextActivities.parent` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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 `timestamp` SHALL be set to the time the task-trainer-task Activity was completed and using the Timestamp requirements in the Navy Core xAPI Profile

2.3.4.7.2. Exited Task Trainer Task Statement Example

```json
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/exited",
    "display": {
      "en": "exited"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-tasks/7a2ab106-1ffb-40c6-be7a-4f4d0b6586d2",
    "definition": {
      "name": {
        "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
      },
      "description": {
        "en": "A maintenance task within the removal and replacement of the ECSP
MCE 7 10MHz tray assembly."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task",
      "extensions": {
        "https://w3id.org/xapi/simulation/extensions/element-nomenclature": "R-2537/SPY-1D(V)",
        "https://w3id.org/xapi/simulation/extensions/element-ref-des": "T09",
        "https://w3id.org/xapi/netc/extensions/tech-doc-id": "SW272-A2-AEG-020",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id": "WPM109",
```

```
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title": "Antenna
Group MCE T09 10MHz Tray Assembly Removal/Replacement",

        "https://w3id.org/xapi/simulation/extensions/s1000d-dmc": "ANSPY1-AAA-GG1-
60-0000-00A-009A-D",

        "https://w3id.org/xapi/simulation/extensions/s1000d-sns": "GG1-60"
      }
    }
  },
  "context": {
    "contextActivities": {
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
          "definition": {
            "name": {
              "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
            },
            "description": {
              "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
          }
        },
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
```

```
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    },
    "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
    "extensions": {
      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
    }
```

```
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.4.8. Restarting a Task Trainer Task

A learner should be able to restart a Task Trainer Task activity that they exited in the current attempt. Restarting is different from Resuming in that it does not indicate the continuation of an attempt.

The Restarted Task Trainer Scenario Statement is typically associated with the learner's intentional exit of the task-trainer-task Activity due to some illogical or error condition during the activity.

All of the xAPI requirements for a Restarted Statement are provided below.

2.3.4.8.1. Restarted Task Trainer Task Statement Requirements

The following are the requirements for an xAPI Statement for restarting a Task Trainer Task activity:

- The `actor` property SHALL be set according to the requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/verbs/restarted`
- The `verb.display.en` SHALL be set to `restarted`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-task Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task`
- The following Activity Extensions requirements apply:
    - The `https://w3id.org/xapi/simulation/extensions/element-nomenclature` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
    - The `https://w3id.org/xapi/simulation/extensions/element-ref-des` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile

- The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
- If known, the following Activity Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/s1000d-dmc` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/simulation/extensions/s1000d-sns` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `context.contextActivities.parent` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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 `timestamp` SHALL be set to the time the task-trainer-task Activity was completed and using the Timestamp requirements in the Navy Core xAPI Profile

2.3.4.8.2. Restarted Task Trainer Task Statement Example

```
{
  "actor": {
    "name": "John Doe",
```

```json
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/task-trainer-simulation/verbs/restarted",
    "display": {
      "en": "restarted"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-tasks/40b11d80-0b98-45d1-8922-f191226d4e01",
    "definition": {
      "name": {
        "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement Procedure Task"
      },
      "description": {
        "en": "A maintenance task within the removal and replacement of the ECSP MCE 7 10MHz tray assembly."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task",
      "extensions": {
        "https://w3id.org/xapi/simulation/extensions/element-nomenclature": "R-2537/SPY-1D(V)",
        "https://w3id.org/xapi/simulation/extensions/element-ref-des": "T09",
        "https://w3id.org/xapi/netc/extensions/tech-doc-id": "SW272-A2-AEG-020",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id": "WPM109",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement",
        "https://w3id.org/xapi/simulation/extensions/s1000d-dmc": "ANSPY1-AAA-GG1-60-0000-00A-009A-D",
```

```
          "https://w3id.org/xapi/simulation/extensions/s1000d-sns": "GG1-60"
      }
    }
  },
  "context": {
    "contextActivities": {
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
          "definition": {
            "name": {
              "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
            },
            "description": {
              "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
          }
        },
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
```

```
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    },
    "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
    "extensions": {
      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
    }
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.4.9. Terminating a Task Trainer Task

To indicate that an attempt on a Task Trainer Task has ended, the content SHALL send a Terminated Statement. If applicable, the Terminated Statement SHALL also contain the overall results associated with the task-trainer-task Activity, such as whether it was passed, failed, completed, or if there is a score.

