ITRMBond - NIST Cybersecurity Framework

Step-by-Step Tutorial

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Contents

About Rsam Tutorials

The Rsam module step-by-step tutorials are designed to help you learn about a specific Rsam module and to gain basic familiarity with the user interface. The Rsam platform is highly configurable and is capable of handling both simple and comprehensive applications. The step-by-step tutorials and Rsam sandboxes, however, are specifically designed to quickly deliver a user experience without requiring further training. Each step-by-step tutorial walks you through common, out-of-the-box functionality within a given Rsam module, allowing you to get immediate hands-on familiarity with the module.

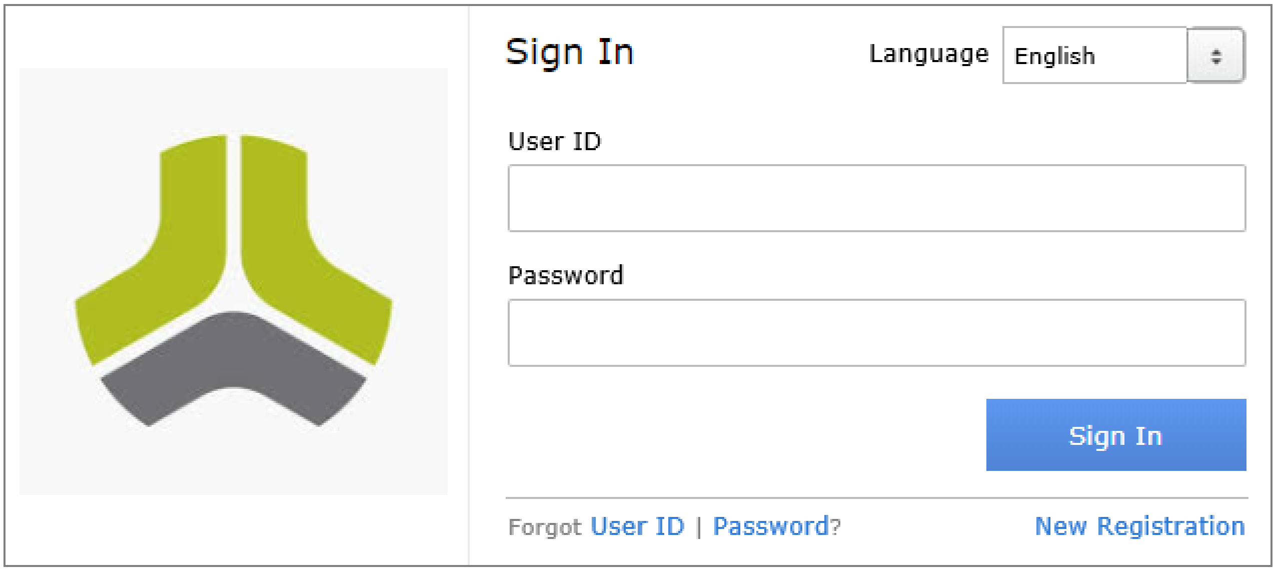
Rsam Sandbox Environment

Rsam module step-by-step tutorials are designed to work with the out-of-the-box Rsam configuration. You may follow this tutorial using an Rsam Sandbox environment or using your own instance of Rsam that you already own. If you are using this tutorial with an Rsam Sandbox environment, the URL to access your Rsam sandbox is delivered through an email. Otherwise, you may contact your Rsam Administrator for the URL to access your Rsam instance.

If you are using an Rsam sandbox environment, you should have provided Rsam with your organization's internet facing IP address. To find this information, open a browser and connect to an IP discovery site such as www.whatismyip.com, or contact your organization's Network Administrator for assistance. You may also contact your Rsam Customer Representative with any questions.

Sign-In Page

Tutorials leverage pre-defined accounts that require manual authentication. While your organization may intend to use SSO authentication, Rsam sandbox environments require manual authentication through the Rsam Sign In page so that you can easily toggle between various sample accounts used throughout the tutorial.



Like most elements in Rsam, the Sign In page can be configured in a number of ways. Different authentication options such as user self-registration, integration with customer user directories (such as Active Directory), or integration with Single Sign-On products, such as Shibboleth, can be applied. You can also embed your own branding and logo on the Sign In page.

NCSF Assessment Framework

Overview

Rsam NIST Cybersecurity Assessment Framework (NCSF) module allows users to create, scope, and assess cybersecurity *profiles* as defined by the NIST Cybersecurity Framework. Users assess profiles against individual *subcategories* provided by the Cybersecurity Framework core utilizing the NIST concept of current and target *implementation tiers*. Users can then define action plans to address identified gaps, attest to the validity of assessments, and report over time on progress from the current state to the target state.

This tutorial covers the following phases of conducting a NIST Cybersecurity Assessment:

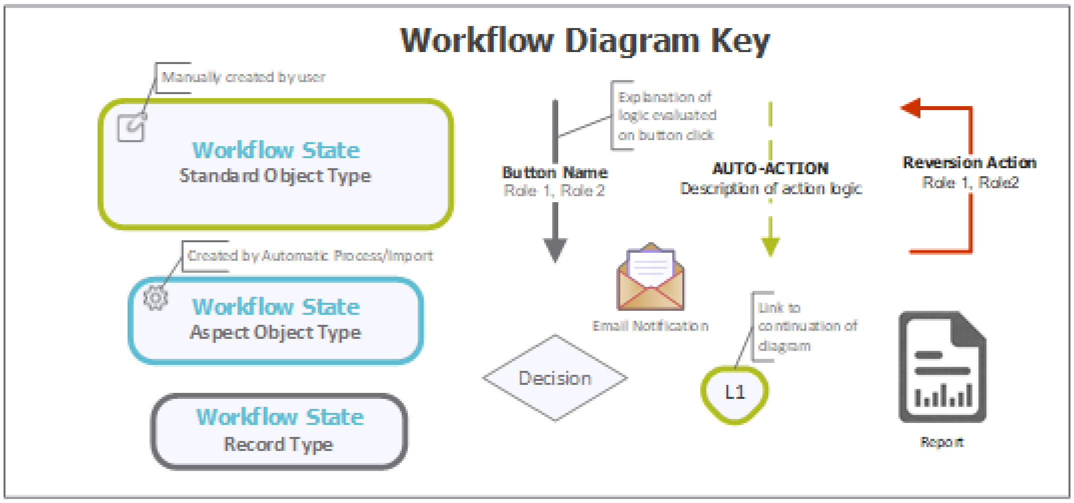
- Creating and Scoping an NCSF Assessment Profile
- Assessing Control Requirements
- Developing Action Plans
- Attesting to an NCSF Assessment
- Finalizing an NCSF Assessment
- Viewing NCSF Assessment Status Summary Charts and Reports

NCSF Workflows

The NCSF module provides automated workflows for each of the following components:

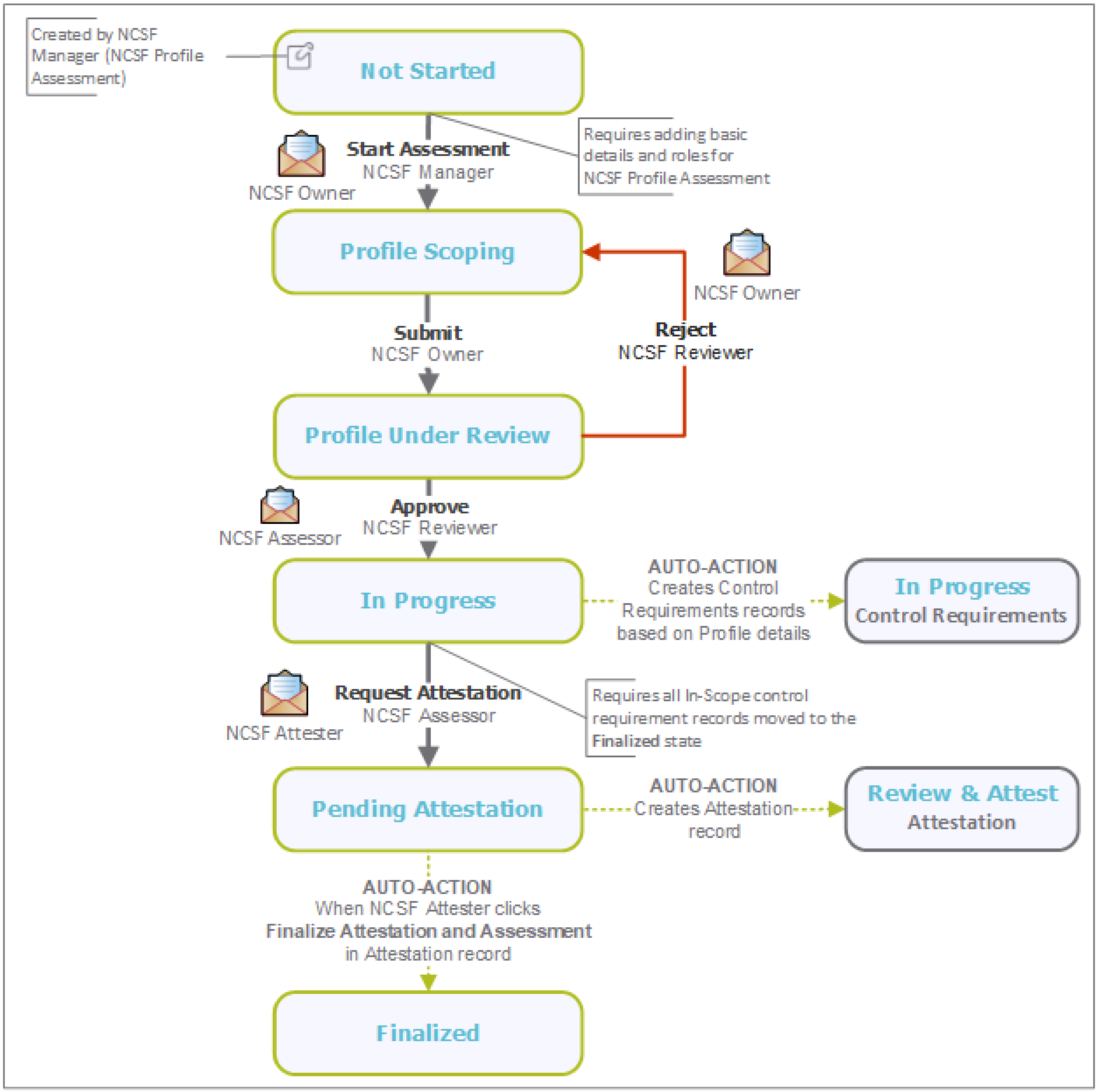
- NCSF Profile Assessments
- Control Requirements (assessments against each of the subcategories in the Framework core)
- Action Plans
- Tier Attestations

Before proceeding to the specific workflows, it is recommended that you familiarize yourself with the following Rsam workflow diagram key.



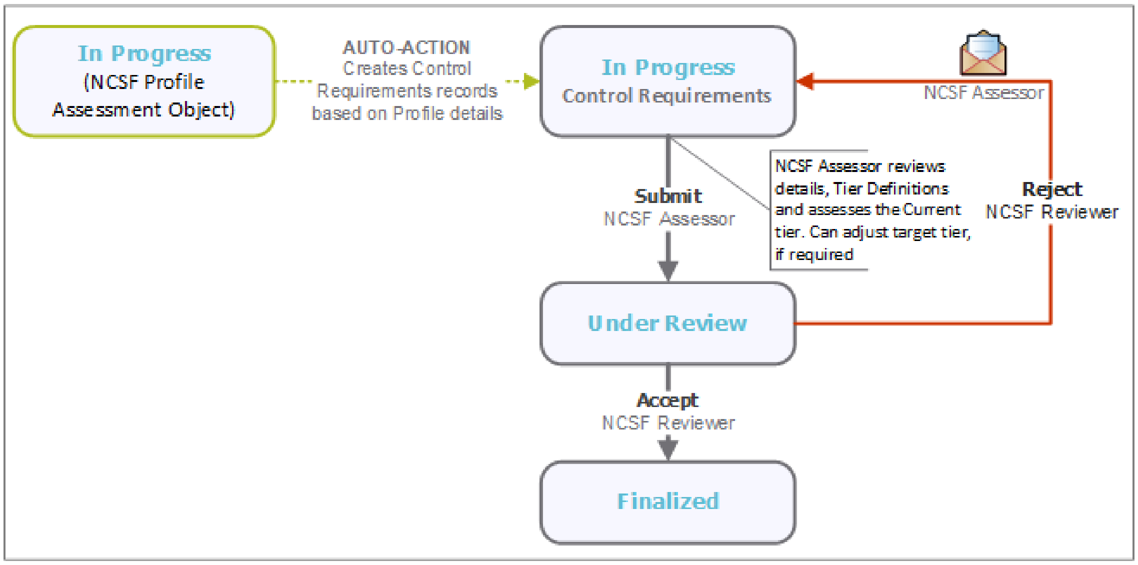
NCSF Profile Assessment Workflow

The following diagram shows the workflow of the NCSF Profile Assessment object.



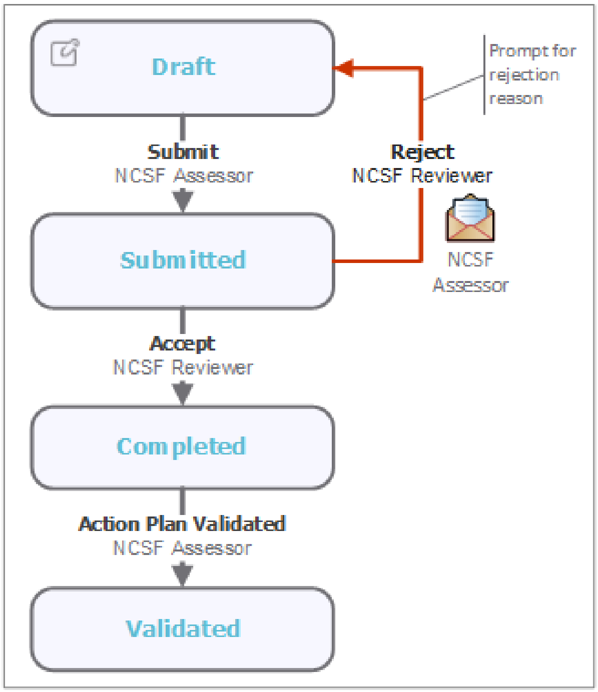
Control Requirements Workflow

The following diagram shows the workflow for each of the Control Requirement records, which reside within a NCSF Profile Assessment. Each Control Requirement record represents an assessment of a specific subcategory in the framework core.


In Progress
(NCSF Profile Assessment Object)
AUTO-ACTION
Creates Control Requirements records based on Profile details
In Progress
Control Requirements
NCSF Assessor
Submit
NCSF Assessor
NCSF Assessor reviews details, Tier Definitions and assesses the Current tier. Can adjust target tier, if required
Reject
NCSF Reviewer
Under Review
Accept
NCSF Reviewer
Finalized

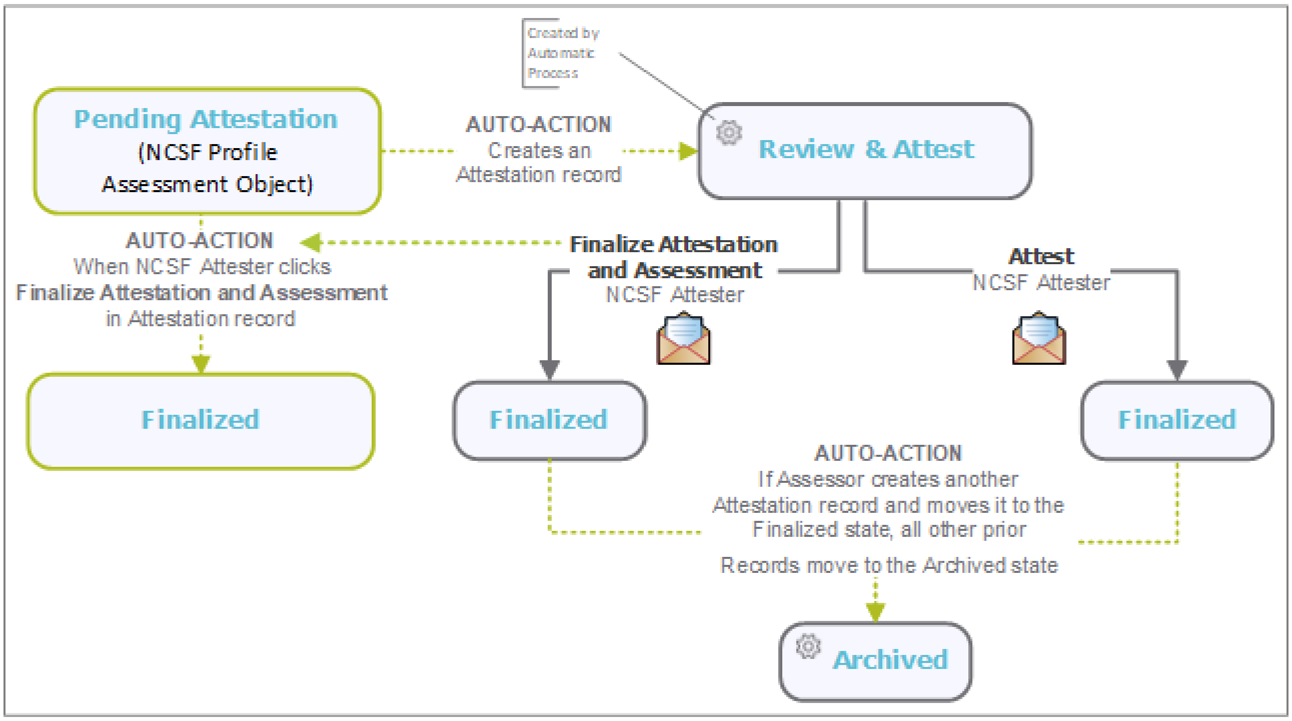
Action Plan Workflow

The following diagram shows the workflow for Action Plans configured to remediate gaps between current and target tiers.



Tier Attestation Workflow

The following diagram shows the workflow for the Tier Attestation records. These records help obtain periodic point-in-time sign-offs for respective NCSF Profile Assessments.


Created by Automatic Process
Pending Attestation
(NCSF Profile Assessment Object)
AUTO-ACTION
Creates an Attestation record
Review & Attest
AUTO-ACTION
When NCSF Attester clicks
Finalize Attestation and Assessment
in Attestation record
Finalize Attestation and Assessment
NCSF Attester
Attest
NCSF Attester
Finalized
Finalized
Finalized
AUTO-ACTION
If Assessor creates another Attestation record and moves it to the Finalized state, all other prior Records move to the Archived state
Archived

User Accounts

User accounts are required for the individuals authorized to access a specific Rsam baseline module. The Rsam sandbox for the NCSF Assessment Framework module comes with pre-populated sample accounts.

Note: Sample users for each of these roles are optionally provided with the baseline module installation package.

User ID	User	Role Description
r_ncsf_manager	*NCSF Manager*	Has overall administrative access to all NCSF Profile Assessments and Control Requirements in the system. A user with this role is responsible for creating NCSF Profile Assessments and assigning the primary NCSF Owner and NCSF Assessor roles for assessments.
r_ncsf_owner	*NCSF Owner*	Responsible for defining and scoping the NCSF Profile Assessments to generate the required Control Requirements.
r_ncsf_reviewer	*NCSF Reviewer*	Responsible for reviewing NCSF Profile Assessments and related Control Requirements.
r_ncsf_assessor	*NCSF Assessor*	Responsible for assessing assigned Control Requirements.
r_ncsf_attester	*NCSF Attester*	Responsible for attesting to the entire NCSF Profile Assessment (including its individual control requirement assessments and action plans) prior to finalizing the assessment.

Users can contact *Rsam Administrator* to obtain passwords for assigned accounts. Individual users may change their password once authenticated. Users with administrator permissions may also reset the password of other users.

High-Level Steps

The following is a high-level list of the steps described in this tutorial.

Step	User	Description
Step 1: Configuring Assessment Profile	*NCSF Manager* *NCSF Owner* *NCSF Reviewer*	Assessment profile is created, scope is defined, and moved to the **In Progress** state. In this state, Control Requirements are generated.
Step 2: Updating Control Requirements	*NCSF Assessor* *NCSF Reviewer*	Control Requirement records are assessed, action plans are associated, and reviewed and approved to progress to next state.
Step 3: Generating and Attesting Tiers	*NCSF Assessor* *NCSF Attester*	Attestation record is generated and the associated profile is attested.
Step 4: Finalizing Assessment Profile	Automatic process	Assessment Profile moves to Finalized state automatically when all the associated control requirements are reviewed and approved and are in the Finalized state.

NCSF Profile Assessment

An NCSF Profile Assessment contains details on how a given NCSF assessment is defined and scoped. It includes the following information:

- Subject of the assessment (lines of business, departments, etc.)
- Assigned roles and scheduled dates
- Related Asset-Level Assessments (for applications, vendors, etc.)
- NCSF Control Requirements (Subcategories) In-Scope

This chapter explains the following topics:

- Creating an NCSF Profile Assessment Object
- Starting an NCSF Profile Assessment
- Updating an NCSF Profile Assessment
- Reviewing and Approving NCSF Profile Assessment Details

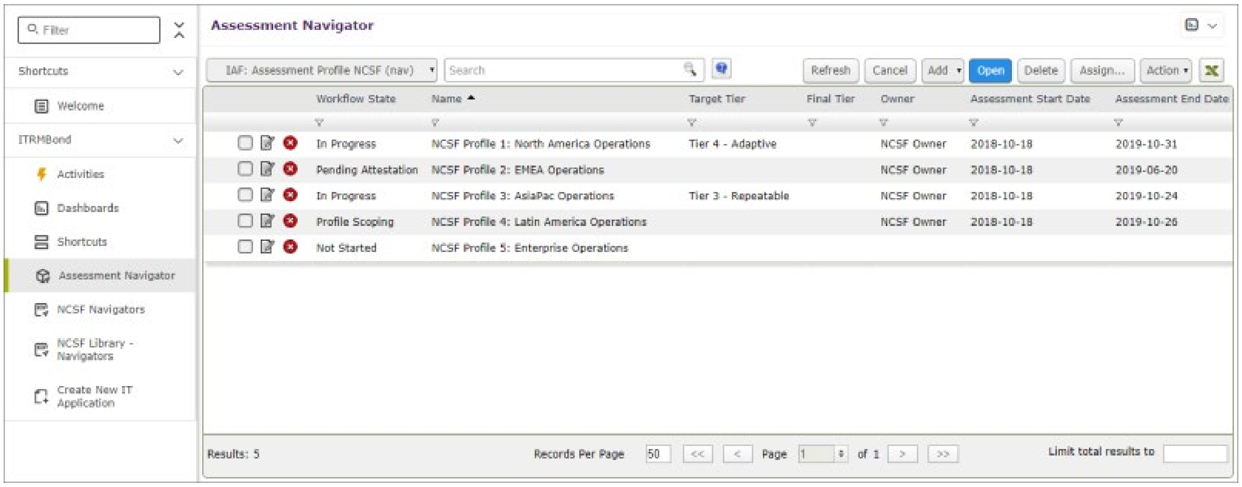
Step 1: Creating an NCSF Profile Assessment Object

To create an NCSF Profile Assessment Object, perform the following steps:

1. Sign in to Rsam as the *NCSF Manager*. Enter the **Username** as *r_ncsf_manager* and provide the **Password**.

2. Navigate to **ITRMBond > Assessment Navigator**. The Assessment Navigator Home page opens.

3. From within the assessment navigator, select **IAF: Assessment Profile NCSF (nav)**.
   The navigator lists all the NCSF Profile Assessments defined.



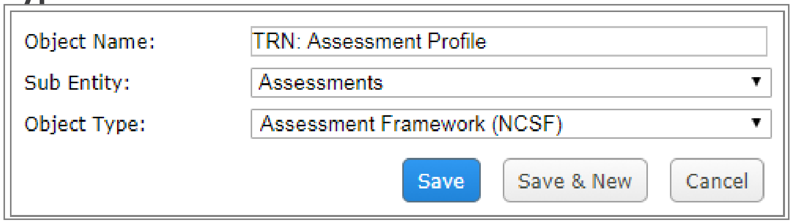
	Workflow State	Name ▲	Target Tier	Final Tier	Owner	Assessment Start Date	Assessment End Date
□	In Progress	NCSF Profile 1: North America Operations	Tier 4 - Adaptive		NCSF Owner	2018-10-18	2019-10-31
□	Pending Attestation	NCSF Profile 2: EMEA Operations			NCSF Owner	2018-10-18	2019-06-20
□	In Progress	NCSF Profile 3: AsiaPac Operations	Tier 3 - Repeatable		NCSF Owner	2018-10-18	2019-10-24
□	Profile Scoping	NCSF Profile 4: Latin America Operations			NCSF Owner	2018-10-18	2019-10-26
□	Not Started	NCSF Profile 5: Enterprise Operations					

Results: 5   Records Per Page 50   << < Page 1 of 1 > >>   Limit total results to

4. Select **Add > Object**. The **Create New Object** dialog appears.

   a. Provide a name for the NCSF Profile Assessment, ***TRN: Assessment Profile***, in the **Object Name** field.

   b. Select **Assessment Framework (NCSF)** from the drop down list available in the **Object Type** field.



Object Name:	TRN: Assessment Profile
Sub Entity:	Assessments
Object Type:	Assessment Framework (NCSF)

   c. Click **Save** to save the object. The dialog closes.