Minimum xAPI requirements for a Terminated Statement for a task-trainer-task Activity are provided below, in addition to the optional results.

2.3.4.9.1. Terminated Task Trainer Task Statement Requirements

The following are the requirements for an xAPI Statement for terminating a Task Trainer Task activity:

- 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/terminated`
- The `verb.display.en` SHALL be set to `terminated`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-task Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task`
- The following Activity Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/element-nomenclature` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/simulation/extensions/element-ref-des` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-id` property SHALL be set to the appropriate value and format defined in the TT Simulation Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
  - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
- If known, the following Activity Extensions requirements apply:

- The `https://w3id.org/xapi/simulation/extensions/s1000d-dmc` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `https://w3id.org/xapi/simulation/extensions/s1000d-sns` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `context.contextActivities.parent` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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
- If known, set the following Result Object properties to the overall result values for the task-trainer-task Activity using the requirement below:
  - The `result.duration` SHALL be set to an ISO 8601 formatted duration value representing the total time spent in the task-trainer-task Activity under the current attempt
  - The `result.success` SHALL be set to `true` if the task-trainer-task Activity was passed
  - The `result.success` SHALL be set to `false` if the task-trainer-task Activity was failed
  - The `result.completion` SHALL be set to `true` if the task-trainer-task Activity was completed
  - The `result.completion` SHALL be set to `false` if the task-trainer-task Activity was not completed
  - The `result.score.scaled` SHALL be set to a decimal number between `-1` and `1` if there is an overall score associated with the task-trainer-task Activity
- The `timestamp` SHALL be set to the time the task-trainer-task Activity was terminated using the Timestamp requirements in the Navy Core xAPI Profile

2.3.4.9.2. Terminated Task Trainer Task Statement Example

```json
{
  "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/task-trainer-tasks/7a2ab106-1ffb-40c6-be7a-4f4d0b6586d2",
    "definition": {
      "name": {
        "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement Procedure Task"
      },
      "description": {
        "en": "A maintenance task within the removal and replacement of the ECSP MCE 7 10MHz tray assembly."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-task",
      "extensions": {
        "https://w3id.org/xapi/simulation/extensions/element-nomenclature": "R-2537/SPY-1D(V)",
```

```
            "https://w3id.org/xapi/simulation/extensions/element-ref-des": "T09",

            "https://w3id.org/xapi/netc/extensions/tech-doc-id": "SW272-A2-AEG-020",

            "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id": "WPM109",

            "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title": "Antenna
Group MCE T09 10MHz Tray Assembly Removal/Replacement",

            "https://w3id.org/xapi/simulation/extensions/s1000d-dmc": "ANSPY1-AAA-GG1-
60-0000-00A-009A-D",

            "https://w3id.org/xapi/simulation/extensions/s1000d-sns": "GG1-60"

        }

      }

  },

  "context": {

    "contextActivities": {

      "grouping": [

        {

          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",

          "definition": {

            "name": {

              "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"

            },

            "description": {

              "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."

            },

            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"

          }

        },

        {

          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
```

```
      "definition": {
        "name": {
          "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
        },
        "description": {
          "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
        },
        "type": "http://adlnet.gov/expapi/activities/simulation"
      }
    }
  ],
  "category": [
    {
      "id": "https://w3id.org/xapi/netc/v1.0",
      "definition": {
        "type": "http://adlnet.gov/expapi/activities/profile"
      }
    },
    {
      "id": "https://w3id.org/xapi/simulation/v1.0",
      "definition": {
        "type": "http://adlnet.gov/expapi/activities/profile"
      }
    },
    {
      "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
      "definition": {
        "type": "http://adlnet.gov/expapi/activities/profile"
      }
```

```
        }
      ]
    },
    "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
    "extensions": {
      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
    }
  },
  "result": {
    "duration": "PT1H10M5S",
    "success": true,
    "completion": true,
    "score": {
      "scaled": 0.95
    }
  },
  "timestamp": "2020-04-29T16:30:45.520Z"
}
```

2.3.5. Task Trainer Steps

2.3.5.1. Completing Task Trainer Steps

Task Trainer Steps are the prescribed, sequential set of interactions expected of a learner to complete the performance of a Task Trainer Task. A Completed Statement could be used for each step, if desired.

All of the xAPI requirements for a Completed Task Trainer Step are provided below.