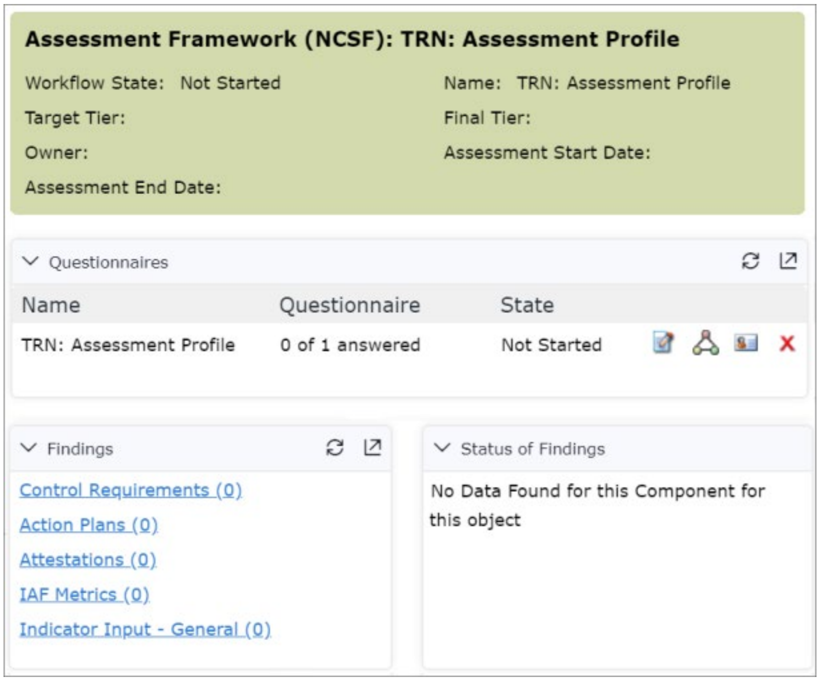
The created object appears on the Assessment Navigator list, in the **Not Started** state.

Step 2: Starting an NCSF Profile Assessment

After creating an NCSF Profile Assessment Object, the *NCSF Manager* must start the assessment by assigning roles and setting the assessment schedule. To start an assessment, perform the following steps:

1. Stay signed in as the *NCSF Manager*.

2. On the Assessment Navigator page, double-click the newly created NCSF Profile Assessment Object to open it. The Details page opens listing details of the NCSF Profile Assessment.



Assessment Framework (NCSF): TRN: Assessment Profile

Workflow State: Not Started
Name: TRN: Assessment Profile
Target Tier:
Final Tier:
Owner:
Assessment Start Date:
Assessment End Date:

Questionnaires

Name	Questionnaire	State
TRN: Assessment Profile	0 of 1 answered	Not Started

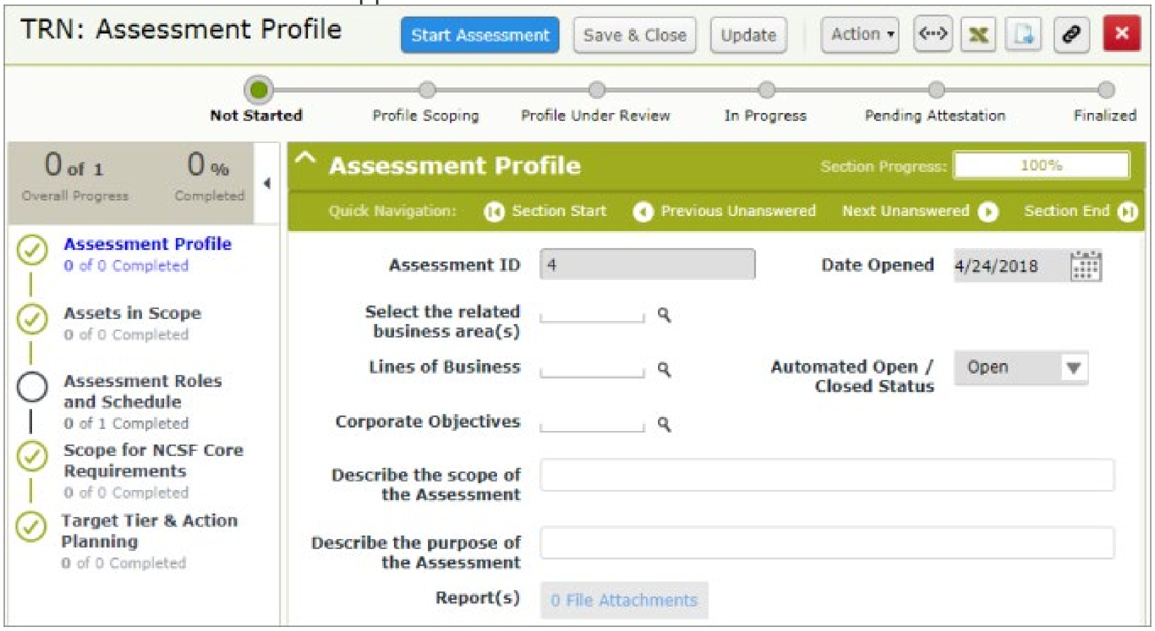
Findings

- Control Requirements (0)
- Action Plans (0)
- Attestations (0)
- IAF Metrics (0)
- Indicator Input - General (0)

Status of Findings

No Data Found for this Component for this object

3. Click 📝 corresponding to the Object name to open the NCSF Profile Assessment. The **Assessment Profile** tab appears.



Assessment Profile
0 of 0 Completed
Assets in Scope
0 of 0 Completed
Assessment Roles and Schedule
0 of 1 Completed
Scope for NCSF Core Requirements
0 of 0 Completed
Target Tier & Action Planning
0 of 0 Completed

Assessment Profile

Assessment ID	4	Date Opened	4/24/2018
Select the related business area(s)			
Lines of Business		Automated Open / Closed Status	Open
Corporate Objectives			
Describe the scope of the Assessment			
Describe the purpose of the Assessment			
Report(s)	0 File Attachments		

Values in the **Assessment ID**, **Date Opened**, **Automated Open / Closed Status** fields are auto-populated.

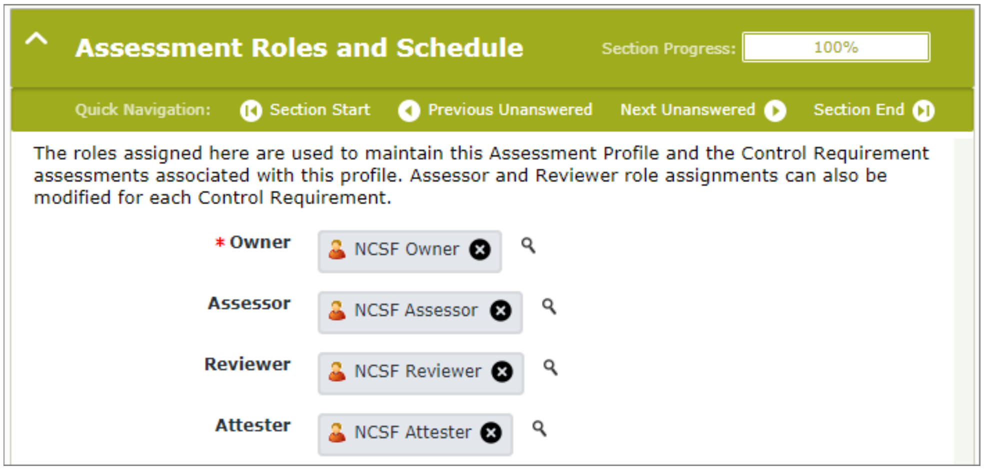
4. Provide values for any of the desired fields in the **Assessment Profile** tab.

5. Click **Assessment Roles and Schedule** tab and perform the following:

   a. Provide values for the roles, as mentioned in the following table.

Field	User Role
Owner	*NCSF Owner*
Assessor	*NCSF Assessor*
Reviewer	*NCSF Reviewer*
Attester	*NCSF Attester*

   Owner is the only role that is required to be set to start the Assessment but the user can set values for all other roles as these are required for the other steps in the tutorial.



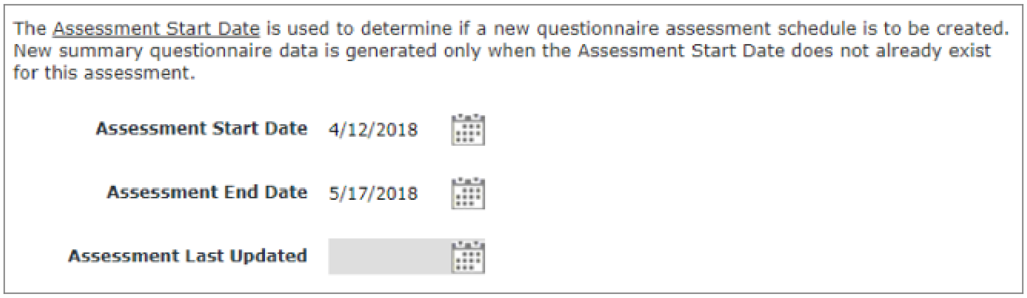
Assessment Roles and Schedule

The roles assigned here are used to maintain this Assessment Profile and the Control Requirement assessments associated with this profile. Assessor and Reviewer role assignments can also be modified for each Control Requirement.

* Owner	NCSF Owner
Assessor	NCSF Assessor
Reviewer	NCSF Reviewer
Attester	NCSF Attester

b. Provide values for the following:

- **Assessment Start Date** - Date when the assessment must be started.
- **Assessment End Date** - Date by when the assessment must be finished.



The Assessment Start Date is used to determine if a new questionnaire assessment schedule is to be created. New summary questionnaire data is generated only when the Assessment Start Date does not already exist for this assessment.

Assessment Start Date	4/12/2018
Assessment End Date	5/17/2018
Assessment Last Updated	

6. Validate the values provided and click **Start Assessment**. The responses are saved and the NCSF Profile Assessment moves to the **Profile Scoping** state. The page refreshes to show the Object Details.

Step 3: Updating an NCSF Profile Assessment

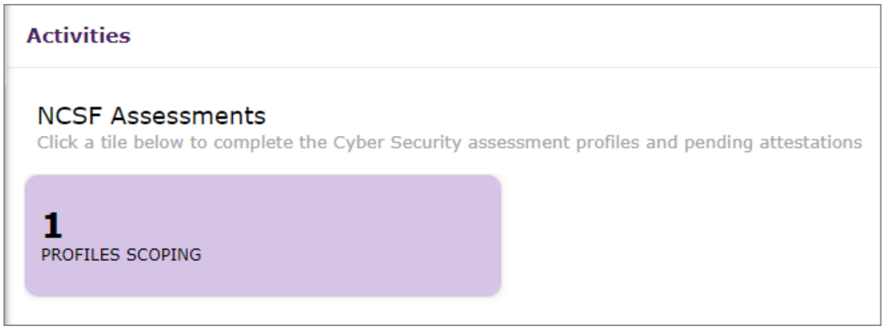
The NCSF Owner must now provide further information to define and scope the profile assessment. Specifically, the NCSF Owner determines which subcategories of the NIST Cybersecurity Framework core are *in scope*, whether and how to set default values for *target tiers*, and whether to require action plans for identified gaps. These details are then submitted to the NCSF Reviewer for review.

Note: In this stage of the workflow, an Assessment Profile can also be mapped to specific *Assets in scope* so that the questionnaire results identified in the Asset-level Assessments will be displayed in the related Control Requirements to inform current and target tier assessments for those requirements. However, while the NCSF Assessment Framework Module is designed to integrate data from the asset-level Risk & Compliance Assessments, the steps are not covered in this tutorial.

To provide the scope and Asset details, perform the following steps:

1. Sign in to Rsam as the *NCSF Owner*. Enter the **Username** as *r_ncsf_owner* and provide the **Password**.
2. Navigate to **ITRMBond > Activities**.

   The Activities page appears listing the applicable activity tiles.



Activities

NCSF Assessments

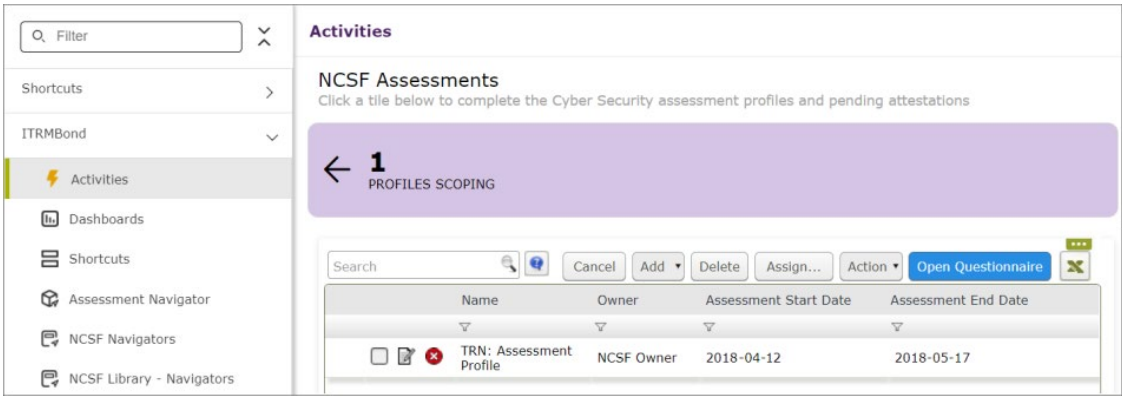
Click a tile below to complete the Cyber Security assessment profiles and pending attestations

1

PROFILES SCOPING

3. Click the tile **Profiles Scoping**.

   The tile expands to display the grid listing the objects in the **Profiles Scoping** state.



NCSF Assessments

Click a tile below to complete the Cyber Security assessment profiles and pending attestations

Name	Owner	Assessment Start Date	Assessment End Date
TRN: Assessment Profile	NCSF Owner	2018-04-12	2018-05-17

Note: When there are lot of objects to be updated, you can also navigate through **ITRMBond > Assessment Navigator** and select **IAF: Assessment Profile NCSF (nav)**.

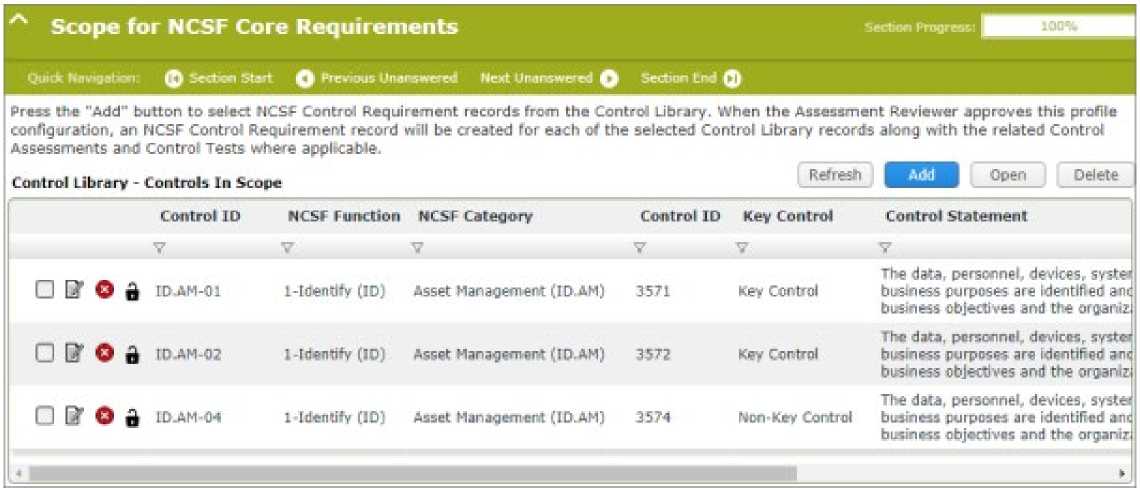
4. Double-click an Object in the **Profile Scoping** state to open it.

5. In this step you will determine which specific subcategories from the NIST Cybersecurity Framework core to include in the scope of this profile assessment. Click **Scope for NCSF Core Requirements** tab to add the control requirements in scope for the profile.

   a. Click **Add**. The **Control Library - Controls In Scope** dialog appears.

   b. Select the first three controls from the **Identify** function and click **Update**. The selected controls are added to the list.

   Note: For the purpose of completing the baseline configuration following this tutorial, selecting three or lesser number of controls ensure that you can quickly advance all the control requirements to the final state before sending for attestation and finalization of the profile. However, when configuring an actual customer scenario, you can select all the required functions and controls.



Press the "Add" button to select NCSF Control Requirement records from the Control Library. When the Assessment Reviewer approves this profile configuration, an NCSF Control Requirement record will be created for each of the selected Control Library records along with the related Control Assessments and Control Tests where applicable.

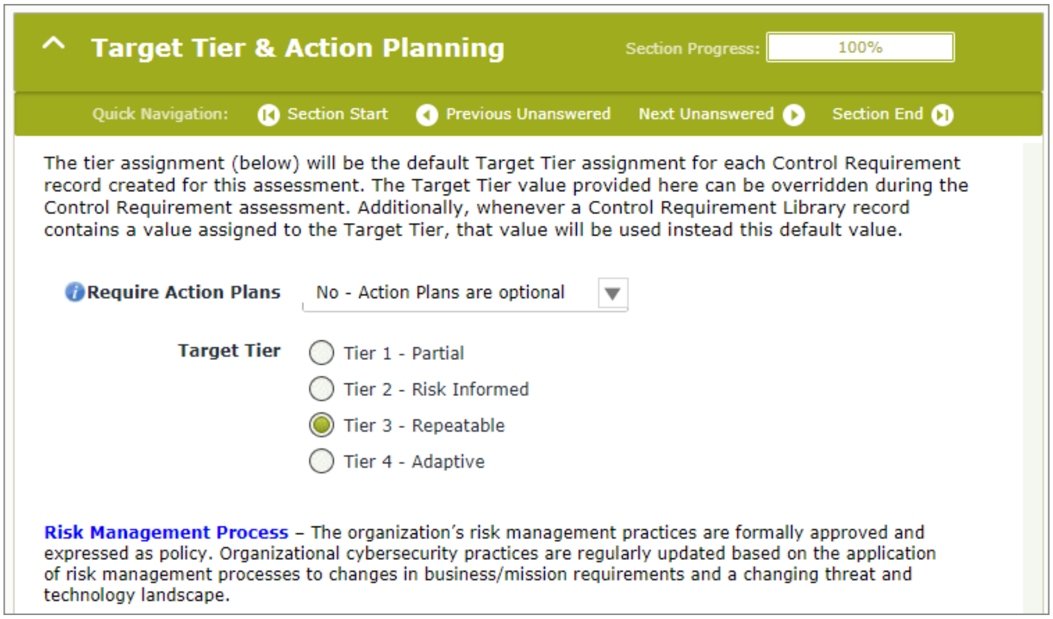
Control Library - Controls In Scope

Control ID	NCSF Function	NCSF Category	Control ID	Key Control	Control Statement
ID.AM-01	1-Identify (ID)	Asset Management (ID.AM)	3571	Key Control	The data, personnel, devices, syster business purposes are identified anc business objectives and the organiz
ID.AM-02	1-Identify (ID)	Asset Management (ID.AM)	3572	Key Control	The data, personnel, devices, syster business purposes are identified anc business objectives and the organiz
ID.AM-04	1-Identify (ID)	Asset Management (ID.AM)	3574	Non-Key Control	The data, personnel, devices, syster business purposes are identified anc business objectives and the organiz

6. In this step you will determine how Rsam sets default values for *target tiers* and whether Rsam will require action plans for identified gaps. Click **Target Tier & Action Planning** tab and perform the following:

   a. The **Require Action Plans** field determines whether Rsam will require actions plans to be created for Control Requirements that have gaps between their current and target tier designations. Select **No – Action Plans are optional**.

   b. The **Target Tier** field will default the target tier for the individual Control Requirements that will be generated later it the workflow. Select any value (or no value) as the **Target Tier** for the NCSF Profile Assessment.



The tier assignment (below) will be the default Target Tier assignment for each Control Requirement record created for this assessment. The Target Tier value provided here can be overridden during the Control Requirement assessment. Additionally, whenever a Control Requirement Library record contains a value assigned to the Target Tier, that value will be used instead this default value.

Require Action Plans: No - Action Plans are optional

Target Tier:
○ Tier 1 - Partial
○ Tier 2 - Risk Informed
● Tier 3 - Repeatable
○ Tier 4 - Adaptive

Risk Management Process – The organization's risk management practices are formally approved and expressed as policy. Organizational cybersecurity practices are regularly updated based on the application of risk management processes to changes in business/mission requirements and a changing threat and technology landscape.

Note: If target tier values are provided for the individual Control Requirements in the Control Library, the target tier provided here will be overridden. The management of Library Controls is not covered in this document.

7. Click **Submit** to submit the profile for review. The profile moves to the **Profile Under Review** state.

Step 4: Reviewing and Approving NCSF Profile Assessment Details

An NCSF Reviewer must review the profile details provided by the NCSF Owner and approve or reject the details. To review and approve the details, perform the following steps:

1. Sign in to Rsam as the *NCSF Reviewer*. Enter the **Username** as *r_ncsf_reviewer* and provide the **Password**.

2. Navigate to **ITRMBond > Activities**.

   The Activities page appears listing the applicable activity tiles.

3. Click the tile **Profiles Under Review**.

   The tile expands to display the grid listing the objects in the **Profile Under Review** state.

   Note: This step can also be accomplished through the Activity Centers when there are a small number of assessments to be reviewed.

4. Double-click an Assessment Profile to open it.

5. Review the details provided in the different tabs of the NCSF Profile Assessment.

6. Click **Approve** to approve the NCSF Profile Assessment details.

   A confirmation dialog appears stating that continuing the action will move the profile to the **In Progress** state and create Control Requirement records, based on the criteria.

7. Click **OK** in the confirmation dialog that appears.

   The profile moves to the **In Progress** state and Control Requirements are automatically generated for the NCSF Profile Assessment, based on the defined scope. The generated Control Requirement records are specific to this NCSF Profile Assessment and serve as the work spaces where control-level tier assessments will be managed and tracked.

   Note: Now, users with the assigned roles can navigate to the control requirement records, update and submit the requirements for review.

Control Requirements

Control Requirement records track the individual workflows for assessing the current and target tiers for specific Control Requirements determined to be in scope for an NCSF Profile Assessment. Control Requirements for each NCSF Profile Assessment are generated when the NCSF Reviewer approves the profile. These individual requirement records can then be populated with details and progressed to the further states.

This chapter explains the following topics:

- Assessing a Control Requirement
    - Creating an Action Plan
    - Approving an Action Plan
    - Validating an Action Plan
- Submitting a Control Requirement
- Reviewing a Control Requirement

Note: This tutorial assumes that the NCSF Assessor has all information available that is required to make informed decisions about the current tier designation, target tier designation, and any required action plans for the subcategory. However, Rsam NCSF module is designed with out-of-the-box integrations with other Rsam modules to display relevant information that supports data-driven decisions. Rsam NCSF module integrates specifically with the following modules:

- **Rsam Risk and Compliance Assessments module:** If customers are using Rsam Risk and Compliance Assessments module, the relevant results of any asset-level, survey-based assessments associated with the NIST Cybersecurity profile assessment will be visible on the **Questionnaire Results** tab of each Control Requirement. For survey-based assessment data to appear within a Control Requirement record, customers must ensure the following requirements are met:
    - Rsam Risk and Compliance Assessments module is deployed in their Rsam environment.
    - Specific asset objects (IT applications, vendors, etc.) are associated with the NIST Cybersecurity Profile Assessment object during the scoping phase.
    - Survey-based assessments have been conducted against those assets using Assessment Questions that have been mapped to the NIST Cybersecurity Framework control library. Rsam-harmonized Assessment Questions and Rsam NIST 800-53 assessment questions have been pre-mapped to the NCSF control library, so customers that have licensed either of these content packs from Rsam do not need to establish those mappings themselves.

      For more information on the Risk and Compliance Assessments module, refer the *ITRMBond - Risk and Compliance Assessments Step-by-Step Tutorial*.
- **Rsam Continuous Controls Testing module:** The NCSF module includes one pre-defined control test for each subcategory in the Framework core. For more information on the Continuous Controls Testing module, refer the *ITRMBond - Continuous Controls Testing Step-by-Step Tutorial*.

- **Rsam Indicators module:** The Indicators module allows customers to define indicators for any additional data that might support decisions around NIST Cybersecurity implementation tier designations. Indicator data can be sourced manually from users, automatically from the results of saved searches executed against other Rsam modules, or from data that has been integrated from other tools (for example, vulnerability scanners). For more information on the Indicators module, refer the *Rsam Indicators Step-by-Step Tutorial*.

Step 1: Assessing a Control Requirement

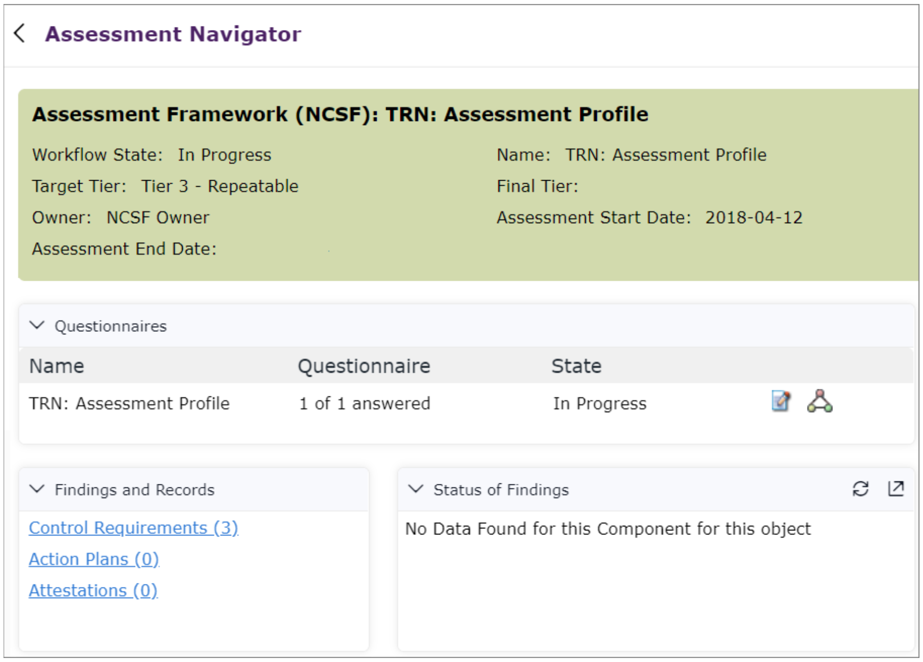
In this step of the workflow, the NCSF Assessor will specify the current and target implementation tiers for the Control Requirement. Additionally, if the current tier does not meet the target, the assessor may be required to enter one or more Action Plans to address the identified gap.