2.3.5.1.1. Completed Task Trainer Step Statement Requirements

The following are the requirements for an xAPI Statement for completing a Task Trainer Step activity:

- 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/completed`
- The `verb.display.en` SHALL be set to `completed`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-step Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-step`
- The following Activity Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/element-nomenclature` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/simulation/extensions/element-ref-des` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `context.contextActivities.parent` array SHALL include the task-trainer-task Activity
  - If known, the `context.contextActivities.parent.definition.description` SHALL be set to the exact step text from the technical document
- The `context.contextActivities.grouping` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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 `timestamp` SHALL be set to the time the task-trainer-step Activity was completed in accordance with the Timestamp requirements in the Navy Core xAPI Profile

2.3.5.1.2. Completed Task Trainer Step Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/completed",
    "display": {
      "en": "completed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-steps/9412eea7-9e74-44df-ba5c-4cb2d650ea2e",
    "definition": {
      "name": {
        "en": "WPS601 Step 4 - Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement Procedure Task"
      },
      "description": {
        "en": "Turn off circuit breaker 2."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-step",
      "extensions": {
        "https://w3id.org/xapi/simulation/extensions/element-nomenclature": "R-2537/SPY-1D(V)",
```

```
          "https://w3id.org/xapi/simulation/extensions/element-ref-des": "T09A1CB1"
        }
      }
  },
  "context": {
    "contextActivities": {
      "parent": [
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
tasks/7a2ab106-1ffb-40c6-be7a-4f4d0b6586d2",
          "definition": {
            "name": {
              "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
            },
            "description": {
              "en": "A maintenance task within the removal and replacement of the
ECSP MCE 7 10MHz tray assembly."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-task"
          }
        }
      ],
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
          "definition": {
            "name": {
              "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
            },
            "description": {
              "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
```

```
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
          }
        },
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
```

```
            "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
            "definition": {
              "type": "http://adlnet.gov/expapi/activities/profile"
            }
          }
        ]
      },
      "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
        "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
      }
    },
    "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.5.2. Skipping Task Trainer Steps

Task Trainer Steps are the sequential set of Activities a learner is expected to perform, in a prescribed order, to satisfy a Task Trainer Task objective. A Skipped Statement SHALL be sent when a learner skips an expected task-trainer-step Activity.

All of the xAPI requirements for a Skipped Task Trainer Step are provided below.

2.3.5.1.1. Skipped Task Trainer Step Statement Requirements

The following are the requirements for an xAPI Statement for skipping a Task Trainer Step activity:

- The `actor` property SHALL be set according to the requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `http://id.tincanapi.com/verb/skipped`
- The `verb.display.en` SHALL be set to `skipped`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-step Activity according to the Activity ID requirements in the Navy Core xAPI Profile

- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-step`
- The following Activity Extensions requirements apply:
  - The `https://w3id.org/xapi/simulation/extensions/element-nomenclature` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
  - The `https://w3id.org/xapi/simulation/extensions/element-ref-des` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `context.contextActivities.parent` array SHALL include the task-trainer-task Activity
  - If known, the `context.contextActivities.parent.definition.description` SHALL be set to the exact step text from the technical document
- The `context.contextActivities.grouping` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Activity Initialization
- 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 `timestamp` SHALL be set to the time the task-trainer-step Activity was completed, in accordance with the Timestamp requirements in the Navy Core xAPI Profile

2.3.5.1.2. Skipped Task Trainer Step Statement Example

```
{
  "actor": {
```

```json
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://id.tincanapi.com/verb/skipped",
    "display": {
      "en": "skipped"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-steps/9412eea7-9e74-
44df-ba5c-4cb2d650ea2e",
    "definition": {
      "name": {
        "en": "WPS601 Step 4 - Antenna Group MCE T09 10MHz Tray Assembly
Removal/Replacement Procedure Task"
      },
      "description": {
        "en": "Turn off circuit breaker 2."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-step",
      "extensions": {
        "https://w3id.org/xapi/simulation/extensions/element-nomenclature": "R-
2537/SPY-1D(V)",
        "https://w3id.org/xapi/simulation/extensions/element-ref-des": "T09A1CB1"
      }
    }
  },
  "context": {
    "contextActivities": {
```

```
    "parent": [
      {
        "id": "https://navy.mil/netc/xapi/activities/task-trainer-
tasks/7a2ab106-1ffb-40c6-be7a-4f4d0b6586d2",
        "definition": {
          "name": {
            "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
          },
          "description": {
            "en": "A maintenance task within the removal and replacement of the
ECSP MCE 7 10MHz tray assembly."
          },
          "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-task"
        }
      }
    ],
    "grouping": [
      {
        "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
        "definition": {
          "name": {
            "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
          },
          "description": {
            "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
          },
          "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
        }
      },
      {
```

```
      "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
```

```
    },
    "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
    "extensions": {
       "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
       "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
    }
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.6. Tracking General Activities

General activities such as receiving feedback, tool/equipment use, and documentation views can also be tracked within TT Simulation content. The requirements and examples for these types of Activities are defined in the TT Simulation Profile. Other types of general activities are defined in the Navy Common Reference Profile and should be reused, if needed. However, the content SHALL include any additional TT Simulation Profile requirements for the Context of an xAPI Statement when the Object is a granular activity within a TT Simulation simulation, scenario, task, and step.

2.3.6.1. Feedback

Feedback is a general Activity through which TT Simulation content communicates with a learner when a significant event occurs during the learning process. There are four feedback Activity Types defined in the TT Simulation Profile:

- **Assessment (feedback-performance)** - a notice that informs of the degree of training performance in relation to a standard.
- **Corrective (feedback-corrective)** - an intervention that improves or corrects training performance.
- **Error (feedback-error)** - a notice that informs of an illogical condition that prohibits continuation of task.
- **Safety (feedback-safety)** - an intervention that informs of and/or corrects safety violations that occur during training performance.

2.3.6.1.1. Receiving Performance Feedback

After a learner has completed all Task Trainer Task(s) within a Task Trainer Scenario, the learner may receive feedback that provides a stated or summarized performance assessment (e.g., AAR, score). If performance feedback is used within a TT Simulation, then a Received Statement SHALL be sent when a learner acknowledges the feedback.

All of the xAPI requirements for Received Performance Feedback are provided below.

2.3.6.1.1.1 Received Performance Feedback Statement Requirements

The following are the requirements for an xAPI Statement for responding to a Task Trainer Feedback Performance activity:

- The `actor` property SHALL be set according to the requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/verbs/received`
- The `verb.display.en` SHALL be set to `received`
- The `object.id` SHALL be set to a unique identifier for the assessment feedback according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/feedback-performance`
- The `context.contextActivities.parent` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-scenario Initialization
- 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 `timestamp` SHALL be set to the time the assessment feedback was responded according to the Timestamp requirements in the Navy Core xAPI Profile

2.3.6.1.1.2. Received Performance Feedback Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/task-trainer-simulation/verbs/received",
    "display": {
      "en": "received"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-feedback/3c2a8358-
1791-11eb-adc1-0242ac120002",
    "definition": {
      "name": {
        "en": "Task performance feedback for the ECSP MCE 7 10MHz Tray Assembly
Remove and Replace Scenario"
      },
      "description": {
        "en": "Performance feedback for a maintenance scenario for the
disassemble, repair and reassemble of Antenna Group components."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/feedback-performance"
    }
  },
  "context": {
    "contextActivities": {
      "parent": [
```

```json
      {
        "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
        "definition": {
          "name": {
            "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
          },
          "description": {
            "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
          },
          "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
        }
      }
    ],
    "grouping": [
      {
        "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
        "definition": {
          "name": {
            "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
          },
          "description": {
            "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
          },
          "type": "http://adlnet.gov/expapi/activities/simulation"
        }
      }
    ],
    "category": [
      {
        "id": "https://w3id.org/xapi/netc/v1.0",
```

```
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      },
      {