Note: Assessors can be assigned to individual Control Requirements or can be assigned at the NCSF Profile Assessment level. In our case, we have assigned NCSF Assessor user at the profile level, so there is no need to assign specific assessors for each Control Requirement.

To assess a control requirement, perform the following steps:

1. Sign in to Rsam as the *NCSF Assessor*. Enter the **Username** as *r_ncsf_assessor* and provide the **Password**.
2. Navigate to **ITRMBond > Assessment Navigator**. The Assessment Navigator page opens.

   Note: This step can also be accomplished by navigating through **ITRMBond > Activities > NCSF Requirements** and clicking the **In Progress** tile when there are a small number of Control Requirements to be assessed.
3. On the **Assessment Navigator** page, select **IAF: Assessment Profile NCSF (nav)** from the drop-down list. The page refreshes to display the NCSF Assessments.
4. Double-click the assigned NCSF Profile Assessment Object to open it. The Details page opens listing details of the NCSF Profile Assessment.



Assessment Framework (NCSF): TRN: Assessment Profile

Workflow State: In Progress
Name: TRN: Assessment Profile
Target Tier: Tier 3 - Repeatable
Final Tier:
Owner: NCSF Owner
Assessment Start Date: 2018-04-12
Assessment End Date:

Questionnaires

Name	Questionnaire	State
TRN: Assessment Profile	1 of 1 answered	In Progress

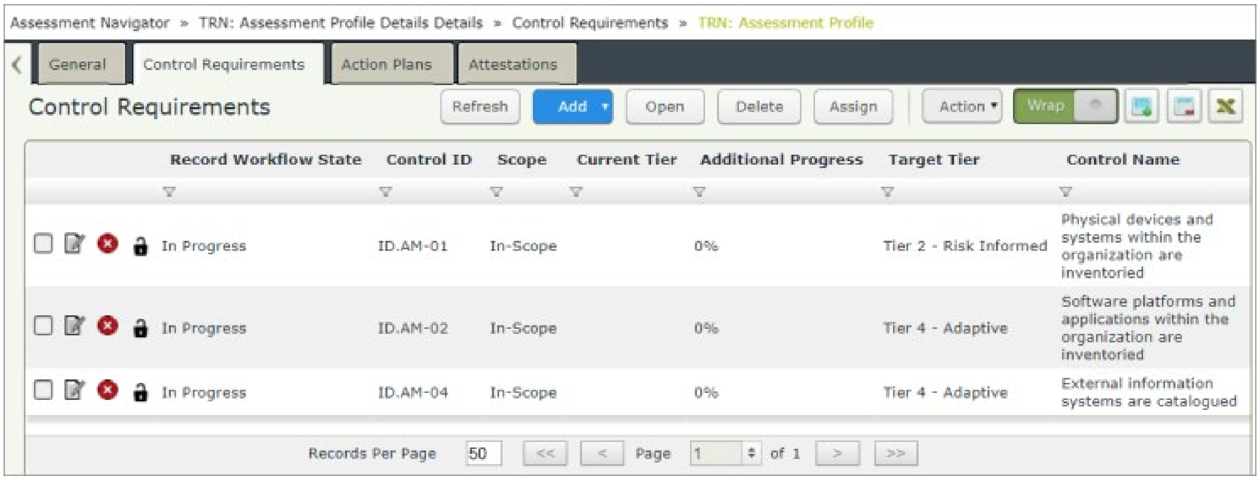
Findings and Records

Control Requirements (3)
Action Plans (0)
Attestations (0)

Status of Findings

No Data Found for this Component for this object

5. Click the **Control Requirements (x)** link to open the Control Requirements generated for the profile assessment.
   The **Control Requirements** page opens listing all the applicable Control Requirements.

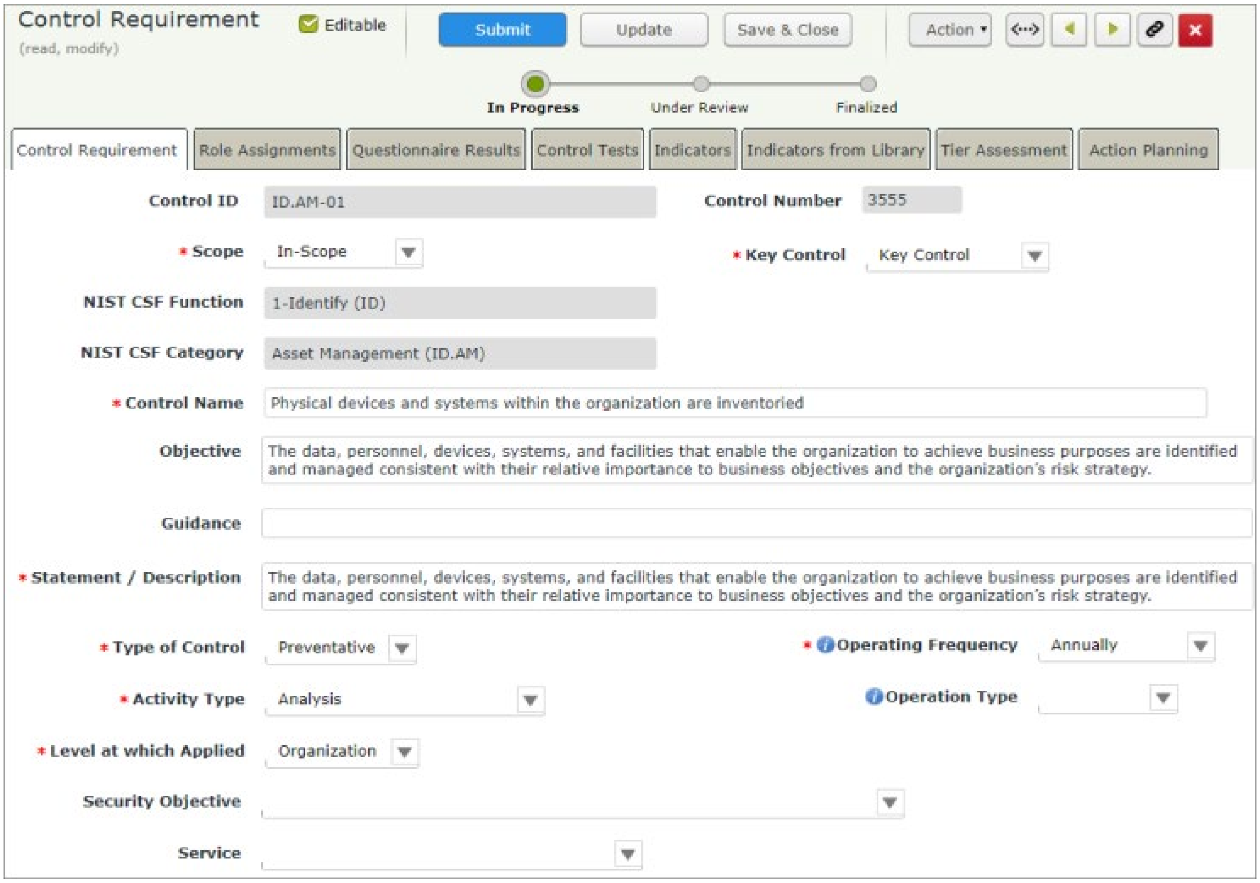

Assessment Navigator » TRN: Assessment Profile Details Details » Control Requirements » TRN: Assessment Profile
General
Control Requirements
Action Plans
Attestations
Refresh
Add
Open
Delete
Assign
Action
Wrap

Control Requirements

	Record Workflow State	Control ID	Scope	Current Tier	Additional Progress	Target Tier	Control Name
□	In Progress	ID.AM-01	In-Scope		0%	Tier 2 - Risk Informed	Physical devices and systems within the organization are inventoried
□	In Progress	ID.AM-02	In-Scope		0%	Tier 4 - Adaptive	Software platforms and applications within the organization are inventoried
□	In Progress	ID.AM-04	In-Scope		0%	Tier 4 - Adaptive	External information systems are catalogued

Records Per Page 50 << < Page 1 of 1 > >>

6. Double-click the first Control Requirement record to open it. The record opens with **Control Requirement** tab selected.



Control Requirement
(read, modify)

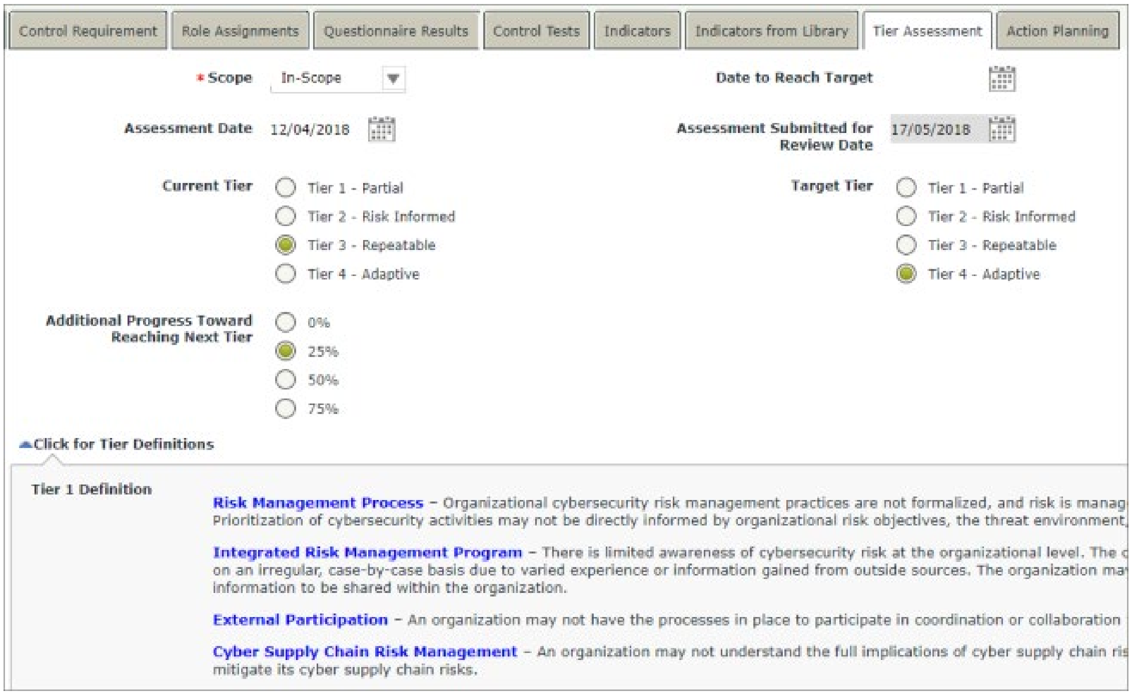
Control ID	ID.AM-01	Control Number	3555
* Scope	In-Scope	* Key Control	Key Control
NIST CSF Function	1-Identify (ID)		
NIST CSF Category	Asset Management (ID.AM)		
* Control Name	Physical devices and systems within the organization are inventoried		
Objective	The data, personnel, devices, systems, and facilities that enable the organization to achieve business purposes are identified and managed consistent with their relative importance to business objectives and the organization's risk strategy.		
Guidance			
* Statement / Description	The data, personnel, devices, systems, and facilities that enable the organization to achieve business purposes are identified and managed consistent with their relative importance to business objectives and the organization's risk strategy.		
* Type of Control	Preventative	* Operating Frequency	Annually
* Activity Type	Analysis	Operation Type	
* Level at which Applied	Organization		
Security Objective			
Service			

The Control Requirement tab displays general information about the subcategory as defined in the NCSF core.

7. Review the information in the Control Requirements tab to get an understanding of the requirement you are assessing.

8. Click **Tier Assessment** tab. The tab displays attributes for capturing the current tier, target tier, and other information relevant to the tier assessments.

   Before providing any values in this tab, click the expand icon next to **Click for Tier Definitions** attribute to display explanations of each of the tiers.



*Scope: In-Scope

Date to Reach Target:

Assessment Date: 12/04/2018

Assessment Submitted for Review Date: 17/05/2018

Current Tier:
○ Tier 1 - Partial
○ Tier 2 - Risk Informed
● Tier 3 - Repeatable
○ Tier 4 - Adaptive

Target Tier:
○ Tier 1 - Partial
○ Tier 2 - Risk Informed
○ Tier 3 - Repeatable
● Tier 4 - Adaptive

Additional Progress Toward Reaching Next Tier:
○ 0%
● 25%
○ 50%
○ 75%

▲Click for Tier Definitions

Tier 1 Definition

Risk Management Process – Organizational cybersecurity risk management practices are not formalized, and risk is manag
Prioritization of cybersecurity activities may not be directly informed by organizational risk objectives, the threat environment,

Integrated Risk Management Program – There is limited awareness of cybersecurity risk at the organizational level. The c
on an irregular, case-by-case basis due to varied experience or information gained from outside sources. The organization ma
information to be shared within the organization.

External Participation – An organization may not have the processes in place to participate in coordination or collaboration

Cyber Supply Chain Risk Management – An organization may not understand the full implications of cyber supply chain ris
mitigate its cyber supply chain risks.