        "id": "https://w3id.org/xapi/simulation/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      },
      {
        "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
    ]
  },
  "registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
  "extensions": {
    "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
    "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
  }
},
"timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.6.1.2. Receiving Corrective Feedback

As a learner completes a series of sequential Task Trainer Steps within a Task Trainer Task, the learner may receive corrective feedback when a deviation from the expected step pattern occurs (e.g., skips a step). If corrective feedback is used within a TT Simulation, then a Received Statement SHALL be sent when a learner acknowledges the feedback.

All of the xAPI requirements for Received Corrective Feedback are provided below.

2.3.6.1.2.1 Received Corrective Feedback Statement Requirements

The following are the requirements for an xAPI Statement for responding to a Task Trainer Feedback Corrective activity:

- The `actor` property SHALL be set according to the requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/verbs/received`
- The `verb.display.en` SHALL be set to `received`
- The `object.id` SHALL be set to a unique identifier for the corrective feedback according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/feedback-corrective`
- The `context.contextActivities.parent` array SHALL include the task-trainer-step Activity
    - If known, the `context.contextActivities.parent.definition.description` SHALL be set to the exact step text from the technical document
- The `context.contextActivities.grouping` array SHALL include the task-trainer-task Activity
- The `context.contextActivities.grouping` array SHALL include the trask-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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 `timestamp` SHALL be set to the time the corrective feedback was responded according to the Timestamp requirements in the Navy Core xAPI Profile

2.3.6.1.2.2. Received Corrective Feedback Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/task-trainer-simulation/verbs/received",
    "display": {
      "en": "received"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-feedback/a1e7bdc0-
179e-11eb-adc1-0242ac120002",
    "definition": {
      "name": {
        "en": "Corrective task performance feedback during the ECSP MCE 7 10MHz
Tray Assembly Remove and Replace Scenario"
      },
      "description": {
        "en": "Corrective feedback during a maintenance scenario for the
disassemble, repair and reassemble of Antenna Group components."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/feedback-corrective"
    }
  },
  "context": {
    "contextActivities": {
      "parent": [
```

```
      {
        "id": "https://navy.mil/netc/xapi/activities/task-trainer-
steps/9412eea7-9e74-44df-ba5c-4cb2d650ea2e",
        "definition": {
          "name": {
            "en": "WPS601 Step 4 - Antenna Group MCE T09 10MHz Tray Assembly
Removal/Replacement Procedure Task"
          },
          "description": {
            "en": "Turn off circuit breaker 2."
          },
          "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-step"
        }
      }
    ],
    "grouping": [
      {
        "id": "https://navy.mil/netc/xapi/activities/task-trainer-
tasks/7a2ab106-1ffb-40c6-be7a-4f4d0b6586d2",
        "definition": {
          "name": {
            "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
          },
          "description": {
            "en": "A maintenance task within the removal and replacement of the
ECSP MCE 7 10MHz tray assembly."
          },
          "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-task"
        }
      },
      {
        "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
```

```
      "definition": {
        "name": {
          "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
        },
        "description": {
          "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
        },
        "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
      }
    },
    {
      "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
      "definition": {
        "name": {
          "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
        },
        "description": {
          "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
        },
        "type": "http://adlnet.gov/expapi/activities/simulation"
      }
    }
  ],
  "category": [
    {
      "id": "https://w3id.org/xapi/netc/v1.0",
      "definition": {
        "type": "http://adlnet.gov/expapi/activities/profile"
      }
    },
```

```json
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    },
    "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
    "extensions": {
      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
    }
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.6.1.3. Receiving Error Feedback

As a learner completes a series of sequential Task Trainer Steps within a Task Trainer Task, the learner may receive error feedback when the learner's interaction creates an illogical state that prohibits the learner from continuing the task steps. If error feedback is used within a TT Simulation, then a Received Statement SHALL be sent when a learner acknowledges the feedback.

All of the xAPI requirements for Received Error Feedback are provided below.

2.3.6.1.3.1 Received Error Feedback Statement Requirements

The following are the requirements for an xAPI Statement for responding to a Task Trainer Feedback Error activity:

- The `actor` property SHALL be set according to the requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/verbs/received`
- The `verb.display.en` SHALL be set to `received`
- The `object.id` SHALL be set to a unique identifier for the error feedback according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/feedback-error`
- The `context.contextActivities.parent` array SHALL include the task-trainer-step Activity
- The `context.contextActivities.grouping` array SHALL include the task-trainer-task Activity
- The `context.contextActivities.grouping` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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 `timestamp` SHALL be set to the time the error feedback was responded according to the Timestamp requirements in the Navy Core xAPI Profile

2.3.6.1.3.2. Received Error Feedback Statement Example