Note: These definitions are inherited from the library controls that represent the Framework core. The out-of-the-box definitions are taken directly from the NIST Cybersecurity Framework, but customers can optionally configure them to match their own tier definitions.

   a. Select **Tier 4 - Adaptive** for the **Target Tier** field.

      Note: The Target Tier value may be pre-selected with a different value specified either within the control library or during the scoping for this profile assessment. If so, overwrite the default value by selecting **Tier 4 – Adaptive** to complete this tutorial.

   b. Select **Tier 3 - Repeatable** for the **Current Tier** field.

      Note: For this tutorial, we are selecting a lower value than the Target Tier so that you can explore the creation of an Action Plan to address this gap.

   c. Select a value in the **Additional Progress Toward Reaching Next Tier** field. While the NCSF Control Requirements are assessed primarily using the four-valued tier designations, the module allows for more granular tracking of current progress from the current tier to the next tier. The value specified for this field provides for more granular assessment of the current tier and is reflected in reports such as the Target Tier Progress Drill-Down report.

   d. Provide the **Date to Reach Target** for the control requirement.

   Proceed to the next steps to create, approve, and validate an action plan for the Control Requirement.

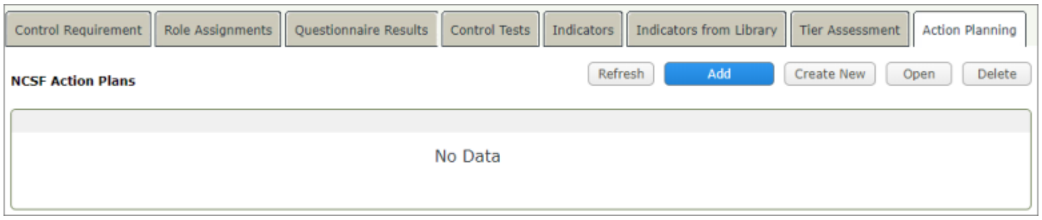
Step 1a: Creating an Action Plan

In this tutorial workflow, since the Current Tier is set to a lower value than the Target Tier, we will create an Action Plan to address this gap. Click the **Action Planning** tab in the Control Requirement record to add an action plan.

Note: If you prefer to skip adding action plans, the appropriate selection must have been done for the Require Action Plans field when setting up the Profile Assessment in previous steps.

You can either create new action plans or associate already existing plans. In this tutorial, we will create a new action plan:

1. Stay signed in as the *NCSF Assessor* and click **Action Planning** tab.



NCSF Action Plans

No Data

2. Click **Create New** button that appears above the **NCSF Action Plans** section.
3. Provide values in the required fields and click **Submit** to submit the action plan.
4. Click **OK** in the confirmation dialog that appears.
5. Click **Save & Close** to close the Control Requirement record.

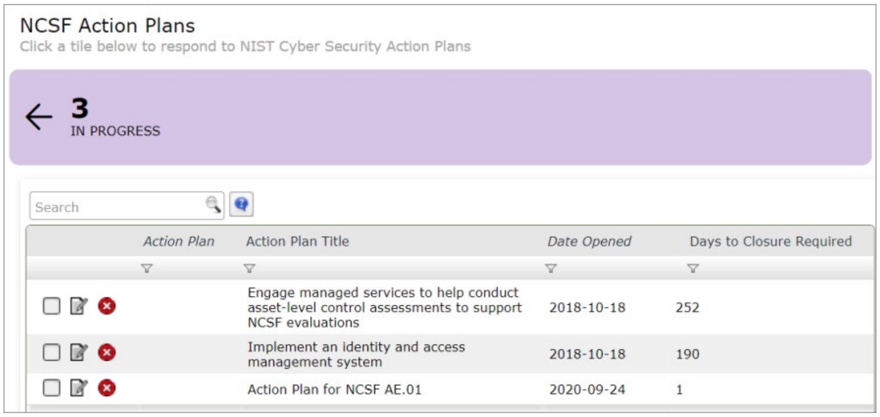
Step 1b: Approving an Action Plan

An action plan must be reviewed and approved before the Profile Assessment can be finalized. To approve an action plan, perform the following steps:

1. Sign in to Rsam as the *NCSF Reviewer*. Enter the **Username** as *r_ncsf_reviewer* and provide the **Password**.
2. Navigate to **ITRMBond > Activities**.

   The Activities page appears listing the applicable tiles.
3. Click **In Progress** tile under **NCSF Action Plans**.

   The tile expands listing details of all Action Plans in the *In Progress* state and that are assigned to the reviewer.



NCSF Action Plans

Click a tile below to respond to NIST Cyber Security Action Plans

	Action Plan	Action Plan Title	Date Opened	Days to Closure Required
☐		Engage managed services to help conduct asset-level control assessments to support NCSF evaluations	2018-10-18	252
☐		Implement an identity and access management system	2018-10-18	190
☐		Action Plan for NCSF AE.01	2020-09-24	1

4. Double-click the required action plan to open it, review the details, and click **Accept**.

5. Click **OK** in the confirmation dialog that appears. The action plan moves to the **Completed** state.

6. Log out from Rsam.

Step 1c: Validating an Action Plan

After an Action Plan has been approved, an Assessor must validate the plan. To validate an Action Plan, perform the following steps:

1. Sign in to Rsam as the *NCSF Assessor*. Enter the **Username** as *r_ncsf_assessor* and provide the **Password**.

2. Navigate to **ITRMBond > Activities**.

   The Activities page appears listing the applicable tiles.

3. Click **Pending Validation** tile under **NCSF Action Plans**.

   The tile expands listing details of all Action Plans that are assigned to the assessor.

4. Select the required Action Plan and select **Action > Action Plan Validated**. The plan is validated and moves to the **Validated** state.

Step 2: Submitting a Control Requirement

After completing the action plan workflow, you can return to the Control Requirement and submit it for review. To submit a Control Requirement for review, perform the following steps:

1. Stay signed in as the *NCSF Assessor*.

2. Navigate to **ITRMBond > Assessment Navigator**. The Assessment Navigator page opens.

   Note: This step can also be accomplished by navigating through **ITRMBond > Activities > NCSF Requirements** and clicking the **In Progress** tile when there are a small number of Control Requirements to be submitted.

3. On the **Assessment Navigator** page, select **IAF: Assessment Profile NCSF (nav)** from the drop-down list. The page refreshes to display the NCSF Assessments.

4. Double-click the assigned NCSF Profile Assessment Object to open it. The Details page opens listing details of the NCSF Profile Assessment.

5. Click the **Control Requirements (x)** link to view the Control Requirements generated for the profile assessment.

   The **Control Requirements** page opens listing all the applicable Control Requirements.

6. Double-click the Control Requirement updated in the previous step to open it. The record opens with the **Control Requirement** tab selected.

7. Click **Submit** to submit the control requirement, including the specified tier designations and action plans, for review.

   A confirmation message appears stating that the control requirement is being submitted for review.

8. Click **OK** in the confirmation message dialog box. The responses are saved and the control requirement moves to the **Under Review** state.

9. Log out from Rsam.

Step 3: Reviewing a Control Requirement

An assigned NCSF Reviewer receives a notification when a control requirement is moved to the **Under Review** state. The reviewer must review the assessment details and Accept or Reject it. To review a control requirement, perform the following steps:

1. Sign in to Rsam as the *NCSF Reviewer*. Enter the **Username** as *r_ncsf_reviewer* and provide the **Password**.

2. Navigate to **ITRMBond > Assessment Navigator**. The Assessment Navigator page opens.

   Note: This step can also be accomplished by navigating through **ITRMBond > Activities > NCSF Requirements** and clicking the **Under Review** tile when there are a small number of Control Requirements to be reviewed.

3. On the **Assessment Navigator** page, select **IAF: Assessment Profile NCSF (nav)** from the drop-down list. The page refreshes to display the NCSF Assessments.

4. Double-click the assigned NCSF Profile Assessment Object to open it. The Details page opens listing details of the NCSF Profile Assessment.

5. Click the **Control Requirements (x)** link to view the Control Requirements generated for the profile assessment.
   The **Control Requirements** page opens listing all the applicable Control Requirements.

6. Double-click the Control Requirement in the **Under Review** state to open it.

7. Validate all details provided.

8. Click **Accept** to accept the control requirement. The control requirement moves to the **Finalized** state.

9. Repeat the above steps for updating, submitting, and approving all the control requirements before continuing to the next section to request attestations of the profile. Attestations cannot be requested until all In-Scope Control Requirements are moved to the Finalized state.

   Note: When accepting the last In-Scope control requirement record, a pop-up appears stating that all control requirements for the Profile are completed and users can continue with **Attestation** to finalize the assessment profile.

Tier Attestation

Before an NCSF Profile Assessment can be finalized, an NCSF Attester is responsible for reviewing the final tier assignment for the NCSF Profile Assessment and its related Control Requirements and attesting to the designated tier assignments.

This chapter explains the following topics:

- Generating an Attestation Record
- Attesting to an NCSF Profile Assessment

Note: Before requesting an attestation, all Control Requirements must be in the **Finalized** state, and any related action plans must be in the **Approved** state.

Step 1: Generating an Attestation Record

To generate an Attestation record, perform the following steps:

1. Sign in to Rsam as the *NCSF Assessor*. Enter the **Username** as *r_ncsf_assessor* and provide the **Password**.

2. Navigate to **ITRMBond > Assessment Navigator**. The Assessment Navigator Home page opens listing all the Assessments defined.

3. On the **Assessment Navigator** page, select **IAF: Assessment Profile NCSF (nav)** from the drop-down list.

   The page refreshes to display the NCSF Assessments.

4. Select the required NCSF Profile Assessment and click **Actions > Request Attestation**. A confirmation message appears stating that an Assessment/Attestation record will be created to finalize the assessment.

   Alternatively, you can open the assessment and click △ and select **Request Attestation** from within the Object Details page.

5. Click **OK** in the confirmation message pop up that appears.

   The Profile moves to the **Pending Attestation** state and an Attestation record is generated.

Step 2: Attesting to an NCSF Profile Assessment

To attest to an NCSF Profile Assessment, perform the following steps:

1. Sign in to Rsam as the *NCSF Attester*. Enter the **Username** as *r_ncsf_attester* and provide the **Password**.

2. Navigate to **ITRMBond > Assessment Navigator**. The Assessment Navigator Home page opens listing all the Assessments defined.

   Alternatively, you can also navigate to the attestation records from the Activity Centers.

3. On the **Assessment Navigator** page, select **IAF: Assessment Profile NCSF (nav)** from the drop-down list.

4. Double-click the required assessment, in the **Pending Attestation** state, to open it. The Assessment Details page opens.

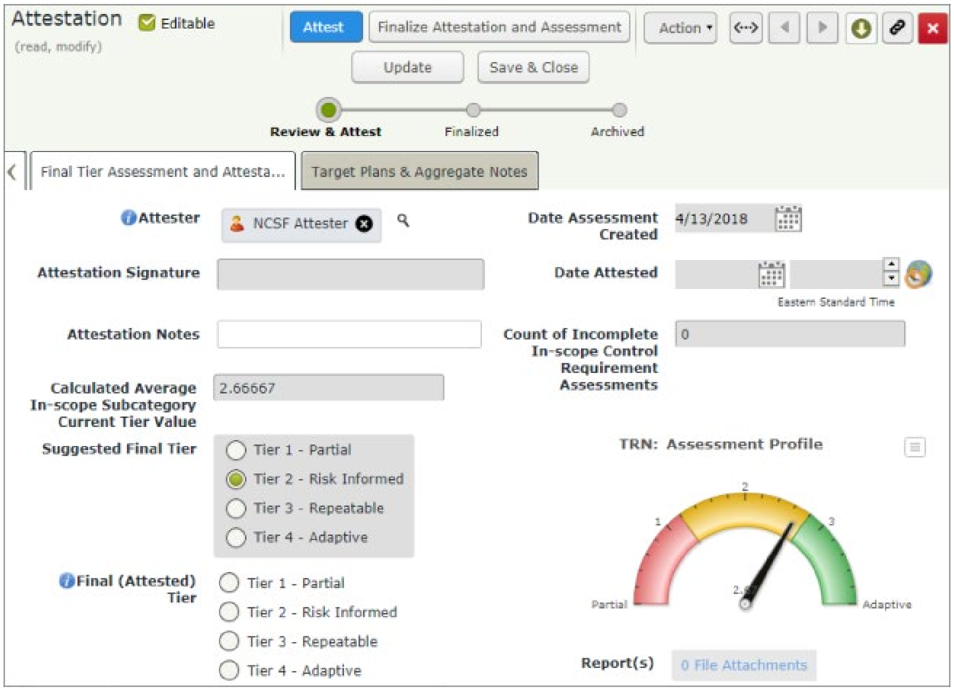
5. Click the **Attestations (x)** link under the **Findings and Records** section.

   The page refreshes to display all the corresponding attestations for the assessment profile.

6. Double-click the attestation record to open it. The record opens showing the **Final Tier Assessment and Attestation** tab.