```json
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/task-trainer-simulation/verbs/received",
    "display": {
      "en": "received"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-feedback/798f677e-
17a8-11eb-adc1-0242ac120002",
    "definition": {
      "name": {
        "en": "Error feedback during the ECSP MCE 7 10MHz Tray Assembly Remove and
Replace Scenario"
      },
      "description": {
        "en": "Error feedback during a maintenance scenario for the disassemble,
repair and reassemble of Antenna Group components."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/feedback-error"
    }
  },
  "context": {
    "contextActivities": {
      "parent": [
```

```
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
steps/9412eea7-9e74-44df-ba5c-4cb2d650ea2e",
          "definition": {
            "name": {
              "en": "WPS601 Step 4 - Antenna Group MCE T09 10MHz Tray Assembly
Removal/Replacement Procedure Task"
            },
            "description": {
              "en": "Turn off circuit breaker 2."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-step"
          }
        }
      ],
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
tasks/7a2ab106-1ffb-40c6-be7a-4f4d0b6586d2",
          "definition": {
            "name": {
              "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
            },
            "description": {
              "en": "A maintenance task within the removal and replacement of the
ECSP MCE 7 10MHz tray assembly."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-task"
          }
        },
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
```

```
          "definition": {
            "name": {
              "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
            },
            "description": {
              "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
          }
        },
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
```

```
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    },
    "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
    "extensions": {
      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
 Combat Systems (CSCS)",
      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
    }
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.6.1.4. Receiving Safety Feedback

As a learner completes a series of sequential Task Trainer Steps within a Task Trainer Task, the learner may receive safety feedback when a simulation-defined safety violation occurs, regardless of whether steps are being performed in the correct order. If safety feedback is used within a TT Simulation, then a Received Statement SHALL be sent when a learner acknowledges the feedback.

All of the xAPI requirements for Received Safety Feedback are provided below.

2.3.6.1.4.1 Received Safety Feedback Statement Requirements

The following are the requirements for an xAPI Statement for responding to a Task Trainer Feedback Safety activity:

- The `actor` property SHALL be set according to the requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/verbs/received`
- The `verb.display.en` SHALL be set to `received`
- The `object.id` SHALL be set to a unique identifier for the safety feedback according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/feedback-safety`
- The `context.contextActivities.parent` array SHALL include the task-trainer-step Activity
- The `context.contextActivities.grouping` array SHALL include the task-trainer-task Activity
- The `context.contextActivities.grouping` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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 `timestamp` SHALL be set to the time the safety feedback was responded according to the Timestamp requirements in the Navy Core xAPI Profile

2.3.6.1.4.2. Received Safety Feedback Statement Example

```json
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/task-trainer-simulation/verbs/received",
    "display": {
      "en": "received"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-feedback/0dcb9b2e-
17a9-11eb-adc1-0242ac120002",
    "definition": {
      "name": {
        "en": "Safety feedback during the ECSP MCE 7 10MHz Tray Assembly Remove
and Replace Scenario"
      },
      "description": {
        "en": "Safety feedback during a maintenance scenario for the disassemble,
repair and reassemble of Antenna Group components."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/feedback-safety"
    }
  },
  "context": {
    "contextActivities": {
      "parent": [
```

```
      {
        "id": "https://navy.mil/netc/xapi/activities/task-trainer-
steps/9412eea7-9e74-44df-ba5c-4cb2d650ea2e",
        "definition": {
          "name": {
            "en": "WPS601 Step 4 - Antenna Group MCE T09 10MHz Tray Assembly
Removal/Replacement Procedure Task"
          },
          "description": {
            "en": "Turn off circuit breaker 2."
          },
          "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-step"
        }
      }
    ],
    "grouping": [
      {
        "id": "https://navy.mil/netc/xapi/activities/task-trainer-
tasks/7a2ab106-1ffb-40c6-be7a-4f4d0b6586d2",
        "definition": {
          "name": {
            "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
          },
          "description": {
            "en": "A maintenance task within the removal and replacement of the
ECSP MCE 7 10MHz tray assembly."
          },
          "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-task"
        }
      },
      {
        "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
```

```json
          "definition": {
            "name": {
              "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
            },
            "description": {
              "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
          }
        },
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
```

```
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    },
    "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
    "extensions": {
      "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
      "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
    }
  },
  "timestamp": "2020-04-29T16:01:41.520Z"
}
```

2.3.6.2. Tools

Tool use is a general Activity through which TT Simulation content tracks a learner's use of simulated hand tools (e.g., screwdriver) or equipment (e.g., multimeter) during the learning process. The task-trainer-tool Activity Type is defined in the TT Simulation Profile to track this general Activity.

After a learner has initialized a Task Trainer Task, and while performing a Task Trainer Step the learner may require either a simulated hand tool or test equipment. If desired, TT Simulation content may generate a Used Statement to track this Activity.

All of the xAPI requirements for a Used Tool Statement are provided below.