7. Select the final tier for the Assessment from the values corresponding to the **Final (Attested) Tier** tab. This value determines the overall tier for the Assessment.

8. Provide values for other fields as required.


Attestation
☑ Editable
(read, modify)
Attest
Finalize Attestation and Assessment
Action ▾
Update
Save & Close
Review & Attest
Finalized
Archived
Final Tier Assessment and Attesta...
Target Plans & Aggregate Notes

Attester	NCSF Attester	Date Assessment Created	4/13/2018
Attestation Signature		Date Attested	Eastern Standard Time
Attestation Notes		Count of Incomplete In-scope Control Requirement Assessments	0
Calculated Average In-scope Subcategory Current Tier Value	2.66667		

Suggested Final Tier
○ Tier 1 - Partial
● Tier 2 - Risk Informed
○ Tier 3 - Repeatable
○ Tier 4 - Adaptive

Final (Attested) Tier
○ Tier 1 - Partial
○ Tier 2 - Risk Informed
○ Tier 3 - Repeatable
○ Tier 4 - Adaptive

TRN: Assessment Profile

Report(s) 0 File Attachments

9. Click **Target Plans & Aggregate Notes** tab to view notes and status change messages related to the control requirement records and Assessment Profile.

10. Click **Finalize Attestation and Assessment**. Click **OK** in the confirmation message pop up that appears. The record moves to the **Finalized** state.
    Automatically, the Assessment Profile also moves to the **Finalized** state and the Final Tier value is appended to the Assessment Profile.

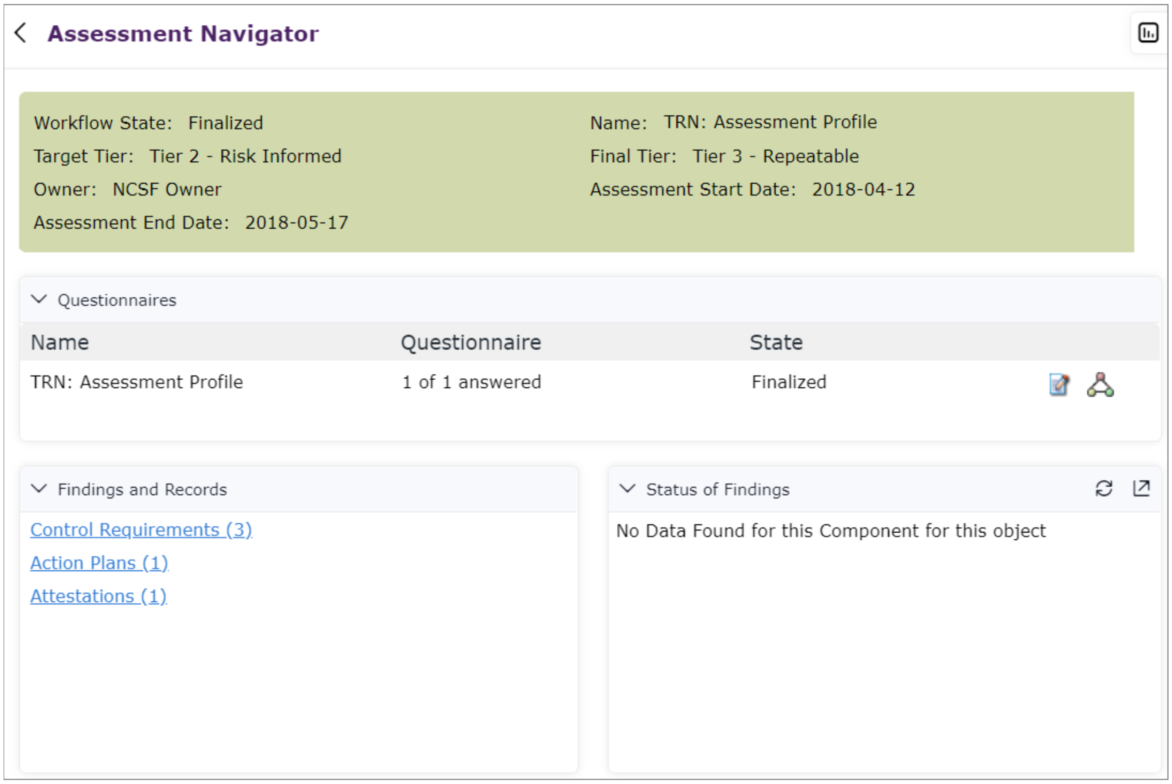
    Alternatively, you can also click **Attest** and the record moves to the **Finalized** state, but the Profile remains in the **Pending Attestation** state. Now an NCSF Owner must log in and click **Finalize** in the Assessment Profile to move the profile to the **Finalized** state.

Note: An NCSF Attester can add more Attestation records, if required, by clicking **Add > Attestation**. When a new record is attested and finalized, if any prior records are available in the **Finalized** state, those records move to the **Archived** state.

Finalizing NCSF Assessments

An active NCSF Profile Assessment has a number of control requirements associated with it. When all the associated control requirements are reviewed and approved and are in the Finalized state, the NCSF Profile Assessment moves to the **Finalized** state automatically.

The following figure shows details of an NCSF Profile Assessment in the Finalized state.



Workflow State: Finalized
Target Tier: Tier 2 - Risk Informed
Owner: NCSF Owner
Assessment End Date: 2018-05-17
Name: TRN: Assessment Profile
Final Tier: Tier 3 - Repeatable
Assessment Start Date: 2018-04-12

Name	Questionnaire	State
TRN: Assessment Profile	1 of 1 answered	Finalized

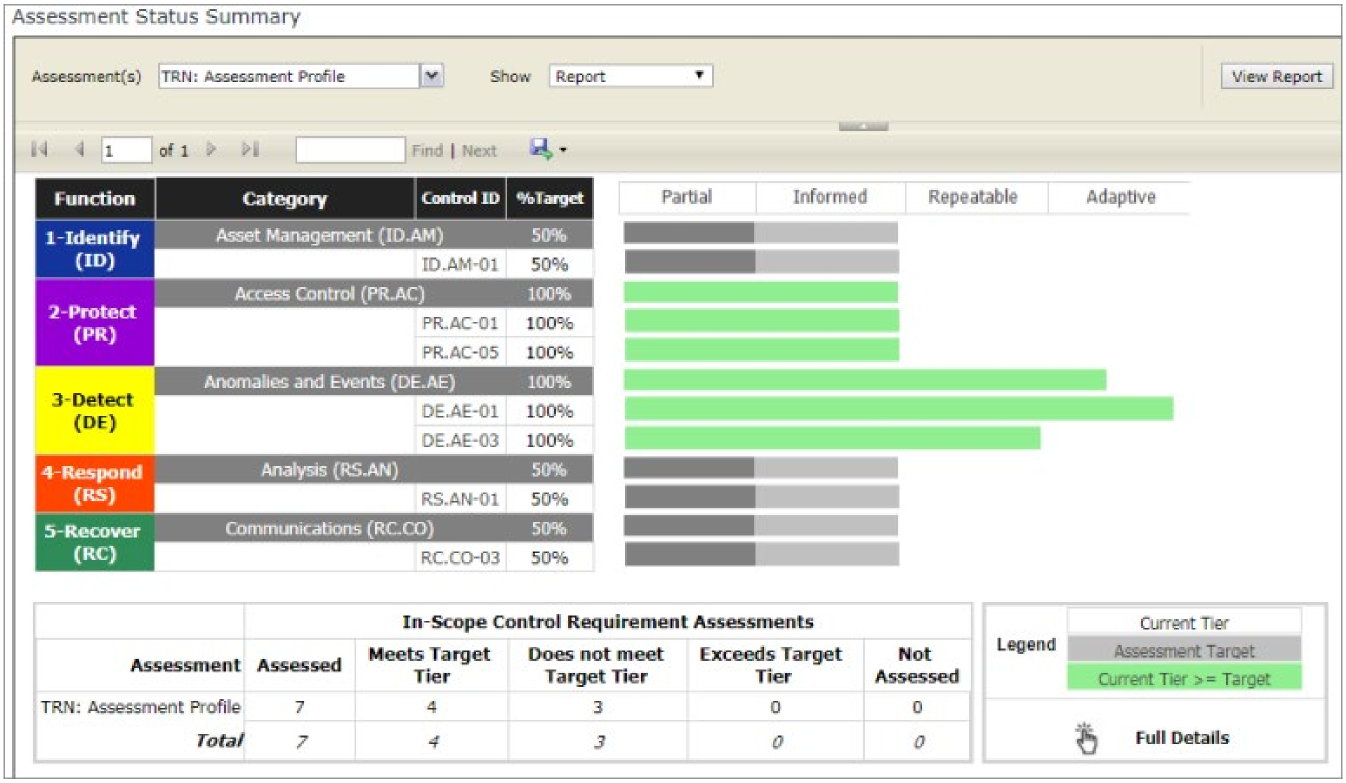
No Data Found for this Component for this object

NCSF Assessment Status Summary

Rsam provides an **Assessment Status Summary Report**, which provides an overview of the NCSF Assessments in the system. This report provides a birds-eye-view of the gaps and tier assessments for the NCSF assessments and related control requirements. It is highly useful to executive management when analysing the NCSF Profile Assessments in the system, where users with access can select all the required assessments simultaneously and view the comparative results.

The report can also be downloaded and shared with stakeholders for any analysis or informational purposes. To access the report, click **ITRMBond > Shortcuts > NCSF Reports > Target Tier Progress DrillDown NCSF**.

The following image shows an example NCSF Assessment Status Summary.



Assessment Status Summary

Assessment(s) TRN: Assessment Profile

Show Report

Function	Category	Control ID	%Target
1-Identify (ID)	Asset Management (ID.AM)		50%
		ID.AM-01	50%
2-Protect (PR)	Access Control (PR.AC)		100%
		PR.AC-01	100%
		PR.AC-05	100%
3-Detect (DE)	Anomalies and Events (DE.AE)		100%
		DE.AE-01	100%
		DE.AE-03	100%
4-Respond (RS)	Analysis (RS.AN)		50%
		RS.AN-01	50%
5-Recover (RC)	Communications (RC.CO)		50%
		RC.CO-03	50%

	In-Scope Control Requirement Assessments				
Assessment	Assessed	Meets Target Tier	Does not meet Target Tier	Exceeds Target Tier	Not Assessed
TRN: Assessment Profile	7	4	3	0	0
Total	*7*	*4*	*3*	*0*	*0*

Legend	
	Current Tier
	▨ Assessment Target
	🟩 Current Tier >= Target

Working with Assessment Status Summary

The following section explains the components of the report and how to use it:

- Generating a Report
- NCSF Function and Category Details
- Overall Summary of Assessments

Generating a Report

To generate a report, perform the following steps:

1. Sign in to Rsam as a user with access to the Assessment Status Summary.

2. Navigate to **ITRMBond > Shortcuts > NCSF Reports > Target Tier Progress DrillDown NCSF**.

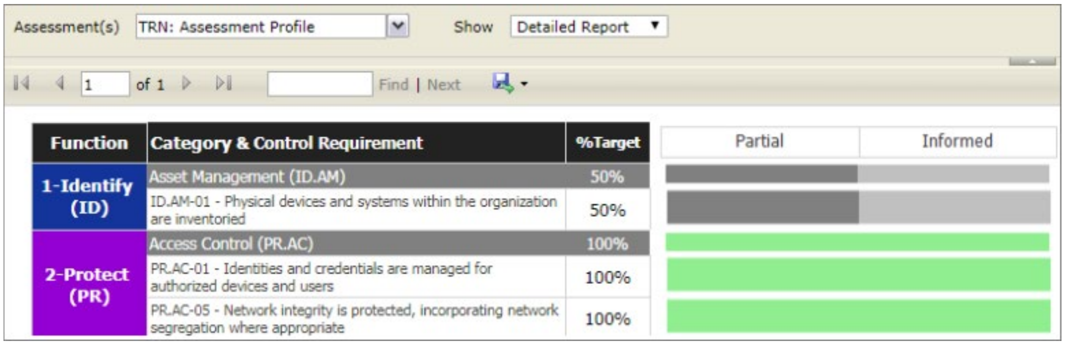
3. In the Report pane, select the required NCSF Profile Assessment(s), of which you want to view the summary, in the **Assessment(s)** field.

4. Select the required view from the **Show** field. The values available are as follows:

   - **Report** - Displays the % Target and tier corresponding to each Control Requirement for the selected NCSF Profile Assessment(s).

   - **Summary Report** - Provides a summary of the selected assessments with no granular data. Displays the overall tier and % Target for the Function as a whole.

   - **Detailed Report -** Displays detailed data for the selected assessment(s). Users can view the descriptions of all articles and corresponding tier assignments.