2.3.6.2.1. Tools Statement Requirements

The following are the requirements for an xAPI Statement for tracking a Task Trainer Tool activity:

- 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/used`
- The `verb.display.en` SHALL be set to `used`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-tool Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-tool`
- The `context.contextActivities.parent` array SHALL include the task-trainer-step Activity
    - If known, the `context.contextActivities.parent.definition.description` SHALL be set to the exact step text from the technical document
- The `context.contextActivities.grouping` array SHALL include the task-trainer-task Activity
- The `context.contextActivities.grouping` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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 `timestamp` SHALL be set to the time the task-trainer-tool Activity occurred according to the Timestamp requirements in the Navy Core xAPI Profile

2.3.6.2.2. Tools Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/task-trainer-simulation/verbs/used",
    "display": {
      "en": "used"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-tools/59ad19d7-19f0-
41e9-9e0a-70d0184ff818",
    "definition": {
      "name": {
        "en": "multimeter"
      },
      "description": {
        "en": "Multimeter use during a maintenance step."
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-tool"
    }
  },
  "context": {
    "contextActivities": {
      "parent": [
        {
```

```
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-steps/9412eea7-
9e74-44df-ba5c-4cb2d650ea2e",
          "definition": {
            "name": {
              "en": "WPS601 Step 6 - Antenna Group MCE T09 10MHz Tray Assembly
Removal/Replacement Procedure Task"
            },
            "description": {
              "en": "Test DC voltage."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-step"
          }
        }
      ],
      "grouping": [
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-tasks/7a2ab106-
1ffb-40c6-be7a-4f4d0b6586d2",
          "definition": {
            "name": {
              "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
            },
            "description": {
              "en": "A maintenance task within the removal and replacement of the
ECSP MCE 7 10MHz tray assembly."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-task"
          }
        },
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
          "definition": {
```

```
            "name": {
              "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
            },
            "description": {
              "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
          }
        },
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
```