Assessment(s): TRN: Assessment Profile

Show: Detailed Report

Function	Category & Control Requirement	%Target
1-Identify (ID)	Asset Management (ID.AM)	50%
	ID.AM-01 - Physical devices and systems within the organization are inventoried	50%
2-Protect (PR)	Access Control (PR.AC)	100%
	PR.AC-01 - Identities and credentials are managed for authorized devices and users	100%
	PR.AC-05 - Network integrity is protected, incorporating network segregation where appropriate	100%

5. Click **View Report**. The pane refreshes to show the report based on the selections.

NCSF Function and Category Details

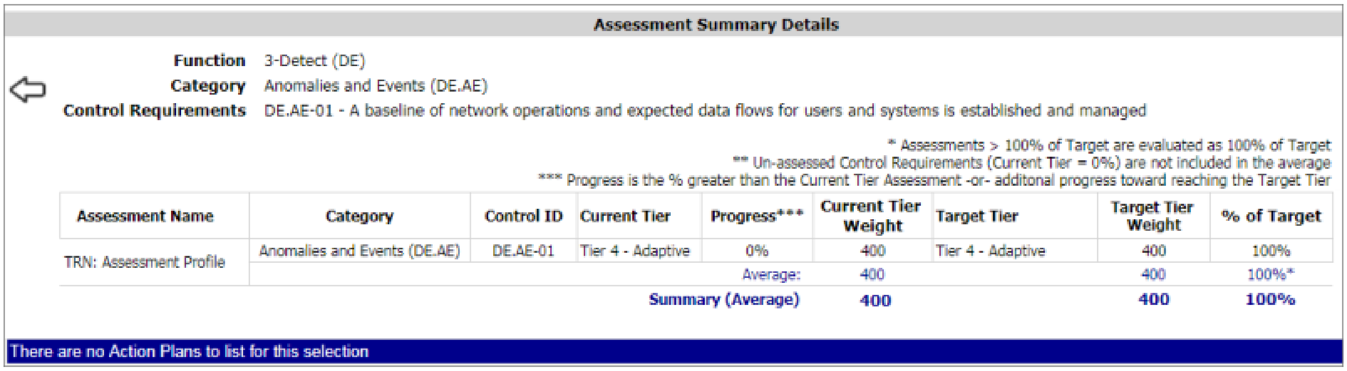
This section categorizes the tier assignments for each article based on the Function and Category to which it belongs and represents values in **percentages** and **graphically**. In a Report or Detailed view, the tier assignments shown are as follows:

- **For each applicable Control Requirement / Article**.

- **At the Function level** - after calculating the tier based on all Control Requirements / Articles in that category.

- **At the Category level** - after calculating the tier based on all Control Requirements / Articles for each **Function** in that chapter.

Click the graphical bars or values to view additional details. The details provided in this report depend on the selected Function, Category, or Subcategory.



Assessment Summary Details

Function 3-Detect (DE)
Category Anomalies and Events (DE.AE)
Control Requirements DE.AE-01 - A baseline of network operations and expected data flows for users and systems is established and managed

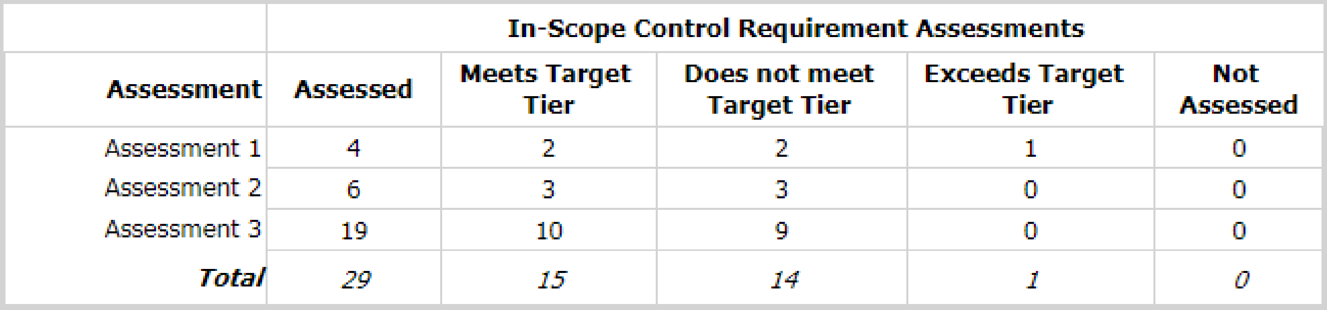
* Assessments > 100% of Target are evaluated as 100% of Target
** Un-assessed Control Requirements (Current Tier = 0%) are not included in the average
*** Progress is the % greater than the Current Tier Assessment -or- additonal progress toward reaching the Target Tier

Assessment Name	Category	Control ID	Current Tier	Progress***	Current Tier Weight	Target Tier	Target Tier Weight	% of Target
TRN: Assessment Profile	Anomalies and Events (DE.AE)	DE.AE-01	Tier 4 - Adaptive	0%	400	Tier 4 - Adaptive	400	100%
				Average:	400		400	100%*
				Summary (Average)	**400**		**400**	**100%**

There are no Action Plans to list for this selection

Overall Summary of Assessments

The last section in the report shows a summary of all control requirements for the selected assessments, with **numerical values**.



	In-Scope Control Requirement Assessments				
Assessment	**Assessed**	**Meets Target Tier**	**Does not meet Target Tier**	**Exceeds Target Tier**	**Not Assessed**
Assessment 1	4	2	2	1	0
Assessment 2	6	3	3	0	0
Assessment 3	19	10	9	0	0
Total	*29*	*15*	*14*	*1*	*0*

Appendix A: Creating Action Plans from Outside a Profile Assessment

Action Plans for an NCSF Assessment / Control Requirement define the actions to be taken when gaps exist for the NCSF Profile Assessment or control requirements. The Control Requirements chapter in this tutorial covers the creation of an action plan from within a Control Requirement record, but action plans can also be created from outside of a Profile Assessment and associated with many Control Requirement records (and even across multiple Profile Assessments). This chapter explains the following topics in the context of managing action plans from outside of a given Profile Assessment:

- Creating an Action Plan
- Approving an Action Plan
- Validating an Action Plan

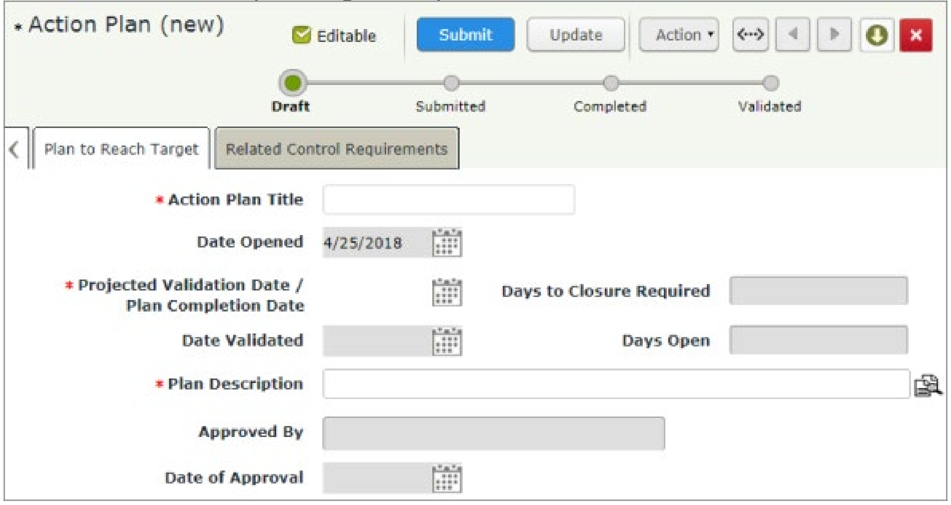
Creating an Action Plan

To create an Action Plan from outside any particular Profile Assessment, perform the following steps:

1. Log in to Rsam as a *NCSF Manager / Assessor*.
2. Navigate to **ITRMBond > Shortcuts > Create New > Create an Action Plan**. A page listing the NCSF Assessment Objects appears.

   Note: Local Action Plans can be created from the Control Requirements records also by clicking the **Create New** button.

3. Click **Select** corresponding to any NCSF Profile Assessment. The Action Plan page opens.



Date Opened 4/25/2018

4. Provide values for the required fields.
5. Click the **Related Control Requirements** tab.

6. Click **Add** corresponding to the **Control Requirements for NCSF Action Plans** section and map control requirements to the plan, as required.

7. Click **Submit**. A confirmation message appears stating that the plan will be moved to the **Submitted** state.

8. Click **OK** in the dialog box. The plan is saved in the **Submitted** state.

Approving an Action Plan

To approve an action plan, perform the following steps:

1. Sign in to Rsam as the *NCSF Reviewer*. Enter the **Username** as *r_ncsf_reviewer* and provide the **Password**.

2. Navigate to **ITRMBond > Activities**. The Activities page appears listing the applicable tiles.

3. Select the **In Progress** tile under **NCSF Action Plans**.

4. Double-click the required action plan to open it.

5. Review the details, and click **Accept**.

6. Click **OK** in the confirmation dialog that appears. The action plan moves to the **Completed** state.

Validating an Action Plan

After an Action Plan has been approved, an Assessor must validate the plan. To validate an Action Plan, perform the following steps:

1. Sign in to Rsam as the *NCSF Assessor*. Enter the **Username** as *r_ncsf_assessor* and provide the **Password**.

2. Navigate to **ITRMBond > Activities**. The Activities page appears listing the applicable tiles.

3. Select the **Pending Validation** tile under **NCSF Action Plans**.

4. Select the required Action Plan in the **Completed** state and select **Action > Action Plan Validated**. The plan is validated and moves to the **Validated** state.

Appendix 2: Rsam Documentation

NIST Cybersecurity Framework Baseline Configuration Guide

To learn more about the pre-configurations in the NIST Cybersecurity Framework, refer the *NIST Cybersecurity Framework Baseline Configuration Guide*. You should have received the *NIST Cybersecurity Framework Baseline Configuration Guide* along with the NIST Cybersecurity Framework sandbox. If not, please contact your Rsam Customer Representative to obtain an electronic copy of the *NIST Cybersecurity Framework Baseline Configuration Guide*.

Online Help

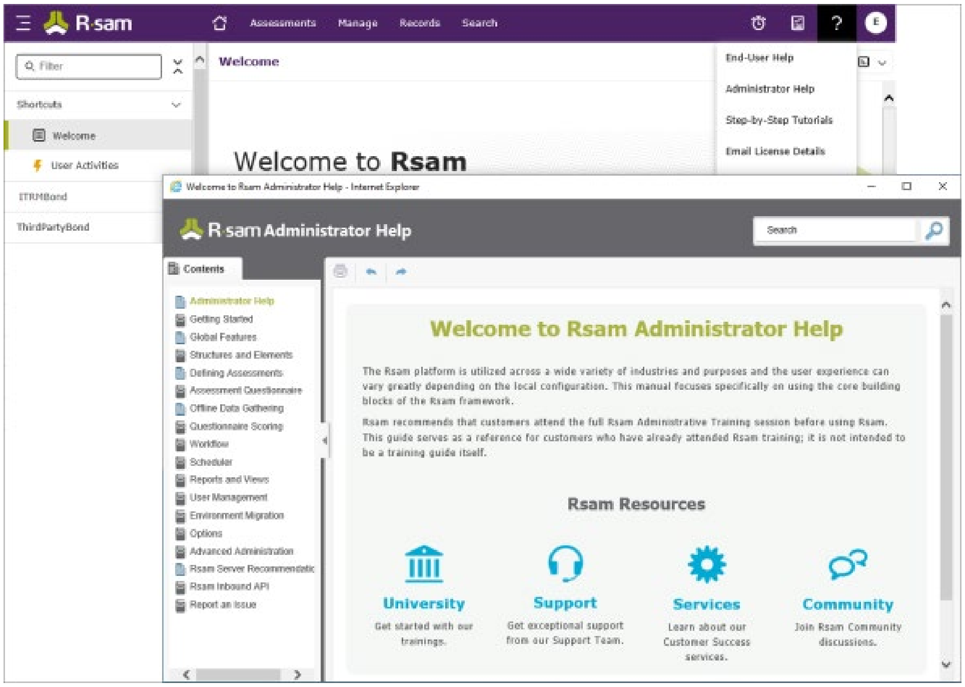
This tutorial provides the step-by-step instructions for the Rsam NIST Cybersecurity Framework module. To get familiar with the specific Rsam features used in this configuration, refer the *Rsam End-User Help*, *Rsam Administrator Help*, or both. The Online help you can access depends on your user permissions.

To access the Online Help, perform the following steps:

1. Sign in to your Rsam instance. For example, sign in as *Example Administrator* user. Provide the **User ID** as ***r_admin*** and provide the **Password**.

2. Hover the cursor over **Help** and select an Online help from the menu that appears. Depending on your user permissions, you will be able to access the Rsam End-User Help, Rsam Administrator Help, Step-by-Step Tutorials, or all.

   The following image shows the *Rsam Administrator Help*, opened from the *Example Administrator* user account.



Welcome to Rsam Administrator Help

The Rsam platform is utilized across a wide variety of industries and purposes and the user experience can vary greatly depending on the local configuration. This manual focuses specifically on using the core building blocks of the Rsam framework.

Rsam recommends that customers attend the full Rsam Administrative Training session before using Rsam. This guide serves as a reference for customers who have already attended Rsam training; it is not intended to be a training guide itself.

Rsam Resources

University
Get started with our trainings.

Support
Get exceptional support from our Support Team.

Services
Learn about our Customer Success services.

Community
Join Rsam Community discussions.