```
            "id": "https://w3id.org/xapi/simulation/v1.0",
            "definition": {
              "type": "http://adlnet.gov/expapi/activities/profile"
            }
          },
          {
            "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
            "definition": {
              "type": "http://adlnet.gov/expapi/activities/profile"
            }
          }
        ]
      },
      "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
  Combat Systems (CSCS)",
        "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
      }
    },
    "timestamp": "2020-04-29T16:01:41.520Z"
  }
```

2.3.6.3. Documents

Technical document viewing is a general Activity through which TT Simulation content tracks a learner's views of technical documentation (e.g., Equipment Manuals, Maintenance Requirement Cards, Work Packages) during the learning process. The task-trainer-document Activity Type is defined in the TT Simulation Profile to track this general Activity.

After a learner has initialized a Task Trainer Task, and while performing a Task Trainer Step the learner may view a technical document provided in the simulated environment. If desired, TT Simulation content may generate a Viewed Statement to track this Activity.

All of the xAPI requirements for a Viewed Document Statement are provided below.

2.3.6.3.1. Documents Statement Requirements

The following are the requirements for an xAPI Statement for tracking a Task Trainer Document activity:

- 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/viewed`
- The `verb.display.en` SHALL be set to `viewed`
- The `object.id` SHALL be set to a unique identifier for the task-trainer-document Activity according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/task-trainer-simulation/activity-types/task-trainer-document`
- The following Activity Extensions requirements apply:
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-id` property SHALL be set to the appropriate value and format defined in the Navy Core xAPI Profile
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id` property SHALL be set to the appropriate value and format defined in the Navy Common Reference Profile
    - The `https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title` property SHALL be set to the appropriate value and format defined in the Navy Common Reference Profile
- If known, the following Activity Extensions requirements apply:
    - The `https://w3id.org/xapi/simulation/extensions/s1000d-dmc` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
    - The `https://w3id.org/xapi/simulation/extensions/s1000d-sns` property SHALL be set to the appropriate value and format defined in the Simulation Base Profile
- The `context.contextActivities.parent` array SHALL include the task-trainer-step Activity
    - If known, the `context.contextActivities.parent.definition.description` SHALL be set to the exact step text from the technical document
- The `context.contextActivities.grouping` array SHALL include the task-trainer-task Activity
- The `context.contextActivities.grouping` array SHALL include the task-trainer-scenario Activity
- The `context.contextActivities.grouping` array SHALL include the simulation 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 Simulation Base Profile Activity identified in the Navy Base Simulation Profile
- The `context.contextActivities.category` array SHALL include the Navy Task Trainer Simulation Profile activity identified in the TT Simulation Profile Activity section above
- The `context.registration` SHALL be set to the same attempt UUID established during the last task-trainer-task Initialization
- 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 `timestamp` SHALL be set to the time the task-trainer-document Activity occurred according to the Timestamp requirements in the Navy Core xAPI Profile

2.3.6.3.2. Documents Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://id.tincanapi.com/verb/viewed",
    "display": {
      "en": "viewed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/task-trainer-documents/e424886c-
a7cb-40d4-b154-853c574f1688",
    "definition": {
      "name": {
```

```
        "en": "SPY-1D(V) System Manual"
      },
      "description": {
        "en": "Description, Operation, and Maintenance of the AN/SPY-1 Radar
System"
      },
      "type": "https://w3id.org/xapi/task-trainer-simulation/activity-types/task-
trainer-document",
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/tech-doc-id": "SW272-A2-AEG-020",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id": "WPS601",
        "https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title": "Antenna
Group MCE T09 10MHz Tray Assembly Removal/Replacement",
        "https://w3id.org/xapi/simulation/extensions/s1000d-dmc": "ANSPY1-AAA-GG1-
60-0000-00A-009A-D",
        "https://w3id.org/xapi/simulation/extensions/s1000d-sns": "GG1-60"
      }
    }
  },
  "context": {
    "contextActivities": {
      "parent": [
        {
          "id": "https://navy.mil/netc/xapi/activities/task-trainer-
steps/9412eea7-9e74-44df-ba5c-4cb2d650ea2e",
          "definition": {
            "name": {
              "en": "WPS601 Step 4 - Antenna Group MCE T09 10MHz Tray Assembly
Removal/Replacement Procedure Task"
            },
            "description": {
              "en": "Turn off circuit breaker 2."
            },
            "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-step"
```

```
        }
      }
    ],
    "grouping": [
      {
        "id": "https://navy.mil/netc/xapi/activities/task-trainer-
tasks/7a2ab106-1ffb-40c6-be7a-4f4d0b6586d2",
        "definition": {
          "name": {
            "en": "Antenna Group MCE T09 10MHz Tray Assembly Removal/Replacement
Procedure Task"
          },
          "description": {
            "en": "A maintenance task within the removal and replacement of the
ECSP MCE 7 10MHz tray assembly."
          },
          "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-task"
        }
      },
      {
        "id": "https://navy.mil/netc/xapi/activities/task-trainer-
scenarios/9e32f474-af07-11ea-b3de-0242ac130004",
        "definition": {
          "name": {
            "en": "ECSP MCE 7 10MHz Tray Assembly Remove and Replace Scenario"
          },
          "description": {
            "en": "A maintenance scenario for the disassemble, repair and
reassemble of Antenna Group components."
          },
          "type": "https://w3id.org/xapi/task-trainer-simulation/activity-
types/task-trainer-scenario"
        }
      },
```

```
        {
          "id": "https://navy.mil/netc/xapi/activities/simulations/3e3ff734-07ff-
1235-9ae3-0184bb639fe",
          "definition": {
            "name": {
              "en": "SPY Radar Alignment Maintenance Task Trainer Simulation"
            },
            "description": {
              "en": "A virtual maintenance task trainer simulation for SPY radar
alignment and verification procedures."
            },
            "type": "http://adlnet.gov/expapi/activities/simulation"
          }
        }
      ],
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/task-trainer-simulation/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
```

```
        ]
      },
      "registration": "6f326ac3-e24f-48de-a7b0-9180e3355bea",
      "extensions": {
        "https://w3id.org/xapi/netc/extensions/school-center": "Center for Surface
Combat Systems (CSCS)",
        "https://w3id.org/xapi/netc/extensions/launch-location": "Ashore"
      }
    },
    "timestamp": "2020-04-29T16:01:41.520Z"
  }
```

2.3.7. Scenario-Based Performance Assessment

When a Task Trainer Scenario Activity is initialized in graded mode, the TT Simulation content SHALL use the Navy Assessment Profile and the Navy Performance Assessment Profile. In TT Simulation content, steps (cmi.interaction Activities) SHALL be children of the last Initialized task-trainer-task Activity and, therefore, SHALL include an assessment Activity as the `parent` Context Activity. The `context.contextActivities.grouping` array SHALL include the `task-trainer-task` Activity, the `task-trainer-scenario` Activity, and the `simulation` Activity. Refer to the Navy Assessment and Performance Assessment Profiles for all other requirements when developing assessments or scenario-based performance assessments for TT Simulation content.